

Bridge Factors Factual Report Attachment 45 – FDOT Structures Design Office (SDO) electronic review and email comments on submittal phases for the signature pedestrian bridge

Miami, FL

## HWY18MH009

(141 pages)

CO Stru	ctures Office Elec	tronic Review Timeline	
Phase	Component	ERC Submittal Create Date	Comments
I (30%)	Preliminary Concept Drawings	3/8/16	
II (60%)	Foundations	5/10/16	Insufficient Submittal – Resubmittal Required
III (90%)	Substructure	6/15/16	Insufficient Submittal – Resubmittal Required
III (90%)	Walls	6/29/16	
III (90%)	Foundations	7/15/16	Resubmittal
III (90%)	Substructure	8/3/16	Resubmittal
IV (Final)	Foundation	9/15/16	
Review Meeting	Foundation, Substructure, Superstructure	9/15/16	
Review Meeting Follow-up Email and Attachments	Foundation, Substructure, Superstructure	9/16/16	
III (90%)	Superstructure	9/28/16	
IV (Final)	Substructure	10/17/16	
IV (Final)	Superstructure	2/14/17	

# Submitta `eport

Financial Project	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE I	Submital Staff Type:	CONSULTANT
Recieved Date:	3/8/2016	Response Due Date:	3/25/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	3/8/2016
Create User Id:	PD601MI	Last Update:	8/31/2016
		Last Update User Id:	KNKSARA

### Description:

434688-1: FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 2/29/2016 Comments Due Date: 3/14/2016 Days Allowed for Review: 15 Review Meeting: 3/25/2016 10:00 AM to 12:00 PM @ TBD If needed-Coordinate with FIU Plans Format: Electronic Comments: External Project Manager: Dwight Dempsey E-mail: Section: Phase: 30% preliminary Design Review Meeting will be schedule if needed Design Criteria is FDOT Work Program Construction Budget: \$11,875,092 Production Date: DESIGN-BUILD Threads:

_ State	Current Holder	Reference	Categories	
RESI		General and Shts L B-3:	STRUCTURES	
Created By	Created On	Version	Delegate For	-
Thomas Andres	3/25/2016	1		
Comments 1 thru 22 below are for	information only. No response is re	quired. The comments are	intended to assist in providing general feedback to the DBF	
1. General: a. See CADD Manual, pg. 4-41	thru 4-47 for structures plans namin	a and numbering conventio	n and sheet order	
	·			
http://www.dot.state.fl.us/ecso/dow	nloads/publications/manual/CADDN	lanual2015/Files/10.1.15/C	ADDManual2015.pdf	
<ul> <li>c. Include Traffic Control Plans f</li> <li>d. Is the C/L Structure &amp; PGL ba</li> </ul>	eport and borings in next submittal. for SW 8th Street in next submittal. aseline tied-in via survey? Include pr utilities within the project limits in ne:		in next submittal.	
code) and NFPA 780 (Standard for b. Expand "Screeding Deck Slat deck interfacing surfaces also meet	the Installation of Lightning Protection Note" to say:TO ENSURE A UN t finish requirements.	on Systems). NFORM TEXTURE OF TH	Cable Systems using Prestressing Steels", NFPA 70 (National Electric FINAL COMPLETED STRUCTURE." to ensure that the CIP and precast	
<ul> <li>c. Rename "Deck Planing and P d. Note 4: If SIP Forms are perr design.</li> </ul>	Profilographing" note title to "Deck Fil mitted, the designer needs to include	nishing" since the short-brid e the dead load (forms and	ge criteria will be used. the weight of the concrete to fill the flutes) which were assumed in the	
e. Future Bearing Replacement:	Include a step to unbolt the bottom	n stay pipe connection (Deta	il B, Sheet B-16) prior to jacking span or incorporate Comment 11.c below.	
f. Per, SDG 2.4.1.E, since bridg	e is higher than 75 ft. Evaluate gus	t factor per ASCE/SEI 7-05	Show gust factor G that was used in General Notes.	
<ul> <li>b. Call-out the existing overhead the vertical distance? Clarify.</li> </ul>	-	hut down? Is this an electri	ine? If so, include voltage. Is the clearance the minimum distance or sing founded on deep foundations and part founded on spread footings. A	
c. Review strain-compatibility im MANUEL FELICIANO	4/22/2016			
progressing the DBF's concept to 9	00% plans. e comments were provided for infon		e is required at this time. These comments are intended to assist in e is required at this time. These comments are intended to assist in	
	e comments were provided for infor	mation only and no respons	e is required at this time. These comments are intended to assist in	

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Thomas Andres

4/25/2016 1

No 108	Statu		Current Holder	Reference	Categories	
	RESI	ACCEPTED		Shts B-4 thru B-7:	STRUCTURES	
Ci	reated By		Created On	Version	Jelegate For	
Provide	iomas Andre	S	3/25/2016	1		
	4. She a. Sho b. Gra water. Pi	eet B-4: bw cross slope on both si dual drainage pipe slope rovide pipe cleanout deta sider the following cross	s will be difficult to maintain. Greate ils during final design and verify tha section shape related issues:	at 8 inch diameter pipe is suffic	ng. Also design-in sufficient longitudinal slope of canopy to avoid ponding ient. kway-web interfaces to reduce the likelihood of cracking at the 90 degree	
	corners.	1.	Add a large 2 -0 charmer at cand	py-web interfaces and at wall	way-web internaces to reduce the internood of clacking at the oo degree	
	post tensi	diagonal Type B member	The inset pipe in the bottom center also an issue at the locations where r anchors appear to conflict with the	at the outer fibers- high comp er of the walkway will likely cre the live end of the PT bar is a drainage pipe.	e (canopy). ression will occur at the top two corners. eate a weak point which will be a crack initiation point due to transverse t the bottom of the truss - if a recess anchor is used. See B-17, Detail 'A'. and the canopy web interface where there is significant interfacing shear	
	between	the elements.				
	a. Spr b. See c. See d. Sho e. Incl	w critical temporary walls	ing requirements. undation layout sheet requirements. s which are required to construct pyl /hich includes requirements for traffi	Ion footing alongside SW 8th	Street. triping restoration of SW 8th Street required to facilitate the Pylon footing	
MA	ANUEL FEL (4) It is ou progressi (5) It is ou progressi (6) It is ou	ICIANO ur understanding that the ng the DBF's concept to ur understanding that the ng the DBF's concept to	90% plans. se comments were provided for info 90% plans. se comments were provided for info	1 ormation only and no response ormation only and no response	.11.2.C. e is required at this time. These comments are intended to assist in e is required at this time. These comments are intended to assist in e is required at this time. These comments are intended to assist in	
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No Staty		Current Holder	Reference	Categories	
-110 RESI	ACCEPTED		Shts. B-9 and B-10	STRUCTURES	
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Thomas An	dres	3/25/2016	1		

<sup>8</sup> Sheets B-9 and B-10:

Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be a. designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such a way that the heel does not spall or crack as the element cambers up and drags on its heel (region 2).

b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments such that members stay in compression. Also predicting where the PT stressing actually goes will be tricky. For instance any forces imposed on web joints affect all members framing into the joint. Longitudinal stressing of the canopy/walkway will tend to go into the stiff web element and not in the canopy/walkway. Also the design needs to pay particular shear lag affects and member interface shear (horizontal shear) through all phases of stressing.

There is a concern with tension behind the compression zone due to longitudinal PT of the walkway at the member ends as the top of the web and canopy element C. gets dragged along (shear lag in region 3).

There appears to be significant shear lag issues in both the canopy and walkway as the stiff web element is being dragged behind the compression zone. The d. designer needs to pay particular attention in these areas. Moving the canopy continuity tendon to the middle tendon spot may improve the issue. Consider adding additional longitudinal tendons in the added 2 ft. corner chamfers (Comment 4.c.i).

e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).

MANUEL FELICIANO

4/22/2016

(8) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans. 4/25/2016

Thomas Andres

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Response Accepted & Comment Closed

No	Status	Current Holder	Reference	Categories	
111	RESPONSE ACCEPTED		Shts B-11 thru B-16:	STRUCTURES	
Cr	eated By	Created On	Version	Delegate For	
Th	omas Andres	3/25/2016	1		of the second seco

Sheets B-11, B-12, B-14, and B-15: Duct radii are less than the minimum radii required by SDG Table 1.11.4-2. Also provide a tangent of 5'-0" at all anchorages industry practice.

Sheet B-13: 10.

Verify stability of the structure during fabrication as the outer two ends of the walkway support beams are cambered upward due to the transverse PT in the deck. a.

The 3 ¾" distance to the flat duct is insufficient when accounting for an outer duct diameter of 1.54". See SDG Table 1.11.4-1. b.

11. Sheet B-16:

The longest pipe (145'-9") will deflect 2.44 inches under its own dead load. This assumes a standard pipe wall thickness. Even thicker walled 16 inch pipes appear to a. be unacceptable solutions. Consider a 20 inch or 24 inch O.D. with an X-Heavy wall thickness for the longest pipe and a standard pipe thickness for the rest.

b. Are the anchor bolts to be embedded in the members? Avoid drill and epoxy options if possible. See suggested detail below in item C to facilitate fit-up.

The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will C. attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of the pipes. Require pipes to be completely sealed against rain intrusion.

 Given the sharply acute angles - How is guality welded insured? Also it is nearly impossible to inspect / perform NDT. 4/22/2016

#### MANUEL FELICIANO

(9) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(10) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(11) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

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Thomas Andres 4/25/2016

	State		Current Holder	Reference	Categories
	RESI.	ACCEPTED	and the second	Shts B-17 and B-2	STRUCTURES
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Thom	has Andres		3/25/2016	1	
	cracking. So b. The P c. In the member. d. Include e. Recom f. The we shrinkage cr inner forms the inner for 13. Shee a. Expan stresses cor b. Outsid c. Requir	ee Comment 8.c above. T bars at the bottom joint case where the bars are e reinforcing and bursting mend showing section v eb truss will be very diffic racking and difficult to stri be allowed to float or will ms to be lined with thin c t B-26: d SPMT support beam do isistent with the plan deta e of the roadway paveme e shop drawings for the S	t intersection member 7 and 8 cor stressed from the bottom, how is g steel details in the next submitta riews for members without PT bar sult to form without shrinkage crack ip without damaging the member. the element be cast in stages? F compressible rubber liners. etails including dimensions from t alls and assumed support conditionent ent limits, the SPMTs will have to	nflict (the bars are in the same stressing accessed? Also if a s. king of the geometrically cons See sketch below. Also ove Recommend a shrinkage redu he end of the precast truss an ons.	In anchor recess is provided at this location, the recess will weaken the atrained members. Concrete placed around rigid inner forms are prone to or the length of the web element how will shrinkage be facilitated will the cing admixture, a staged construction process and possibly call-for all of d analyze/design the precast truss system for the hauling support
	cracking of t	he element. ANO	4/22/2016	1	
(	(12) It is our progressing (13) It is our	understanding that these the DBF's concept to 90	e comments were provided for infe % plans. e comments were provided for infe	•	e is required at this time. These comments are intended to assist in e is required at this time. These comments are intended to assist in
	Response A	ccepted & Comment Clo	sed		
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Thom	Status		Current Holder	Reference	Categories
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Thom F	Status	EACCEPTED	Current Holder.	Shts B-17, B-27 and B	

16. Sheet B-28, Step 5: Include continuity stressing steps. See Comment 7.e above. 4/22/2016

MANUEL FELICIANO

(14) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

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(15) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(16) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans. Thomas Andres 1

4/25/2016

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-114	RES	ACCEPTED		General:	STRUCTURES		
Creat	ted By		Created On	Version	Jelegate For		
Thom	nas An	dres	3/25/2016	1			
	18. 19. 20. 21.	Sheet 10 of 106: Lighting should Sheet 15 of 106: Flat area includ Sheet 16 of 106: Follow CPTED Sheet 17 of 106: Benches should Sheet 55 of 106: Panels create a Sheet 92 of 106: Follow CPTED GO	ed curb element will attract sk standards: Keep tree branche d have center arm rest or simil n opportunity for local artwork	ate boarders. es > 6' above ground, and lar to keep people from sl < – creates ownership and	d ground cover/shubs below 2' i eeping on them.	tall to eliminate hiding places.	
1	Design	Association (CPTED). This would use to enhance wayfinding and or	d include: illuminance levels, li	ighting uniformity, glare c	ontrol, light source color, impac	e Crime Prevention Through Environmental t of lighting on perceived safety/security and	

(19) Understood, the design will follow CPTED standards and will be further detailed in the 90% landscaping submittal. (22)Understood. These details will be further developed and provided in the 90% submittal. Thomas Andres 4/14/2016 1

Comments 1 thru 22 below are for information only. No response is required. The comments are intended to assist in progressing the DBF's concept to 90%.

- 1. General:
  - a. See CADD Manual, pg. 4-41 thru 4-47 for structures plans naming and numbering convention and sheet order.

http://www.dot.state.fl.us/ecso/downloads/publications/manual/CADDManual2015/Files/10.1. 15/CADDManual2015.pdf

- b. Include bridge geotechnical report and borings in next submittal.
- c. Include Traffic Control Plans for SW 8<sup>th</sup> Street in next submittal.
- d. Is the C/L Structure & PGL baseline tied-in via survey? Include project survey control sheets in next submittal.
- e. Locate and show all existing utilities within the project limits in next submittal.
- 2. Sheet B-2:
  - a. Include a note for lightning protection design criteria. fib Bulletin No. 30 "Acceptance of Stay Cable Systems using Prestressing Steels", NFPA 70 (National Electric code) and NFPA 780 (Standard for the Installation of Lightning Protection Systems).
  - b. Expand "Screeding Deck Slab Note" to say: ...TO ENSURE A UNIFORM TEXTURE OF THE FINAL COMPLETED STRUCTURE." to ensure that the CIP and precast deck interfacing surfaces also meet finish requirements.
  - c. Rename "Deck Planing and Profilographing" note title to "Deck Finishing" since the short-bridge criteria will be used.
  - d. Note 4: If SIP Forms are permitted, the designer needs to include the dead load (forms and the weight of the concrete to fill the flutes) which were assumed in the design.
  - e. Future Bearing Replacement: Include a step to unbolt the bottom stay pipe connection (Detail B, Sheet B-16) prior to jacking span or incorporate Comment 11.c below.
  - f. Per, SDG 2.4.1.E, since bridge is higher than 75 ft. Evaluate gust factor per ASCE/SEI 7-05. Show gust factor G that was used in General Notes.
- 3. Sheet B-3:
  - a. See SDM Chapter 7 for PLAN AND ELEVATION DRAWING requirements.
  - b. Call-out the existing overhead utility. Is it to remain? Can it be shut down? Is this an electric line? If so, include voltage. Is the clearance the minimum distance or the vertical distance? Clarify.
  - c. Review strain-compatibility implications created by part of the continuous (for LL) structure being founded on deep foundations and part founded on spread footings.
     Although there is likely surface rock at the site, any settlement of the abutments relative to the pylon need to be accounted for in the design.
- 4. Sheet B-4:
  - a. Show cross slope on both sides of the section.
  - b. Gradual drainage pipe slopes will be difficult to maintain. Greater slopes would be selfcleaning. Also design-in sufficient longitudinal slope of canopy to avoid ponding water.

Provide pipe cleanout details during final design and verify that 8 inch diameter pipe is sufficient.

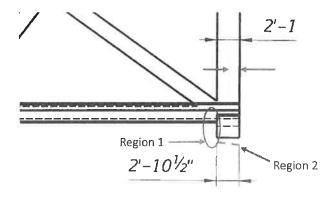
- c. Consider the following cross section shape related issues:
  - i. Add a large 2'-0" chamfer at canopy-web interfaces and at walkway-web interfaces to reduce the likelihood of cracking at the 90 degree corners.
  - ii. Review section for buckling of the unbraced compression flange (canopy).
  - iii. Review the shape of the canopy at the outer fibers- high compression will occur at the top two corners.
  - iv. The inset pipe in the bottom center of the walkway will likely create a weak point which will be a crack initiation point due to transverse post tensioning stresses. This is also an issue at the locations where the live end of the PT bar is at the bottom of the truss - if a recess anchor is used. See B-17, Detail 'A'. Also all diagonal Type B member anchors appear to conflict with the drainage pipe.
  - There is insufficient details of the walkway deck web interface and the canopy web interface where there is significant interfacing shear between the elements.

### 5. Sheet B-5:

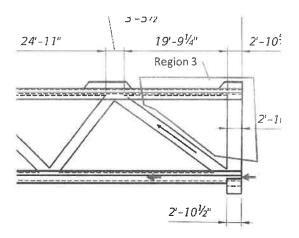
- a. Spread footing layouts do not match B-19 thru B-21.
- b. See SDG 3.8 for spread footing requirements.
- c. See SDM, Chapter 11 for foundation layout sheet requirements.
- d. Show critical temporary walls which are required to construct pylon footing alongside SW 8<sup>th</sup> Street.
- e. Include Roadway Plan Set which includes requirements for traffic control and pavement and striping restoration of SW 8<sup>th</sup> Street required to facilitate the Pylon footing construction under existing roadway.
- Sheets B-6 and B-7: Bury top of footing a minimum of 3'-0" below finished ground per SDG 3.11.2.C.
- 7. Sheet B-8:
  - a. It is unclear why the 3" CIP vertical closure joint is required. Recommend maintaining a 2 ft. closure pour throughout. Issues with the 3" CIP vertical closure joint include:
    - i. Ability to consolidate grout/concrete in the 3" vertical gap.
    - ii. Ability to splice PT bar duct.
    - iii. Ability to accommodate fit-up with hauling defection (SPMTs) shape versus inplace self-weight deflection shape during element placement.
  - b. The vertical PT. ducts located in the precast truss elements (both spans) need to be oversized to facilitate fit-up.
  - c. It is unclear how pylon pier is connected from the underlying pier element-up thru the bottom walkway around the web element and thru the canopy.
  - d. Show duct for the continuity tendon in Section A-A.
  - e. Experience has shown that full-continuous-for-LL behavior which is assumed in design may not be achieved in the structure because of camber growth over time. Consider adding additional continuity bars/tendons in the bottom walkway element and sequence construction as follows: Pour walkway closure, stress walkway continuity

bars/tendons, pour remaining closure, and then stress canopy continuity tendons. That way the bottom is pre-compressed in the vent of camber growth.

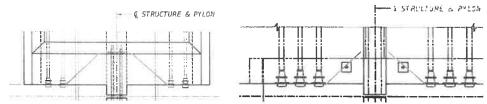
- 8. Sheets B-9 and B-10:
  - a. Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such a way that the heel does not spall or crack as the element cambers up and drags on its heel (region 2).



- b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments such that members stay in compression. Also predicting where the PT stressing actually goes will be tricky. For instance any forces imposed on web joints affect all members framing into the joint. Longitudinal stressing of the canopy/walkway will tend to go into the stiff web element and not in the canopy/walkway. Also the design needs to pay particular shear lag affects and member interface shear (horizontal shear) through all phases of stressing.
- c. There is a concern with tension behind the compression zone due to longitudinal PT of the walkway at the member ends as the top of the web and canopy element gets dragged along (shear lag in region 3).

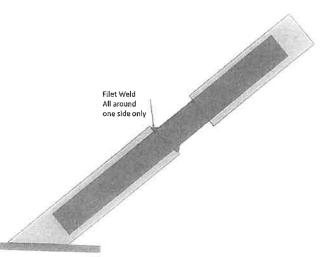


d. There appears to be significant shear lag issues in both the canopy and walkway as the stiff web element is being dragged behind the compression zone. The designer needs to pay particular attention in these areas. Moving the canopy continuity tendon to the middle tendon spot may improve the issue. Consider adding addional longitudinal tendons in the added 2 ft. corner chamfers (Comment 4.c.i).



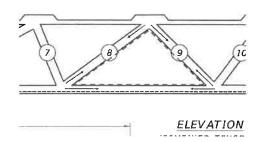
- e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).
- 9. Sheets B-11, B-12, B-14, and B-15: Duct radii are less than the minimum radii required by SDG Table 1.11.4-2. Also provide a tangent of 5'-0" at all anchorages industry practice.
- 10. Sheet B-13:
  - a. Verify stability of the structure during fabrication as the outer two ends of the walkway support beams are cambered upward due to the transverse PT in the deck.
  - b. The 3 ¾" distance to the flat duct is insufficient when accounting for an outer duct diameter of 1.54". See SDG Table 1.11.4-1.
- 11. Sheet B-16:
  - a. The longest pipe (145'-9") will deflect 2.44 inches under its own dead load. This assumes a standard pipe wall thickness. Even thicker walled 16 inch pipes appear to be unacceptable solutions. Consider a 20 inch or 24 inch O.D. with an X-Heavy wall thickness for the longest pipe and a standard pipe thickness for the rest.
  - b. Are the anchor bolts to be embedded in the members? Avoid drill and epoxy options if possible. See suggested detail below in item C to facilitate fit-up.

c. The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of the pipes. Require pipes to be completely sealed against rain intrusion.



- d. Given the sharply acute angles How is quality welded insured? Also it is nearly impossible to inspect / perform NDT.
- 12. Sheet B-17:
  - a. See comment 8 above regarding providing a detailed stressing sequence. All web members may have to be stressed (even members 1, 9, 11 thru 14 and 24) to avoid cracking. See Comment 8.c above.
  - b. The PT bars at the bottom joint intersection member 7 and 8 conflict (the bars are in the same vertical plane).
  - In the case where the bars are stressed from the bottom, how is stressing accessed?
     Also if an anchor recess is provided at this location, the recess will weaken the member.
  - d. Include reinforcing and bursting steel details in the next submittal.
  - e. Recommend showing section views for members without PT bars.

f. The web truss will be very difficult to form without shrinkage cracking of the geometrically constrained members. Concrete placed around rigid inner forms are prone to shrinkage cracking and difficult to strip without damaging the member. See sketch below. Also over the length of the web element how will shrinkage be facilitated – will the inner forms be allowed to float or will the element be cast in stages? Recommend a shrinkage reducing admixture, a staged construction process and possibly call-for all of the inner forms to be lined with thin compressible rubber liners.



- 13. Sheet B-26:
  - a. Expand SPMT support beam details including dimensions from the end of the precast truss and analyze/design the precast truss system for the hauling support stresses consistent with the plan details and assumed support conditions.
  - Outside of the roadway pavement limits, the SPMTs will have to roll on steel plates or mats. Show on this sheet or B-27.
  - c. Require shop drawings for the SPMT move in final plans give requirements related to maximum twist and differential boundary conditions during the move to avoid cracking of the element.
- 14. Sheet B-27 and B-17: For the CIP truss span, it is unclear how the bottom live-end PT bar for member 23 can be stressed with the support/abutment in the way. Also see Comment 12.c above regarding stressing access with the forming system in the way.
- 15. Sheets B-27 and B-28: Expand to include member fabrication forming and stressing, and continuity stressing steps in sufficient detail.
- 16. Sheet B-28, Step 5: Include continuity stressing steps. See Comment 7.e above.
- 17. Sheet 10 of 106: Lighting should meet IESNA and CPTED (crime prevention strategies thru environmental design).
- 18. Sheet 15 of 106: Flat area included curb element will attract skate boarders.
- 19. Sheet 16 of 106: Follow CPTED standards: Keep tree branches > 6' above ground, and ground cover/shubs below 2' tall to eliminate hiding places.
- 20. Sheet 17 of 106: Benches should have center arm rest or similar to keep people from sleeping on them.
- 21. Sheet 55 of 106: Panels create an opportunity for local artwork creates ownership and reduces vandalism.
- 22. Sheet 92 of 106: Follow CPTED Guidelines cut off fixture, reduced glare, etc.

Submitta `ep	ort		
Financial Projec	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE II	Submital Staff Type:	CONSULTANT
Recieved Date:	5/10/2016	Response Due Date:	6/16/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	5/10/2016
Create User Id:	PD601MI	Last Update:	5/10/2016
		Last Update User Id:	PD601MI

Description:

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 5/10/2016 Comments Due Date: 5/23/2016 Days Allowed for Review: 14 Review Meeting: 6/16/2016 2:00 PM to 4:00 PM @ TBD if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Section: Phase: 90% Foundation Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book Work Program Construction Budget: Production Date: DESIGN- BUILD Threads:

		Current Holder	Reference	Categories
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			e 90% foundation submitta	al. Please check the structural calculations that contain all the necessary
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lt was agree	ed that the foundations wo	ould be designed with a small rese	erve so that the superstruc	sture comments could be resolved at a future date.
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Verify the 12	27 ton uplift resistance rec	quirement. It is not clear why suc	h a large up-lift resistance	is required (simple span dead loads and continuous live loads).
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The uplift re	sistance requirement is to	> meet the wind loading demand i	in accordance with the pro	ject design criteria.
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responses from the originator of the design along with the signed independent review certification letter for the 90% Foundations Submittal. Thomas Andres 9/19/2016 1

Comments 1 thru 22 below are for information only. No response is required. The comments are intended to assist in progressing the DBF's concept to 90%.

- 1. General:
  - a. See CADD Manual, pg. 4-41 thru 4-47 for structures plans naming and numbering convention and sheet order.

### http://www.dot.state.fl.us/ecso/downloads/publications/manual/CADDManual2015/Files/10.1. 15/CADDManual2015.pdf

- b. Include bridge geotechnical report and borings in next submittal.
- c. Include Traffic Control Plans for SW 8th Street in next submittal.
- d. Is the C/L Structure & PGL baseline tied-in via survey? Include project survey control sheets in next submittal.
- e. Locate and show all existing utilities within the project limits in next submittal.
- 2. Sheet B-2:
  - a. Include a note for lightning protection design criteria. fib Bulletin No. 30 "Acceptance of Stay Cable Systems using Prestressing Steels", NFPA 70 (National Electric code) and NFPA 780 (Standard for the Installation of Lightning Protection Systems).
  - b. Expand "Screeding Deck Slab Note" to say: ...TO ENSURE A UNIFORM TEXTURE OF THE FINAL COMPLETED STRUCTURE." to ensure that the CIP and precast deck interfacing surfaces also meet finish requirements.
  - c. Rename "Deck Planing and Profilographing" note title to "Deck Finishing" since the short-bridge criteria will be used.
  - d. Note 4: If SIP Forms are permitted, the designer needs to include the dead load (forms and the weight of the concrete to fill the flutes) which were assumed in the design.
  - e. Future Bearing Replacement: Include a step to unbolt the bottom stay pipe connection (Detail B, Sheet B-16) prior to jacking span or incorporate Comment 11.c below.
  - f. Per, SDG 2.4.1.E, since bridge is higher than 75 ft. Evaluate gust factor per ASCE/SEI 7-05. Show gust factor G that was used in General Notes.
- 3. Sheet B-3:
  - a. See SDM Chapter 7 for PLAN AND ELEVATION DRAWING requirements.
  - b. Call-out the existing overhead utility. Is it to remain? Can it be shut down? Is this an electric line? If so, include voltage. Is the clearance the minimum distance or the vertical distance? Clarify.
  - c. Review strain-compatibility implications created by part of the continuous (for LL) structure being founded on deep foundations and part founded on spread footings.
     Although there is likely surface rock at the site, any settlement of the abutments relative to the pylon need to be accounted for in the design.
- 4. Sheet B-4:
  - a. Show cross slope on both sides of the section.
  - b. Gradual drainage pipe slopes will be difficult to maintain. Greater slopes would be selfcleaning. Also design-in sufficient longitudinal slope of canopy to avoid ponding water.

Provide pipe cleanout details during final design and verify that 8 inch diameter pipe is sufficient.

- c. Consider the following cross section shape related issues:
  - i. Add a large 2'-0" chamfer at canopy-web interfaces and at walkway-web interfaces to reduce the likelihood of cracking at the 90 degree corners.
  - ii. Review section for buckling of the unbraced compression flange (canopy).
  - iii. Review the shape of the canopy at the outer fibers- high compression will occur at the top two corners.
  - iv. The inset pipe in the bottom center of the walkway will likely create a weak point which will be a crack initiation point due to transverse post tensioning stresses. This is also an issue at the locations where the live end of the PT bar is at the bottom of the truss - if a recess anchor is used. See B-17, Detail 'A'. Also all diagonal Type B member anchors appear to conflict with the drainage pipe.
  - v. There is insufficient details of the walkway deck web interface and the canopy web interface where there is significant interfacing shear between the elements.

### 5. Sheet B-5:

- a. Spread footing layouts do not match B-19 thru B-21.
- b. See SDG 3.8 for spread footing requirements.
- c. See SDM, Chapter 11 for foundation layout sheet requirements.
- d. Show critical temporary walls which are required to construct pylon footing alongside SW 8<sup>th</sup> Street.
- e. Include Roadway Plan Set which includes requirements for traffic control and pavement and striping restoration of SW 8<sup>th</sup> Street required to facilitate the Pylon footing construction under existing roadway.
- 6. Sheets B-6 and B-7: Bury top of footing a minimum of 3'-0" below finished ground per SDG 3.11.2.C.
- 7. Sheet B-8:

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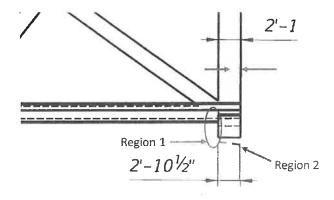
- a. It is unclear why the 3" CIP vertical closure joint is required. Recommend maintaining a 2 ft. closure pour throughout. Issues with the 3" CIP vertical closure joint include:
  - i. Ability to consolidate grout/concrete in the 3" vertical gap.
  - ii. Ability to splice PT bar duct.
  - iii. Ability to accommodate fit-up with hauling defection (SPMTs) shape versus inplace self-weight deflection shape during element placement.
- b. The vertical PT. ducts located in the precast truss elements (both spans) need to be oversized to facilitate fit-up.
- c. It is unclear how pylon pier is connected from the underlying pier element-up thru the bottom walkway around the web element and thru the canopy.
- d. Show duct for the continuity tendon in Section A-A.
- e. Experience has shown that full-continuous-for-LL behavior which is assumed in design may not be achieved in the structure because of camber growth over time. Consider adding additional continuity bars/tendons in the bottom walkway element and sequence construction as follows: Pour walkway closure, stress walkway continuity

bars/tendons, pour remaining closure, and then stress canopy continuity tendons. That way the bottom is pre-compressed in the vent of camber growth.

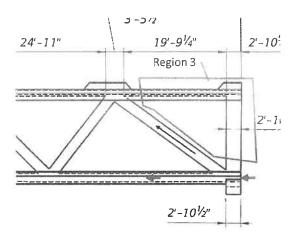
8. Sheets B-9 and B-10:

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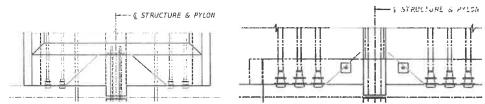
a. Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such a way that the heel does not spall or crack as the element cambers up and drags on its heel (region 2).



- b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments such that members stay in compression. Also predicting where the PT stressing actually goes will be tricky. For instance any forces imposed on web joints affect all members framing into the joint. Longitudinal stressing of the canopy/walkway will tend to go into the stiff web element and not in the canopy/walkway. Also the design needs to pay particular shear lag affects and member interface shear (horizontal shear) through all phases of stressing.
- c. There is a concern with tension behind the compression zone due to longitudinal PT of the walkway at the member ends as the top of the web and canopy element gets dragged along (shear lag in region 3).

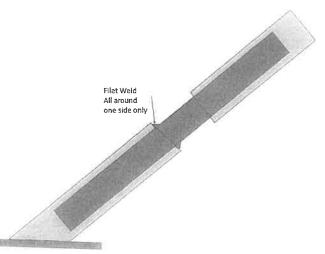


d. There appears to be significant shear lag issues in both the canopy and walkway as the stiff web element is being dragged behind the compression zone. The designer needs to pay particular attention in these areas. Moving the canopy continuity tendon to the middle tendon spot may improve the issue. Consider adding addional longitudinal tendons in the added 2 ft. corner chamfers (Comment 4.c.i).



- e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).
- 9. Sheets B-11, B-12, B-14, and B-15: Duct radii are less than the minimum radii required by SDG Table 1.11.4-2. Also provide a tangent of 5'-0" at all anchorages industry practice.
- 10. Sheet B-13:
  - a. Verify stability of the structure during fabrication as the outer two ends of the walkway support beams are cambered upward due to the transverse PT in the deck.
  - b. (The 3 ¾" distance to the flat duct is insufficient when accounting for an outer duct diameter of 1.54". See SDG Table 1.11.4-1.
- 11. Sheet B-16:
  - a. The longest pipe (145'-9") will deflect 2.44 inches under its own dead load. This assumes a standard pipe wall thickness. Even thicker walled 16 inch pipes appear to be unacceptable solutions. Consider a 20 inch or 24 inch O.D. with an X-Heavy wall thickness for the longest pipe and a standard pipe thickness for the rest.
  - b. Are the anchor bolts to be embedded in the members? Avoid drill and epoxy options if possible. See suggested detail below in item C to facilitate fit-up.

c. The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of the pipes. Require pipes to be completely sealed against rain intrusion.

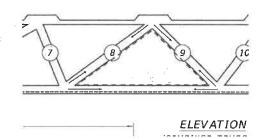


- d. Given the sharply acute angles How is quality welded insured? Also it is nearly impossible to inspect / perform NDT.
- 12. Sheet B-17:

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- a. See comment 8 above regarding providing a detailed stressing sequence. All web members may have to be stressed (even members 1, 9, 11 thru 14 and 24) to avoid cracking. See Comment 8.c above.
- b. The PT bars at the bottom joint intersection member 7 and 8 conflict (the bars are in the same vertical plane).
- (c.) In the case where the bars are stressed from the bottom, how is stressing accessed?
   Also if an anchor recess is provided at this location, the recess will weaken the member.
- d. Include reinforcing and bursting steel details in the next submittal.
- e. Recommend showing section views for members without PT bars.

f. The web truss will be very difficult to form without shrinkage cracking of the geometrically constrained members. Concrete placed around rigid inner forms are prone to shrinkage cracking and difficult to strip without damaging the member. See sketch below. Also over the length of the web element how will shrinkage be facilitated – will the inner forms be allowed to float or will the element be cast in stages? Recommend a shrinkage reducing admixture, a staged construction process and possibly call-for all of the inner forms to be lined with thin compressible rubber liners.



- 13. Sheet B-26:
  - a. Expand SPMT support beam details including dimensions from the end of the precast truss and analyze/design the precast truss system for the hauling support stresses consistent with the plan details and assumed support conditions.
  - b. Outside of the roadway pavement limits, the SPMTs will have to roll on steel plates or mats. Show on this sheet or B-27.
  - c. Require shop drawings for the SPMT move in final plans give requirements related to maximum twist and differential boundary conditions during the move to avoid cracking of the element.
- 14. Sheet B-27 and B-17: For the CIP truss span, it is unclear how the bottom live-end PT bar for member 23 can be stressed with the support/abutment in the way. Also see Comment 12.c above regarding stressing access with the forming system in the way.
- 15. Sheets B-27 and B-28: Expand to include member fabrication forming and stressing, and continuity stressing steps in sufficient detail.
- 16. Sheet B-28, Step 5: Include continuity stressing steps. See Comment 7.e above.
- 17. Sheet 10 of 106: Lighting should meet IESNA and CPTED (crime prevention strategies thru environmental design).
- 18. Sheet 15 of 106: Flat area included curb element will attract skate boarders.
- 19. Sheet 16 of 106: Follow CPTED standards: Keep tree branches > 6' above ground, and ground cover/shubs below 2' tall to eliminate hiding places.
- 20. Sheet 17 of 106: Benches should have center arm rest or similar to keep people from sleeping on them.
- 21. Sheet 55 of 106: Panels create an opportunity for local artwork creates ownership and reduces vandalism.
- 22. Sheet 92 of 106: Follow CPTED Guidelines cut off fixture, reduced glare, etc.

Submitta `ep	port		
Financial Project	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	6/15/2016	Response Due Date:	7/13/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	6/15/2016
Create User Id:	PD601MI	Last Update:	10/17/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 6/16/2016 Comments Due Date: 7/1/2016 Days Allowed for Review: 16 Review Meeting: 7/13/2016 9:00 AM to 11:00 AM @ TBD no meeting schedule Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail:

Phone

Section: Phase: 90% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

## Threads:

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C/D ratios for all the substructure components supporting the bridge. 7/28/2016

Thomas Andres

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sta de MANUE	The 90% Substructure Component Package did not include an independent peer review as required by PPM 26.3.2 and PPM 26.12. Although the structure is a fake cable stay, it is designed for simple span dead load made continuous for live loads; it also is classified as unique bridge type with component-to-component configurations and details not normally used in Florida. We therefore request that the resubmitted 90% Foundation Component Package include a peer review. MANUEL FELICIANO 7/21/2016 1								
	s agreed at the meeting held on 6 FC submittal.	3/30/2016 between FDOT Central O	office, FIU, and FIGG, the inde	ependent peer review for the substructure will be included prior to the					
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a. b. su c. eff MANUE a) b) c) be Thomas Re No St 5 Ri Creater Thomas Ve	Indicate that concrete for the Section C-C: Contact splice abmittal). Will there be any interfacing s fects on the grouted shim joint. S EL FELICIANO A note will be added indicating the The dowel detail has been further Yes, there will be interfacing ster- teen analyzed and its effect on the s Andres esponse Accepted & Comment C tatus ESPONSE ACCEPTED d By s Andres	at footing-pylon connection: The 2 steel between the pylon and the CIP See previous 30% comment related 7/21/2016 hat the base of the pylon is a mass of er coordinated. el between the pylon and the CIP sp e grouted joint is not significant. 7/28/2016 Closed Current Holder Created On 6/17/2016	e span? See General comme to continuous for LL designs. 1 concrete pour. ban. The submittal will show t 1 <b>Reference</b> 5. Sheets B-2, B-70 thru B-83: <b>Version</b> 1	nt above. The concern is potential camber-growth over time and the he requested reinforcement details. The effect of the camber-growth h Categories STRUCTURES Delegate For					

### FIU 90% Substructure Component Plans Review

- General: The RFP requires sufficient information in component submittals to allow for a
  complete review. As previously stated in the 90% Foundation Component Submittals review
  comments sufficient backup information necessary to substantiate the loading on the
  substructure elements was not included in the this 90% substructure Component Submittal
  Package. In addition, the previous 30% comments questioned many of the design assumptions
  related to the bridge superstructure and cross section. See the highlighted comments in
  attached pdf. For this reason, the 90% Substructure Component Submittal needs to be
  resubmitted with the necessary back-up information and comment responses to substantiate
  the loading on the foundations
- 2. General: The 90% Substructure Component Package did not include an independent peer review as required by PPM 26.3.2 and PPM 26.12. Although the structure is a fake cable stay, it is designed for simple span dead load made continuous for live loads; it also is classified as unique bridge type with component-to-component configurations and details not normally used in Florida. We therefore request that the resubmitted 90% Foundation Component Package include a peer review.
- 3. Sheet B-1: The 90% Substructure Component Submittal is missing the pylon truss system connection details (Sheets B-36 and B-37). The 90% Substructure Component Submittal is missing the pylon diaphragm dimensions and reinforcing and the upper pylon dimensions and reinforcing (Sheets B-24 and B-25). The RFP requires sufficient information in component submittals to allow for a complete review. Also the FDOT Boilerplate states that partial submittals will not be allowed. (i.e. Further dividing the foundation, substructure, or superstructure into Pier 2, Abutment 1, Span 4, etc will not be accepted). It is important that the interfacing elements be provided so that a complete review can be performed.
- 4. Sheet B-23:
  - a. Indicate that concrete for the pylon is to be mass concrete.
  - Section C-C: Contact splice at footing-pylon connection: The 2 x 13 inner 11P01 bars does not match the 2 x 11 Pylon dowels shown on Sheet B-10 (previous submittal).
  - c. Will there be any interfacing steel between the pylon and the CIP span? See Comment 3 above. The concern is potential camber-growth over time and the effects on the grouted shim joint. See previous 30% comment related to continuous for LL designs.
- 5. **Sheets B-2, B-70 thru B-83:** Verify that all concrete covers meet the requirements of SDG Table 1.4.2-1. See table below for Department interpretation of requirements.

Sheet, Element Description	Cover Based on Moderately Aggressive Substructure and Superstructure		
B-70, B-78: Landing Bent	3", except for bearing pedestal 2"		
B-71: Upper Landing	Columns (Section E-E) 3", everything else 2"		
B-72, B-75, B-76, B-80, B-83: Stairs	2″		
B-73, B-74: Electrical Room	Columns (Section A-A and B-B) 3", everything else 2"		

B-78: Upper Landing	Columns (Section D-D) 3", everything else 2"
B-81: Electrical Room	Columns (Section A-A) 3", everything else 2"

Comments 1 thru 22 below are for information only. No response is required. The comments are intended to assist in progressing the DBF's concept to 90%.

- 1. General:
  - a. See CADD Manual, pg. 4-41 thru 4-47 for structures plans naming and numbering convention and sheet order.

http://www.dot.state.fl.us/ecso/downloads/publications/manual/CADDManual2015/Files/10.1. 15/CADDManual2015.pdf

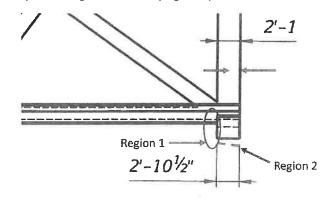
- b. Include bridge geotechnical report and borings in next submittal.
- c. Include Traffic Control Plans for SW 8<sup>th</sup> Street in next submittal.
- d. Is the C/L Structure & PGL baseline tied-in via survey? Include project survey control sheets in next submittal.
- e. Locate and show all existing utilities within the project limits in next submittal.
- 2. Sheet B-2:
  - a. Include a note for lightning protection design criteria. fib Bulletin No. 30 "Acceptance of Stay Cable Systems using Prestressing Steels", NFPA 70 (National Electric code) and NFPA 780 (Standard for the Installation of Lightning Protection Systems).
  - b. Expand "Screeding Deck Slab Note" to say: ...TO ENSURE A UNIFORM TEXTURE OF THE FINAL COMPLETED STRUCTURE." to ensure that the CIP and precast deck interfacing surfaces also meet finish requirements.
  - c. Rename "Deck Planing and Profilographing" note title to "Deck Finishing" since the short-bridge criteria will be used.
  - d. Note 4: If SIP Forms are permitted, the designer needs to include the dead load (forms and the weight of the concrete to fill the flutes) which were assumed in the design.
  - e. Future Bearing Replacement: Include a step to unbolt the bottom stay pipe connection (Detail B, Sheet B-16) prior to jacking span or incorporate Comment 11.c below.
  - f. Per, SDG 2.4.1.E, since bridge is higher than 75 ft. Evaluate gust factor per ASCE/SEI 7-05. Show gust factor G that was used in General Notes.
- 3. Sheet B-3:
  - a. See SDM Chapter 7 for PLAN AND ELEVATION DRAWING requirements.
  - b. Call-out the existing overhead utility. Is it to remain? Can it be shut down? Is this an electric line? If so, include voltage. Is the clearance the minimum distance or the vertical distance? Clarify.
  - c. Review strain-compatibility implications created by part of the continuous (for LL) structure being founded on deep foundations and part founded on spread footings.
     Although there is likely surface rock at the site, any settlement of the abutments relative to the pylon need to be accounted for in the design.
- 4. Sheet B-4:
  - a. Show cross slope on both sides of the section.
  - b. Gradual drainage pipe slopes will be difficult to maintain. Greater slopes would be selfcleaning. Also design-in sufficient longitudinal slope of canopy to avoid ponding water.

Provide pipe cleanout details during final design and verify that 8 inch diameter pipe is sufficient.

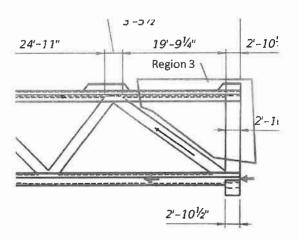
- c. Consider the following cross section shape related issues:
  - i. Add a large 2'-0" chamfer at canopy-web interfaces and at walkway-web interfaces to reduce the likelihood of cracking at the 90 degree corners.
  - ii. Review section for buckling of the unbraced compression flange (canopy).
  - (iii. Review the shape of the canopy at the outer fibers- high compression will occur at the top two corners.
  - (iv. (The inset pipe in the bottom center of the walkway will likely create a weak point which will be a crack initiation point due to transverse post tensioning, stresses. This is also an issue at the locations where the live end of the PT bar is (at the bottom of the truss - if a recess anchor is used., See B-17, Detail 'A'." Also all diagonal Type B member anchors appear to conflict with the drainage pipe.
  - v. There is insufficient details of the walkway deck web interface and the canopy web interface where there is significant interfacing shear between the elements.
- 5. Sheet B-5:
  - a. Spread footing layouts do not match B-19 thru B-21.
  - b. See SDG 3.8 for spread footing requirements.
  - c. See SDM, Chapter 11 for foundation layout sheet requirements.
  - d. Show critical temporary walls which are required to construct pylon footing alongside SW 8<sup>th</sup> Street.
  - e. Include Roadway Plan Set which includes requirements for traffic control and pavement and striping restoration of SW 8<sup>th</sup> Street required to facilitate the Pylon footing construction under existing roadway.
- Sheets B-6 and B-7: Bury top of footing a minimum of 3'-0" below finished ground per SDG 3.11.2.C.
- 7. Sheet B-8:
  - a. It is unclear why the 3" CIP vertical closure joint is required. Recommend maintaining a 2 ft. closure pour throughout. Issues with the 3" CIP vertical closure joint include:
    - i. Ability to consolidate grout/concrete in the 3" vertical gap.
    - ii. Ability to splice PT bar duct.
    - iii. Ability to accommodate fit-up with hauling defection (SPMTs) shape versus inplace self-weight deflection shape during element placement.
  - b. The vertical PT. ducts located in the precast truss elements (both spans) need to be oversized to facilitate fit-up.
  - c. It is unclear how pylon pier is connected from the underlying pier element-up thru the bottom walkway around the web element and thru the canopy.
  - d. Show duct for the continuity tendon in Section A-A.
  - e. Experience has shown that full-continuous-for-LL behavior which is assumed in design may not be achieved in the structure because of camber growth over time. Consider adding additional continuity bars/tendons in the bottom walkway element and sequence construction as follows: Pour walkway closure, stress walkway continuity

bars/tendons, pour remaining closure, and then stress canopy continuity tendons. That way the bottom is pre-compressed in the vent of camber growth.

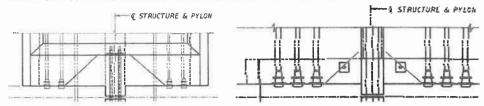
- 8. Sheets B-9 and B-10:
  - a. Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such a way that the heel does not spall or crack as the element cambers up and drags on its heel (region 2).



- b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments such that members stay in compression. Also predicting where the PT stressing actually goes will be tricky. For instance any forces imposed on web joints affect all members framing into the joint. Longitudinal stressing of the canopy/walkway will tend to go into the stiff web element and not in the canopy/walkway. Also the design needs to pay particular shear lag affects and member interface shear (horizontal shear) through all phases of stressing.
- c. There is a concern with tension behind the compression zone due to longitudinal PT of the walkway at the member ends as the top of the web and canopy element gets dragged along (shear lag in region 3).

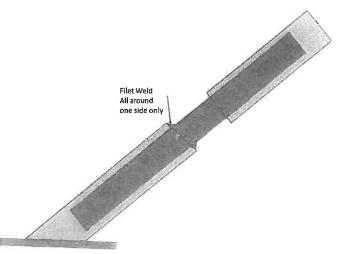


d. There appears to be significant shear lag issues in both the canopy and walkway as the stiff web element is being dragged behind the compression zone. The designer needs to pay particular attention in these areas. Moving the canopy continuity tendon to the middle tendon spot may improve the issue. Consider adding addional longitudinal tendons in the added 2 ft. corner chamfers (Comment 4.c.i).



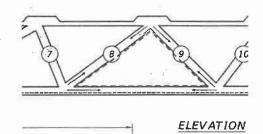
- e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).
- Sheets B-11, B-12, B-14, and B-15: Duct radii are less than the minimum radii required by SDG (Table 1.11.4-2. Also provide a tangent of 5'-0" at all anchorages - industry practice.
- 10. Sheet B-13:
  - a. Verify stability of the structure during fabrication as the outer two ends of the walkway support beams are cambered upward due to the transverse PT in the deck.
  - (b. The 3 ¼" distance to the flat duct is insufficient when accounting for an outer duct diameter of 1.54". See SDG Table 1.11.4-1.
- 11. Sheet B-16:
  - a. The longest pipe (145'-9") will deflect 2.44 inches under its own dead load. This assumes a standard pipe wall thickness. Even thicker walled 16 inch pipes appear to be unacceptable solutions. Consider a 20 inch or 24 inch O.D. with an X-Heavy wall thickness for the longest pipe and a standard pipe thickness for the rest.
  - b. Are the anchor bolts to be embedded in the members? Avoid drill and epoxy options if possible. See suggested detail below in item C to facilitate fit-up.

c. The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of the pipes. Require pipes to be completely sealed against rain intrusion.



- d. Given the sharply acute angles How is quality welded insured? Also it is nearly impossible to inspect / perform NDT.
- 12. Sheet B-17:
  - a. See comment 8 above regarding providing a detailed stressing sequence. All web members may have to be stressed (even members 1, 9, 11 thru 14 and 24) to avoid cracking. See Comment 8.c above.
  - (b. (The PT bars at the bottom joint intersection member 7 and 8 conflict (the bars are in the same vertical plane).
  - c. (In the case where the bars are stressed from the bottom, how is stressing accessed? (Also if an anchor recess is provided at this location; the recess will weaken the member.
  - d. Include reinforcing and bursting steel details in the next submittal.
  - e. (Recommend showing section views for members without PT bars. :

f. The web truss will be very difficult to form without shrinkage cracking of the geometrically constrained members. Concrete placed around rigid inner forms are prone to shrinkage cracking and difficult to strip without damaging the member. See sketch below. Also over the length of the web element how will shrinkage be facilitated – will the inner forms be allowed to float or will the element be cast in stages? Recommend a shrinkage reducing admixture, a staged construction process and possibly call-for all of the inner forms to be lined with thin compressible rubber liners.



- 13. Sheet B-26:
  - a. Expand SPMT support beam details including dimensions from the end of the precast truss and analyze/design the precast truss system for the hauling support stresses consistent with the plan details and assumed support conditions.
  - b. Outside of the roadway pavement limits, the SPMTs will have to roll on steel plates or mats. Show on this sheet or B-27.
  - c. Require shop drawings for the SPMT move in final plans give requirements related to maximum twist and differential boundary conditions during the move to avoid cracking of the element.
- 14. Sheet B-27 and B-17: For the CIP truss span, it is unclear how the bottom live-end PT bar for member 23 can be stressed with the support/abutment in the way. Also see Comment 12.c above regarding stressing access with the forming system in the way.
- (15. Sheets B-27 and B-28: Expand to include member fabrication forming and stressing, and continuity stressing steps in sufficient detail.
- 16. Sheet B-28, Step 5: Include continuity stressing steps. See Comment 7.e above.
- 17. Sheet 10 of 106: Lighting should meet IESNA and CPTED (crime prevention strategies thru environmental design).
- 18. Sheet 15 of 106: Flat area included curb element will attract skate boarders.
- Sheet 16 of 106: Follow CPTED standards: Keep tree branches > 6' above ground, and ground cover/shubs below 2' tall to eliminate hiding places.
- 20. Sheet 17 of 106: Benches should have center arm rest or similar to keep people from sleeping on them.
- Sheet 55 of 106: Panels create an opportunity for local artwork creates ownership and reduces vandalism.
- 22. Sheet 92 of 106: Follow CPTED Guidelines cut off fixture, reduced glare, etc.

Submitta ep	ort		
Financial Projec	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	6/29/2016	Response Due Date:	7/29/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	6/29/2016
Create User Id:	PD601MI	Last Update:	10/24/2016
		Last Update User Id:	PD601MI

Description:

434688-1: Bulkhead Wall at Tamiami Canal for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 6/28/2016 Comments Due Date: 7/13/2016 Days Allowed for Review: 16 Review Meeting: 7/29/2016 9:00 AM to 12:00 PM @ TBD, Schedule if needed Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail: Phone Section: Phase: 90% Bulkhead wall at Tamiami canal Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

Threads:

No Stati		Current Holder	Reference	Categories
48. ~ RESI	ACCEPTED		Sheet BW-1	JTRUCTURES
Created B	y	Created On	Version	Jelegate For
Thomas Ar	dres	7/13/2016	1	
length b. Filt	. The concern is that soil fine er Fabric Placement Detail: T	s will migrate through the open joir	<ol> <li>Require filter fabric to</li> </ol>	n vertical therefore the panels will not likely bear on both piles for their full be attached to back-of-wall across panels via an approved mastic. f-rock in a few locations. Is it the EOR's intent that the toe be preformed?
These MANUEL F	comments require a written n ELICIANO	esponse. 8/16/2016	1	
b) All j draina	panels will be embedded a mi ge plans. A trench will be exc	panel joints via approved mastic. nimum of 2 ft below top of natural i avated to set the panels given the requirements for grouting the toe	hard natural limestone. 1	be excavated to achieve the proposed cross section as shown on the The purpose of setting the panels into the limestone is to avoid soil migration
Thomas An	dres	8/18/2016	1	
Respo	onse Accepted & Comment Cl	osed		
No Statu	S	Current Holder	Reference	Categories
49 RESF	ONSE ACCEPTED		Sheet BW-7:	STRUCTURES
Created By	7	Created On	Version	Delegate For
Thomas An	dres	7/13/2016	1	
a. No	te 5: Expand note for galvania	zing to include nuts, bearing plates	and couplers.	
b. Sec	tion A-A: The anchor bars ap	pear to go-through the proposed fo	oundations. Please addre	ss the following:
II. Cla	the design of the retaining wa rify if the PVC pipe shown on d Footing Settlement on possi		e spread footing surcharg to the spread footings. If	le loadings? so, address how concrete cover will be maintained. If not, address impact of
These MANUEL F	comments require a written re ELICIANO	esponse. 8/2/2016	1	
b) Yes		cent foundations has been include		to include appropriate notes with respect to cover.

c) Yes, PVC pipe will be embedded into spread footing. We will coordinate with bridge designer to include appropriate notes with respect to cover. Thomas Andres 8/18/2016 1

Submitta : > > p	ort		
Financial Projec	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	7/14/2016	Response Due Date:	8/17/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	7/14/2016
Create User Id:	PD601MI	Last Update:	7/14/2016
		Last Update User Id:	PD601MI

Description:

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 7/15/2016 Comments Due Date: 8/3/2016 Days Allowed for Review: 20 Review Meeting: 8/17/2016 9:30 AM to 11:00 AM @ Conference room B (If needed) Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone # Section: Phase: 90% Foundation Design-Resubmittal Review Meeting will be schedule if needed Design Criteria is Florida Green Book Work Program Construction Budget: Production Date: DESIGN- BUILD Threads:

	Stati		Current Holder	Reference	Categories	
1 .	RESIV	ACCEPTED		Calculations Gener	STRUCTURES	
	Created By Thomas Andres	<	Created On 7/15/2016	Version	Jelegate For	
	The reserve capacity for the various spread footings appear to enough to account for any future design refinements to the superstructure (all C/Ds ≥ 1.12). However the calculations for the pylon pile compression C/D = 1.04, and the pile geotechnical capacity C/D ratio =1.00. See attached.					
	We are thinking that a 6-8% reserve would be a reasonable cushion in order to relax the project contract requirements which would allow superstructure design refinements to occur later so that we could move forward with the 90% foundation submitta! package.					
ľ	Either resolve the outstanding superstructure comments or resubmit the plans and calcs. for the pylon to give a larger C/D cushion. MANUEL FELICIANO 7/19/2016 1					
Ţ	Resistance factored de the pile dat	<sup>,</sup> of 450 tons. We agreed sign load divided by the i	I to show the required nominal bear resistance factor (phi). As I mentior	ring resistance (RNBR) in the ned to you, the original design	(Sheet B-9) showing the maximum "Required Nominal Bearing "installation criteria" of the Pile Data Table instead of showing the assumed a nominal bearing resistance of 450 tons despite the fact that stance factor. Also attached is a summary of the calculations showing	
	Will base re	eview on this response.				
No	Status		Current Holder	Reference	Categories	
		TAGREED WITH		General:	STRUCTURES	
β.	COMMEN	AGREED WITH		Ochoral.	STRUCTURES	
	COMMEN	TAGREED WITH	Created On	Version	Delegate For	
C		AGREED WITH	Created On 7/25/2016			
T T	Created By Thomas Andres The submit Per our disc comments,	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure	7/25/2016 ependent Peer Review per the requirement for the position and signed and sealed cov	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su	Delegate For	
	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure	7/25/2016 ependent Peer Review per the required to relax the requirement for the production and signed and sealed cover, superstructure).	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su	Delegate For 28 and PPM Chapter 26. Ibmittal provided that the independent peer review (Engineer's	
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No 9	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC Comment A Status	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure IANO Agreed & Closed	7/25/2016 ependent Peer Review per the requirement for the polyton and signed and sealed cov e, superstructure). 8/17/2016	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su er letter; be submitted for all o 1 Reference	Delegate For 28 and PPM Chapter 26. Ibmittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each Categories	
No 9	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC Comment A Status RESPONS Created By Thomas Andres	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure IANO Agreed & Closed BE ACCEPTED	7/25/2016 ependent Peer Review per the requ d to relax the requirement for the p solution and signed and sealed cov e, superstructure). 8/17/2016 Current Holder Created On	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su er letter) be submitted for all of 1 Reference Sheets B-11 and B-15: Version 1	Delegate For 28 and PPM Chapter 26. ubmittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each Categories STRUCTURES	
No 9 C	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC Comment A Status RESPONS Created By Thomas Andres	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure IANO Agreed & Closed SE ACCEPTED at says: Construct shallo	7/25/2016 ependent Peer Review per the requ d to relax the requirement for the p solution and signed and sealed cov e, superstructure). 8/17/2016 Current Holder Created On 7/25/2016	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su er letter) be submitted for all of 1 Reference Sheets B-11 and B-15: Version 1	Delegate For 28 and PPM Chapter 26. ubmittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each Categories STRUCTURES	
No 9 7	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC Comment A Status RESPONS Created By Thomas Andres Add note th MANUEL FELIC	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure IANO Agreed & Closed SE ACCEPTED at says: Construct shallo	7/25/2016 ependent Peer Review per the requ d to relax the requirement for the p solution and signed and sealed cov e, superstructure). 8/17/2016 Current Holder Created On 7/25/2016 ow foundations in accordance with 8/17/2016	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su er letter) be submitted for all of 1 Reference Sheets B-11 and B-15: Version 1	Delegate For 28 and PPM Chapter 26. ubmittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each Categories STRUCTURES	
No 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Created By Thomas Andres The submit Per our disc comments, component MANUEL FELIC Comment A Status RESPONS Created By Thomas Andres Add note th MANUEL FELIC	tal did not include an Inde cussions, we have agree comment responses, res (foundation, substructure IANO Agreed & Closed E ACCEPTED At says: Construct shall IANO	7/25/2016 ependent Peer Review per the requ d to relax the requirement for the p solution and signed and sealed cov e, superstructure). 8/17/2016 Current Holder Created On 7/25/2016 ow foundations in accordance with 8/17/2016	Version 1 uirements of RFP pgs. 27 and eer review to be in the 90% su er letter) be submitted for all of 1 Reference Sheets B-11 and B-15: Version 1	Delegate For 28 and PPM Chapter 26. ubmittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each Categories STRUCTURES	

Submitta	ort		1
Financial Project	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	8/3/2016	Response Due Date:	9/2/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	8/3/2016
Create User Id:	PD601MI	Last Update:	8/3/2016
		Last Update User Id:	PD601MI

#### Description:

434688-1: RE-SUBMITTAL of Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 8/3/2016 Comments Due Date: 8/19/2016 Days Allowed for Review: 17 Review Meeting: 9/2/2016 10:00 AM to 11:00 AM @ TBD if needed Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail: Phone # Section: Phase: Re-submittal of 90% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD Threads:

No	Status	Current Holder	Reference	Categories	
2	COMMENT AGREED WITH		General:	STRUCTURES	
ass	eated By omas Andres	Created On 8/8/2016	Version 1	Delegate For	

The RFP, page 27; PPM 26.3.2 and PPM 26.12 requires an independent peer review as part of the 90% Substructure Component Package. As discussed in our project meeting, we agree to wave the this specific requirement for this submittal however a completed independent peer review is required prior to RFC of the plans. MANUEL FELICIANO 9/7/2016 1

Comment Agreed & Closed

0	State		Current Holder	Reference	
1000	RESin	ACCEPTED		Sheet B-23:	STRUCTURES
- the	ated By	dida desina isia	Created On	Version	Delegate For
The	omas Andres		8/8/2016	1	
		-	ist into the pylon base? If so, includ		
MA	NUEL FELIC		9/12/2016	1	
	·	re no utility conduits in f			
The	omas Andres		9/15/2016	1	
	Response	Accepted & Comment C	Closed	a many rate	
	Status		Current Holder	Reference	Categories
	RESPONS	SE ACCEPTED		Sheet B-24:	STRUCTURES
Cre	ated By		Created On	Version	Delegate For
Tho	mas Andres	and and share and own	8/8/2016	1	
	Contractor	what is intended.	-		arate this sheet into two or three sheets to better communicate to the
	conflicts of d. Section Consider ca e. Section I g. Section I g. Section I KA HANGO a. The deta and interme b. The draw c. An integr for the cons d. The cons d. The cons the back sp g. The pipe exterior pip	embedded items (PT du B-B: How will column of asting-in bleed holes or D-D: The inner two PT D-D: It is not clear why A-A: Is the pipe cast in ills on sheet B-24 show ediate pylon construction ving will be revised to sh ated 3-D drawing was do struction of this section of ractor is planning to cas overified that the 11P03 different elevation than a section (looking upstat ban tendons.	acts, PT anchors, anchor caps, coup concrete below the precast canopy pour holes in overlying portion of pr anchor caps appear to conflict with the inner two PT anchor caps are no the precast walkway component? 9/7/2016 that the vertical member of the back in sequence is attached for your revi iow a bigger scale using more than leveloped to ensure the embedded of the bridge. It the canopy section (2'x6') at the si bars do not conflict with the anchor in the anchor caps. ion) shows the back span tendons a cast walkway component. A section	olers, reinforcing steel, co surface be consolidated s ecast element. the 11P03 rebar couplers of depicted in the Cross S Is the pipe sections conn 1 < span will be cast monoli iew. one drawing. items are not in conflict. T ame time as the intermed caps. It appears that the and Section D-D only sho of the drain pipe will be c	such that honeycombing is avoided (roughly 2'-0" x 6'-0" horizontal surface)?
	conflicts of d. Section Consider ca e. Section I g. Section I g. Section I KA HANGO a. The deta and interme b. The draw c. An integr for the cons d. The cons d. The cons the back sp g. The pipe exterior pip	embedded items (PT du B-B: How will column of asting-in bleed holes or D-D: The inner two PT D-D: It is not clear why A-A: Is the pipe cast in ils on sheet B-24 show ediate pylon construction ving will be revised to st rated 3-D drawing was struction of this section of a truction of this section of a construction of the section of a different elevation than a section (looking upstat bean tendons. is not cast with the prece e under the deck.	acts, PT anchors, anchor caps, coup concrete below the precast canopy pour holes in overlying portion of pr anchor caps appear to conflict with the inner two PT anchor caps are no the precast walkway component? 9/7/2016 that the vertical member of the back in sequence is attached for your revi iow a bigger scale using more than leveloped to ensure the embedded io of the bridge. If the canopy section (2'x6') at the si- bars do not conflict with the anchor in the anchor caps. ion) shows the back span tendons a cast walkway component. A section 9/16/2016	plers, reinforcing steel, co surface be consolidated s recast element. the 11P03 rebar couplers of depicted in the Cross S Is the pipe sections conn 1 c span will be cast monoli iew. one drawing. items are not in conflict. T arme time as the intermed caps. It appears that the and Section D-D only sho of the drain pipe will be c	nduits, piping, etc.). such that honeycombing is avoided (roughly 2'-0" x 6'-0" horizontal surface)? s. ection View. ected with bell and spigot joints and provide interfacing details. Clarify intent. thically with the intermediate section of the pylon. The assumed back span "his drawing will be used by the design build team during the planning phase liate section of the pylon to avoid any possibility of imperfection in the pour. rebar couplers are in conflict with the anchor caps, but the couplers are ws the main span tendons because the plan view is not wide enough to show east in the pylon CIP section and the embedded pipe will be connected to the
Tho	conflicts of d. Section Consider ca e. Section I g. Section I g. Section I g. Section KA HANGO a. The deta and interme b. The draw c. An integr for the cons d. The cross the back sp g. The pipe exterior pip mas Andres On Respon	embedded items (PT du B-B: How will column of asting-in bleed holes or D-D: The inner two PT D-D: It is not clear why A-A: Is the pipe cast in ils on sheet B-24 show ediate pylon construction ving will be revised to st rated 3-D drawing was struction of this section of struction of this section of a different elevation than a section (looking upstat an tendons. is not cast with the prece e under the deck.	acts, PT anchors, anchor caps, coup concrete below the precast canopy pour holes in overlying portion of pr anchor caps appear to conflict with the inner two PT anchor caps are no the precast walkway component? 9/7/2016 that the vertical member of the back in sequence is attached for your revi- now a bigger scale using more than leveloped to ensure the embedded is of the bridge. If the canopy section (2'x6') at the s- bars do not conflict with the anchor in the anchor caps. ion) shows the back span tendons a cast walkway component. A section 9/16/2016 of the back span will is cast monoliti	plers, reinforcing steel, co surface be consolidated a recast element. the 11P03 rebar couplers of depicted in the Cross S Is the pipe sections conn 1 c span will be cast monoli iew. one drawing. items are not in conflict. T arme time as the intermed caps. It appears that the and Section D-D only sho of the drain pipe will be c	nduits, piping, etc.). such that honeycombing is avoided (roughly 2'-0" x 6'-0" horizontal surface)? s. ection View. ected with bell and spigot joints and provide interfacing details. Clarify intent. thically with the intermediate section of the pylon. The assumed back span "his drawing will be used by the design build team during the planning phase liate section of the pylon to avoid any possibility of imperfection in the pour. rebar couplers are in conflict with the anchor caps, but the couplers are ws the main span tendons because the plan view is not wide enough to show
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NG	Sta*	11	Current Holder	Reference	Categories
5	RES	ACCEPTED		Sheets B-70 and -	TRUCTURES
C	reated By	and the second s	Created On	Version	Jelegate For
T	homas Andre	S	8/9/2016	1	
М	more than factoring-i account fo b. Include have colu IANUEL FELI a. A sensi therefore,	17-#8 bars will be require n that the column is only or the soil springs of the s a call-out at the column mn/building elements tha CIANO tivity study was performe the design is adequate.	d in the negative moment regions o 2 ft. wide. Also verify that the footin pread footings. See attached sketc plaza concrete slab interface. Requ t interface the plaza concrete slab. 9/7/2016 d. The results indicated the column Soil springs will increase the flexibi	f the frame (outer third of ca ligs have been designed to r h. uire 3/4" premolded expansi 1 s are flexible and only a sm	bars are required in the 5 ft. cap positive moment region, then significantly ap-around corners and along outer face of column into footings) especially resist the sliding forces of the frame pier and that the moments in the pier ion material on all four sides of column. Typical comment on all sheets that hall amount of negative moment exists at the face of the columns; (It in a decrease in pier moments.
-71		I-out will be added to the	3	4	
11	homas Andre		9/16/2016	l anter of the continue function	n of the moments that have to be carried around the corners into the
	For Comm	ient a, the tramed pier is	not balanced. The moment at the c	enter of the cap is a function	n or me moments that have to be carried around the conters into the
El	column. E RIKA HANGC		essive or the 7-#8s is too little. I sus 9/22/2016	pect that less than 48#11 an 1	re required and more than 7-#8s are required.
	RIKA HANGC The mome are adequ column. T	) ent in the negative region ate to resist the beam mo he 48 <i>#</i> 11 bars are requi mn will create more nega	9/22/2016 of the beam is equal to the moment oment demand. The same area of st	1 t at the top section of the co teel is placed at the outside	
	RIKA HANGC The mome are adequ column. T wider colu homas Andre	) ent in the negative region ate to resist the beam mo he 48-#11 bars are requi mn will create more nega s	9/22/2016 of the beam is equal to the moment oment demand. The same area of st red to resist the positive moment de tive moment in the beam.	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1	re required and more than 7-#8s are required. Jumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the
Tł	RIKA HANGC The mome are adequ column. T wider colu homas Andre	) ent in the negative region ate to resist the beam mo he 48-#11 bars are requi mn will create more nega s	9/22/2016 of the beam is equal to the moment oment demand. The same area of st red to resist the positive moment de tive moment in the beam. 9/26/2016	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1	re required and more than 7-#8s are required. Jumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the
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Tł	RIKA HANGC The mome are adequ column. T wider colu homas Andres Okay, but Status	) ent in the negative region ate to resist the beam mo he 48.#11 bars are requi mn will create more nega s make sure that both the 3	9/22/2016 of the beam is equal to the moment orment demand. The same area of st red to resist the positive moment de tive moment in the beam. 9/26/2016 24 ksi limit and the reinforcing steel	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1 fatigue has been checked. <b>Reference</b>	re required and more than 7-#8s are required. Journn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A Categories
TI ° C	RIKA HANGC The mome are adequ column. T wider colu homas Andres Okay, but Status RESPON	) ent in the negative region ate to resist the beam mo he 48-#11 bars are requir mn will create more nega s make sure that both the 3 SE ACCEPTED	9/22/2016 of the beam is equal to the moment oment demand. The same area of st red to resist the positive moment de tive moment in the beam. 9/26/2016 24 ksi limit and the reinforcing steel Current Holder	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1 fatigue has been checked. <b>Reference</b> Sheet B-71:	re required and more than 7-#8s are required. Jolumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A <b>Categories</b> STRUCTURES
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דו ס דו	RIKA HANGO The mome are adequi column. T wider colu homas Andre: Okay, but Status RESPON reated By homas Andre:	) ent in the negative region ate to resist the beam mo he 48-#11 bars are requir mn will create more negation s make sure that both the the SE ACCEPTED S into two sheets. Sheet is	9/22/2016 of the beam is equal to the moment orment demand. The same area of st red to resist the positive moment de tive moment in the beam. 9/26/2016 24 ksi limit and the reinforcing steel Current Holder Created On 8/9/2016	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1 fatigue has been checked. <b>Reference</b> Sheet B-71: <b>Version</b> 1	re required and more than 7-#8s are required. Jolumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A Categories STRUCTURES Delegate For
TI C TI	RIKA HANGO The mome are adequi column. T wider colu homas Andres Okay, but Status RESPON reated By homas Andres Separate i ANUEL FELIO	) ent in the negative region ate to resist the beam mo he 48.#11 bars are requir mn will create more nega s make sure that both the 3 SE ACCEPTED SE ACCEPTED Se into two sheets. Sheet is CIANO	9/22/2016 of the beam is equal to the moment orment demand. The same area of st red to resist the positive moment de tive moment in the beam. 9/26/2016 24 ksi limit and the reinforcing steel Current Holder Created On 8/9/2016 difficult to read because scale of de	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1 fatigue has been checked. <b>Reference</b> Sheet B-71: <b>Version</b> 1 tails are too small. See SD 1	re required and more than 7-#8s are required. Jolumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A Categories STRUCTURES Delegate For
Tł Io Tł Tł M.	RIKA HANGO The mome are adequi column. T wider colu homas Andres Okay, but Status RESPON reated By homas Andres Separate i ANUEL FELIO	) ent in the negative region ate to resist the beam mo- he 48-#11 bars are requir mn will create more nega s make sure that both the s SE ACCEPTED S into two sheets. Sheet is CIANO ng will be revised to show	9/22/2016 of the beam is equal to the moment orment demand. The same area of st red to resist the positive moment de thive moment in the beam. 9/26/2016 24 ksi limit and the reinforcing steel Current Holder Created On 8/9/2016 difficult to read because scale of de 9/7/2016	1 t at the top section of the co teel is placed at the outside mand. The moment distribu 1 fatigue has been checked. <b>Reference</b> Sheet B-71: <b>Version</b> 1 tails are too small. See SD 1	re required and more than 7-#8s are required. Jolumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A Categories STRUCTURES Delegate For

Submitta ep	oort		
Financial Project	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	9/15/2016	Response Due Date:	10/19/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	9/15/2016
Create User Id:	PD601MI	Last Update:	9/15/2016
		Last Update User Id:	PD601MI

Description:

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 9/15/2016 Comments Due Date: 10/6/2016 Days Allowed for Review: 22 Review Meeting: 10/19/2016 10:00 AM to 11:00 AM @ to be schedule if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Section: Phase: 100% Foundation Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book Work Program Construction Budget: Production Date: DESIGN- BUILD Threads:

^	Stati		Current Holder	Reference	Categories
0	· RESI A	CCEPTED		Geotechnical Repr	TRUCTURES
C	eated By		Created On	Version	)elegate For
T	omas Andres	8994 a	9/26/2016	1	
EF					ppears to have assumed no influence of groundwater, and no horizontal late the calculations and re-size the footings if necessary.
Th	bearing on grar cohesive mass slight revision to now more cons calculations refi provided by the	nular soils (not rock) with a relatively high o the calculations to i ervative and still muc lecting this considera bridge engineer, incl	with a soil friction angle of 40 deg cohesion value), in which case th ncorporate the effect of groundwa th higher than the maximum recon tion. We disagree that the bearing	rees, when in fact the footings he resulting bearing capacity w ater while keeping the original mmended factored bearing res g capacity analyses do not cor noments. Hence, all external s	apacity analyses are conservative already as they assume footings will sit on competent natural limestone (which may also be treated as a yould have been even significantly higher. As suggested, we have made a conservative assumptions the same. The resulting bearing capacity is sistance of 14 ksf. The attached revised report incorporated the revised maider the effect of horizontal forces. The design loading information was tability checks were performed for all external loads provided and
	Response Acce	epted & Comment Clo	osed		
0	Status	Second Second	Current Holder	Reference	Categories
1	RESPONSE A	CCEPTED		Sheet B-3:	STRUCTURES
F	eated By		-Created On	Version	Delegate For
Cr	Ballou by	1	C. Datou on		Delegated of
- à	omas Andres		9/26/2016	1	Delegate-1 of
Τĥ	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIAN	e (inner and outer). Hecification 560. It is r	9/26/2016 (no response required) due to thi	1 is being the Foundation Subm cted (primer, etc.)- can it be co	ittal however the General Notes do not address the corrosion protection bated? Recommend a High Performance Painting System on the
Τĥ Μ/	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIAN Noted.	e (inner and outer). Hecification 560. It is r	9/26/2016 (no response required) due to thi low is the inside of the pipe prote not clear what an Architectural Co 10/18/2016	1 is being the Foundation Subm cted (primer, etc.)- can it be co ating is? 1	ittal however the General Notes do not address the corrosion protection
Τĥ	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIANO Noted. omas Andres	e (inner and outer). È cification 560. It is r O	9/26/2016 (no response required) due to thi low is the inside of the pipe prote not clear what an Architectural Co 10/18/2016 10/27/2016	1 is being the Foundation Subm cted (primer, etc.)- can it be co	ittal however the General Notes do not address the corrosion protection
Τĥ Μ/	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIANO Noted. omas Andres	e (inner and outer). Hecification 560. It is r	9/26/2016 (no response required) due to thi low is the inside of the pipe prote not clear what an Architectural Co 10/18/2016 10/27/2016	1 is being the Foundation Subm cted (primer, etc.)- can it be co ating is? 1	ittal however the General Notes do not address the corrosion protection
Th M/ Th	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIANO Noted. omas Andres	e (inner and outer). È cification 560. It is r O	9/26/2016 (no response required) due to thi low is the inside of the pipe prote not clear what an Architectural Co 10/18/2016 10/27/2016	1 is being the Foundation Subm cted (primer, etc.)- can it be co ating is? 1	ittal however the General Notes do not address the corrosion protection
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Th M/ Th 2 Cr Th M/	omas Andres This comment is of the stay -pipe outside per Spe NUEL FELICIANO Noted. omas Andres Response Acce Status RESPONSE Andres This comment r NUEL FELICIANO	e (inner and outer). I coffication 560. It is r o epted & Comment Clo CCEPTED equires a written resp o	9/26/2016 (no response required) due to thi low is the inside of the pipe prote not clear what an Architectural Co 10/18/2016 00/27/2016 Current Holder 0/26/2016 000nse: Label Footings (Type 1 th 10/18/2016	1 is being the Foundation Submicted (primer, etc.)- can it be co ating is? 1 1 <b>Reference</b> Sheets B-8 and B-11 thru B-17: <b>Version</b> 1 ru Type 8) on Sheets B-11 thru 1	ittal however the General Notes do not address the corrosion protection pated? Recommend a High Performance Painting System on the         Categories         STRUCTURES         Delegate For         u B-17 per the naming convention given on B-8.

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#### MEMORANDUM

TO: The Files

FROM: Dwight D. Dempsey, P.E., S.E.

REFERENCE: UniversityCity Prosperity Project Pedestrian Bridge Plans Discussion, 9/15/2016 FIGG Project No. 2262.03

DATE: January 21, 2016

A meeting on the referenced project was held from 9:00 to 10:00 a.m. on Thursday, September 15, 2016 at FDOT Central Office in Tallahassee, Florida to discuss the pedestrian bridge plans. Participants included:

FDOT Central Office:	Robert Robertson, Tom Andres, Teddy Theryo
FDOT District 6:	Alfredo Reyna (via phone)
FIU:	Alberto Delgado (via phone)
FIGG:	Denney Pate, Dwight Dempsey, Manuel Feliciano

A document containing the FIGG responses to FDOT comments was discussed during this meeting (copy attached). The following is a summary of key items from this meeting:

- 1. FIGG will list the gust effect factor considered for the bridge design in the General Notes (Item 2.f)
- 2. FDOT suggested increasing the size of the vertical PT bar duct for the vertical PT bars that are used to connect the superstructure to the pylon base. FIGG will check if FDOT suggestion is feasible.
- 3. FIGG to add a note to the bridge plans to require additional testing of the pipe welds to the base plate to ensure highest quality welds (e.g. ultrasonic or radiographic testing).
- 4. FIGG to investigate feasibility of adding a 9" chamfer where the truss members connect to the canopy and bridge deck at the end of the bridge span where the longitudinal PT terminates.
- 5. FIGG to ensure the PT bar anchor cap is utilized at the live and dead ends.
- 6. FIGG to investigate and work with MCM to implement flexible formwork systems to allow the bridge deck section to be minimally restrained after casting.
- 7. FDOT to further review superstructure status set plans that were provided during the meeting and provide comments back to FIGG by 9/21.

xc: All Attendees

### Andres, Tom

m: it:	Andres, Tom Friday, September 16, 2016 11:57 AM
То:	Dempsey, Dwight; Feliciano, Manuel; Robertson, Robert; Theryo, Teddy; Pate, Denney; Rodrigo Isaza <b>Baser Contractions</b> ; Eugene Collings-Bonfill - P.E., PMP; Alberto Delgado <b>Baser Contractions</b> ; Reyna, Alfredo
Subject:	RE: FIU Pedestrian Bridge Superstructure - Draft Meeting Summary
Attachments:	FIU Superstructure Feedback.pdf

Dwight,

I concur with your draft meeting summary. I performed a very quick cursory review of the superstructure status set. Instead of typing up the comments, I simply marked up the set (sorry for my poor handwriting). See attached. A lot of the comments were discussed in yesterday's meeting or are follow-ups to earlier 30% review comments.

Let me know if you have any questions.

Thomas A. Andres P.E. Assistant State Structures Design Engineer 605 Suwannee St., MS 33 Tallahassee, FL 32399-0450

m: Dempsey, Dwigh	nt	
t: Friday, Septembe	er 16, 2016 11:45 AM	
To: Andres, Tom	; Feliciano, Mi	anuel ; Robertson, Robert
	; Theryo, Teddy	; Pate, Denney
	; Rodrigo Isaza	; Eugene Collings-Bonfill - P.E.,
PMP	; Alberto Delgado	; Reyna, Alfredo

Subject: FIU Pedestrian Bridge Superstructure - Draft Meeting Summary

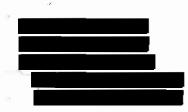
Tom/All,

Please find the attached draft summary from our meeting with Central Office yesterday. Please review and provide me with your comments by COB Monday, 9/19 and I will send out the final summary on 9/20.

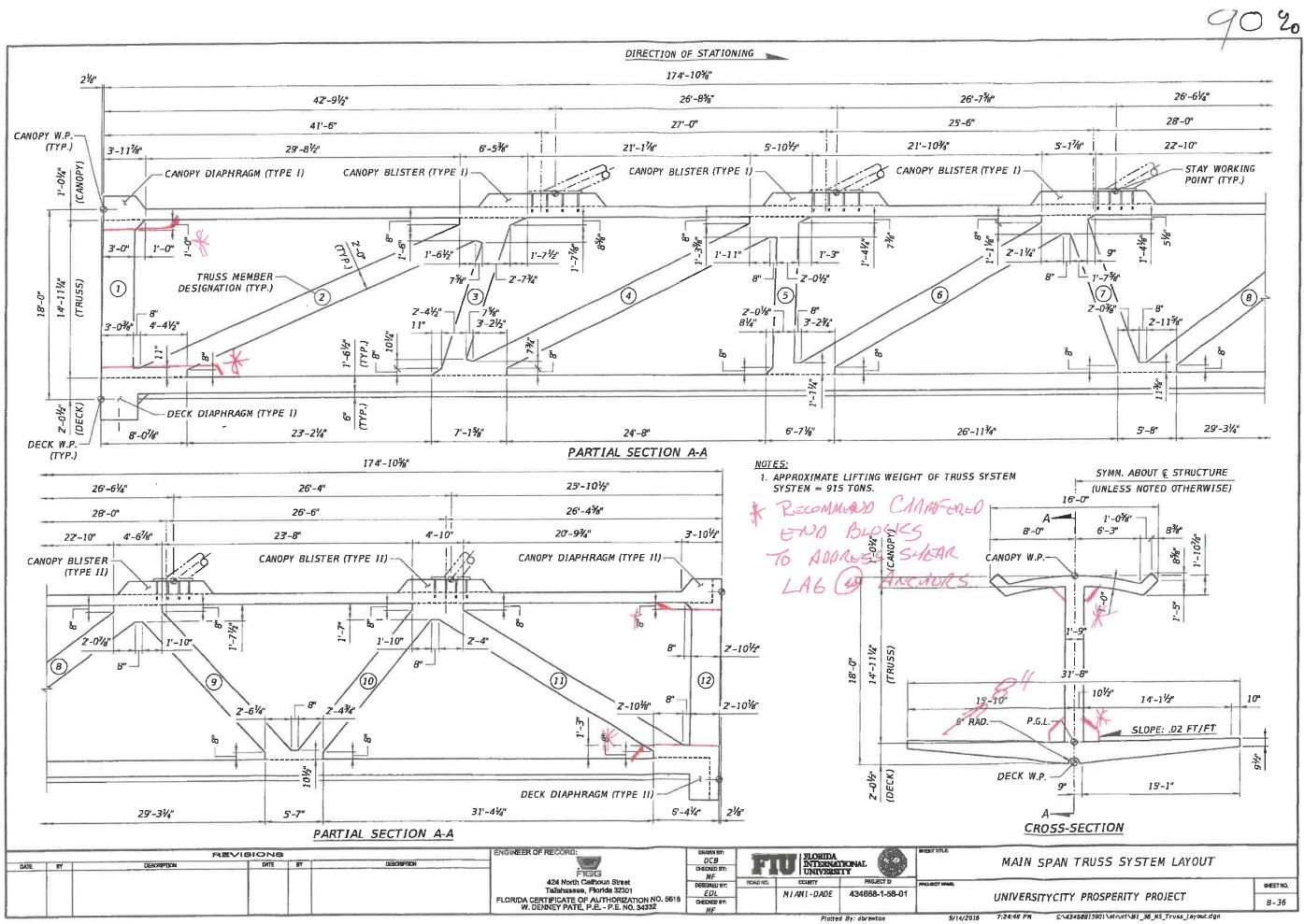
Thank you!

Dwight

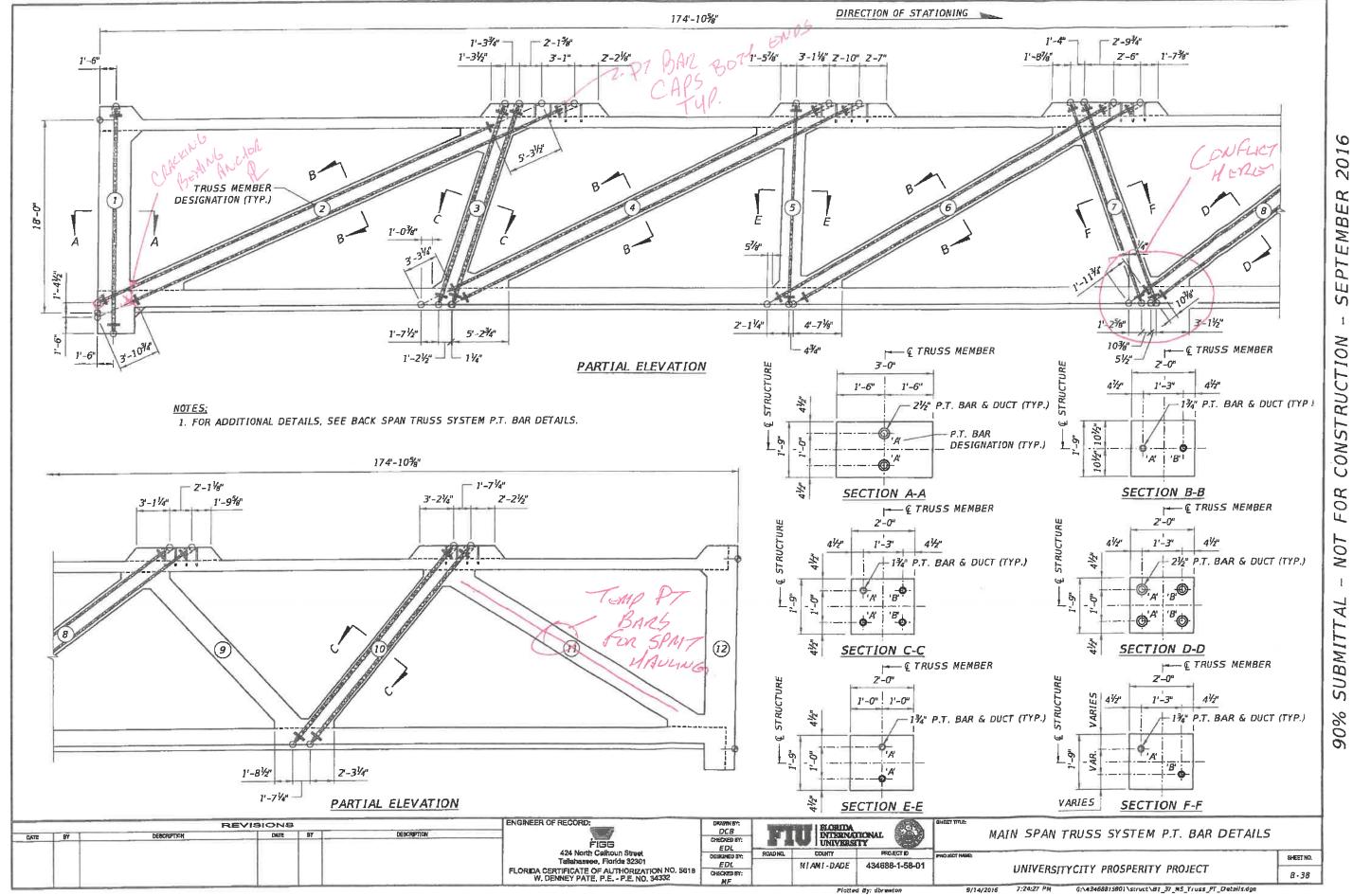
Dwight D. Dempsey, P.E., S.E. Regional Director Southeastern Regional Office FIGG Bridge Engineers, Inc. 1 N. Calhoun St. 1 Alahassee, FL 32301

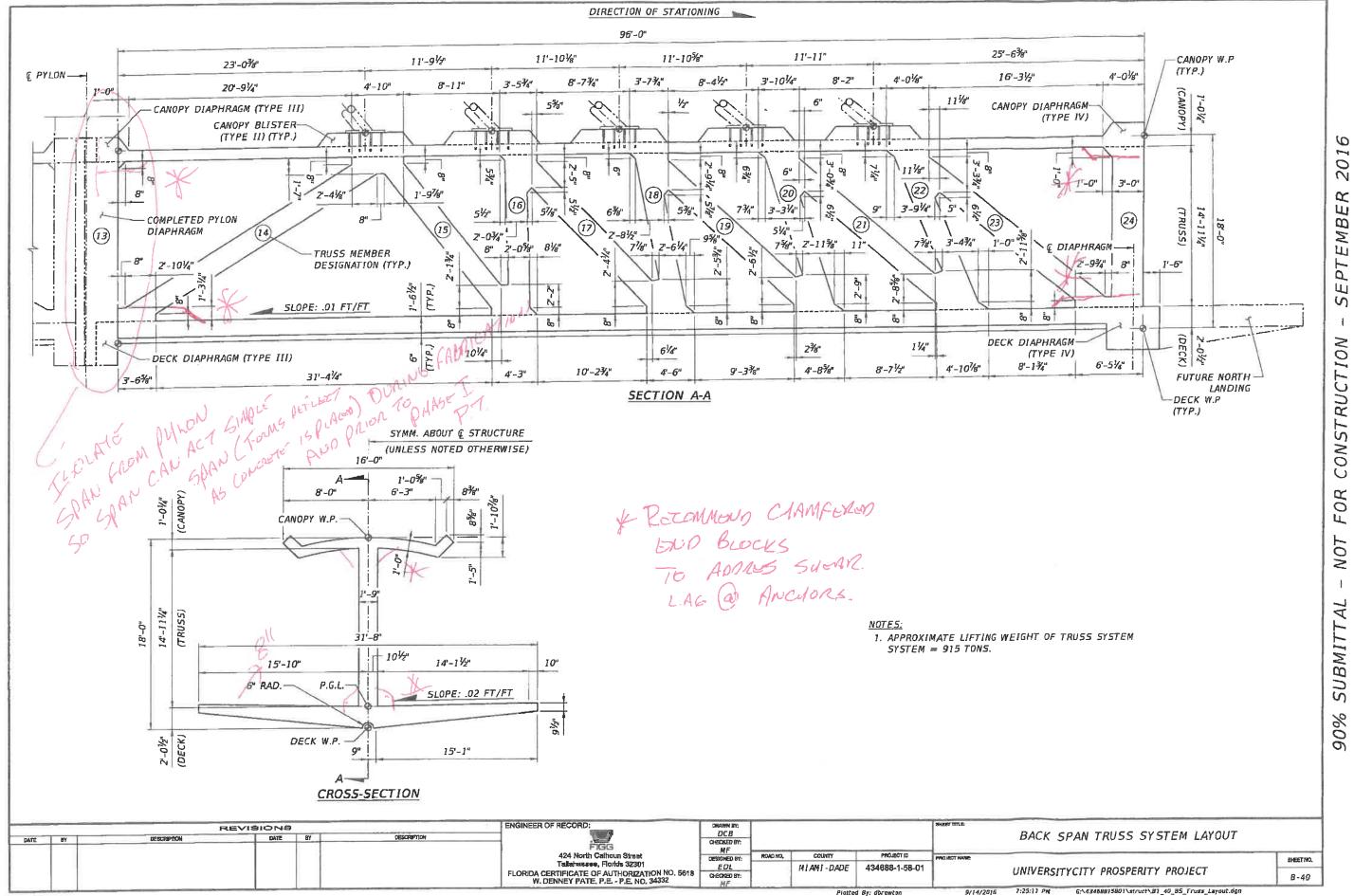


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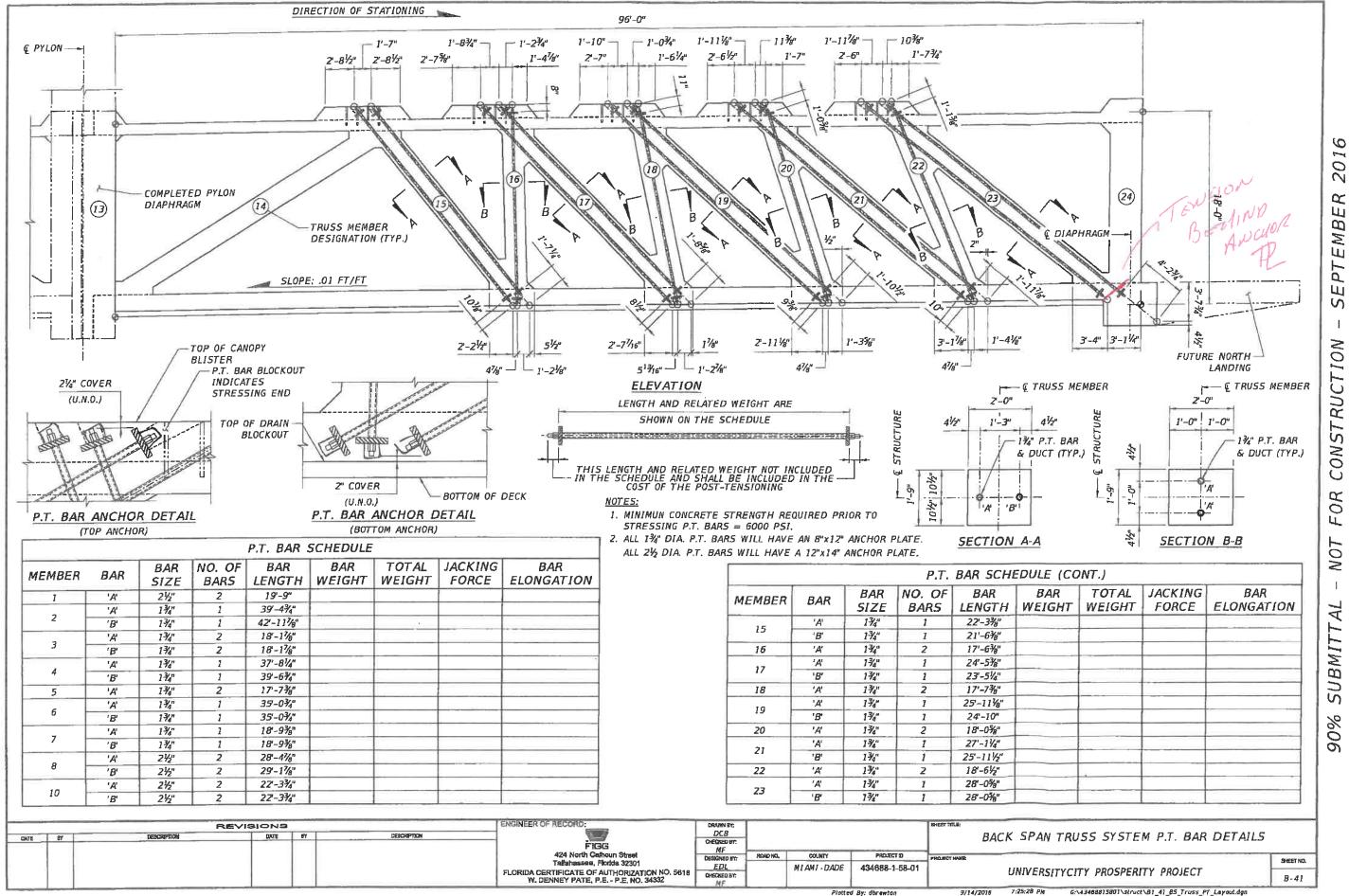
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Plotted By: dbrewton

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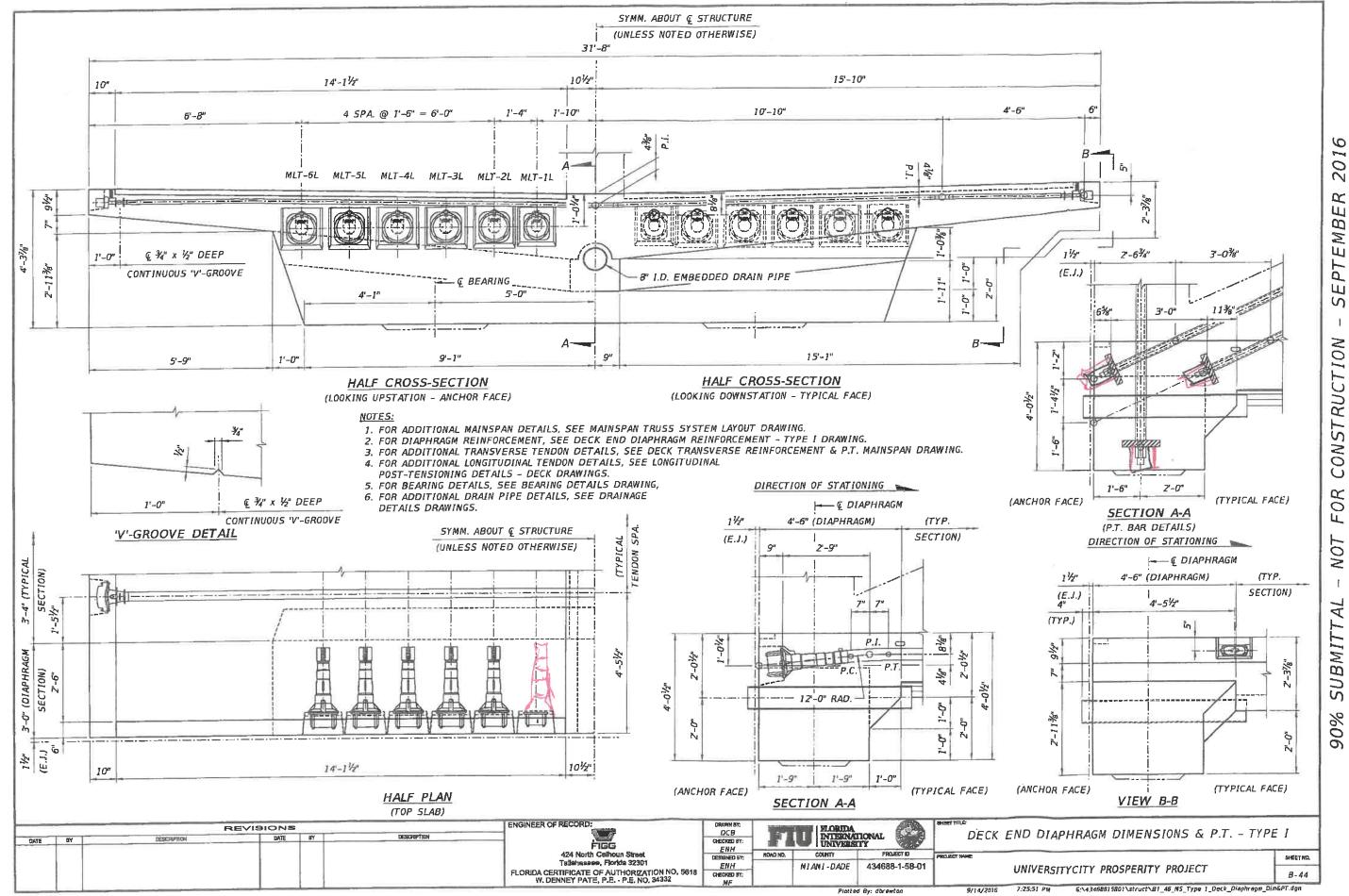
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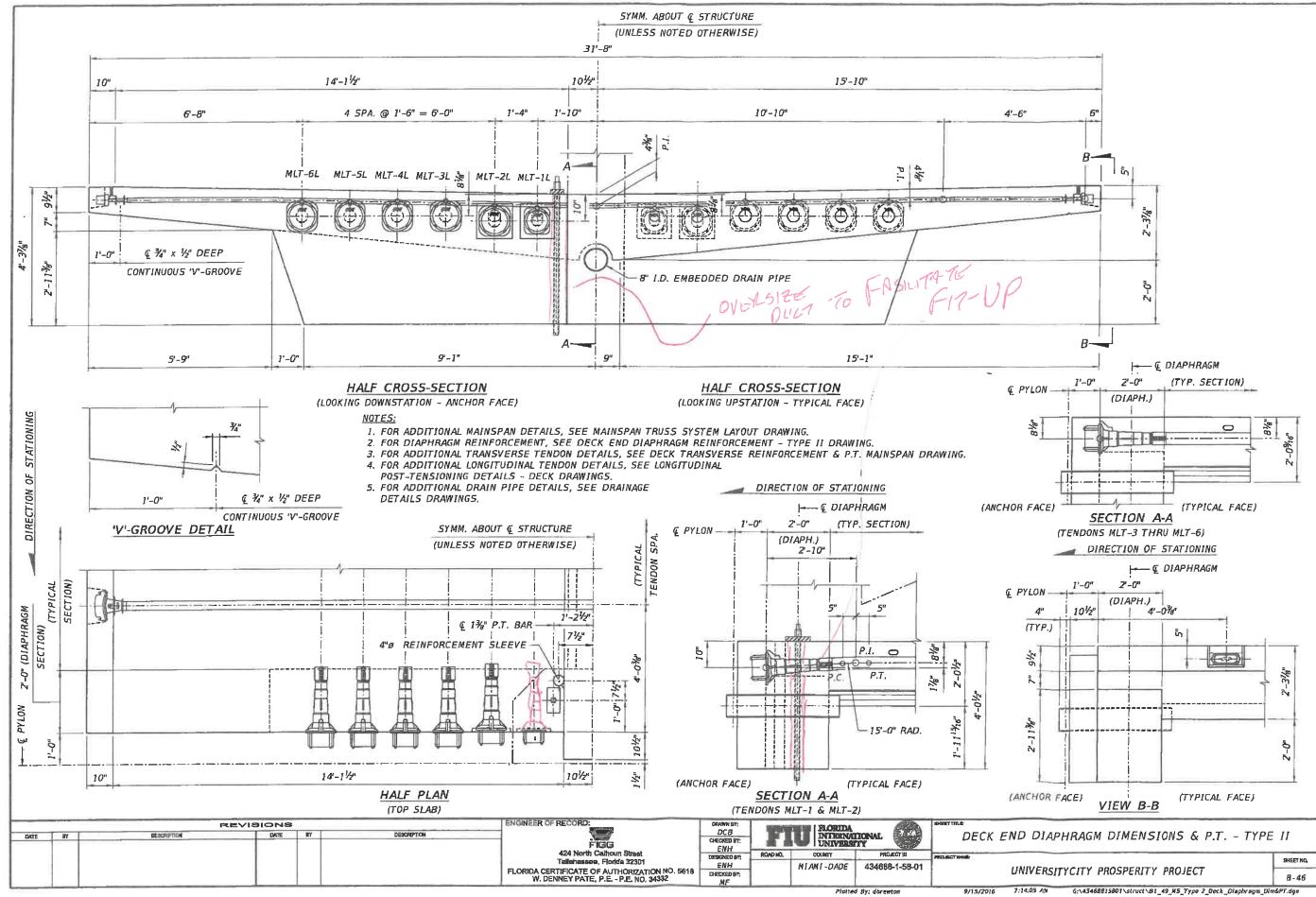
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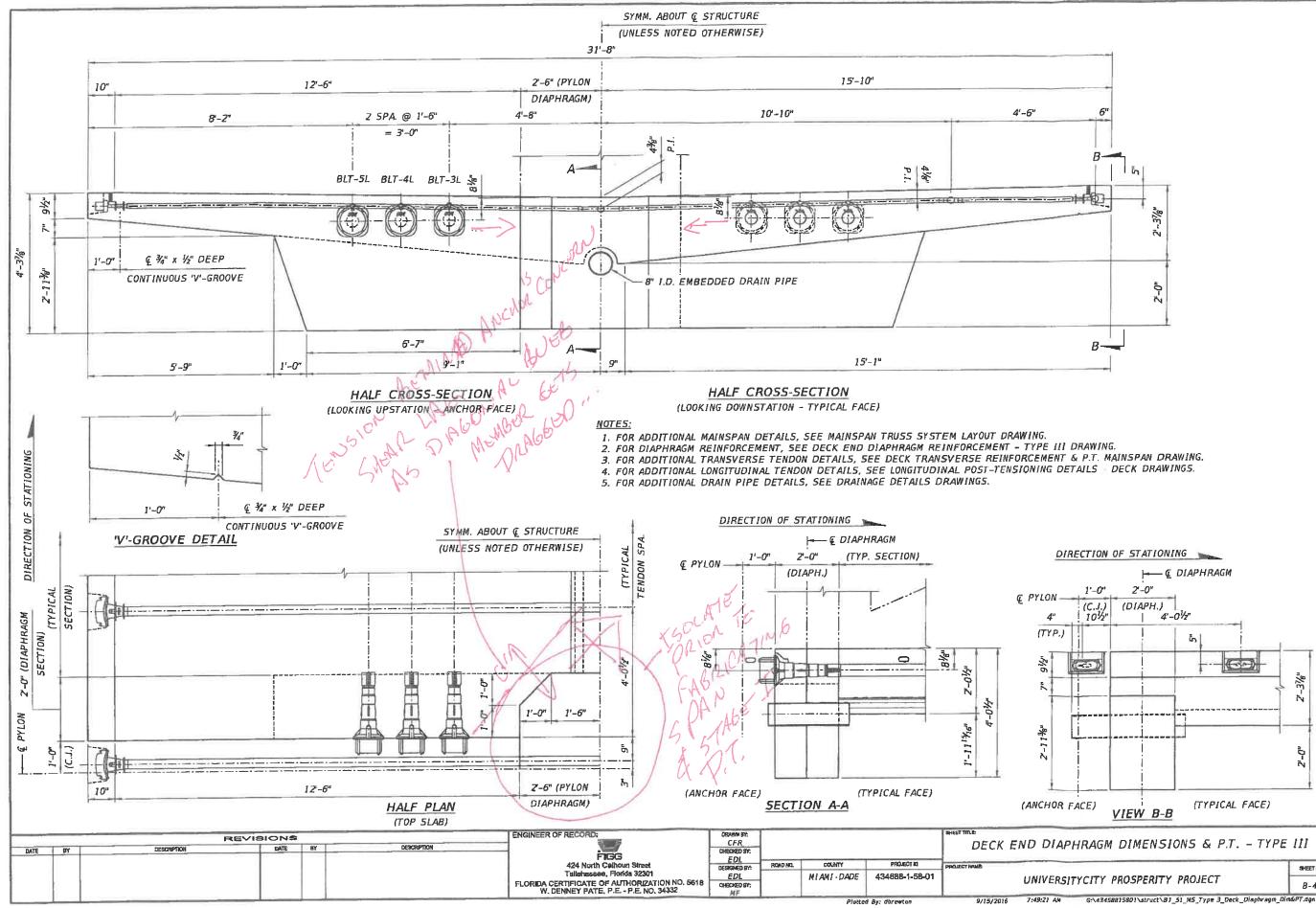
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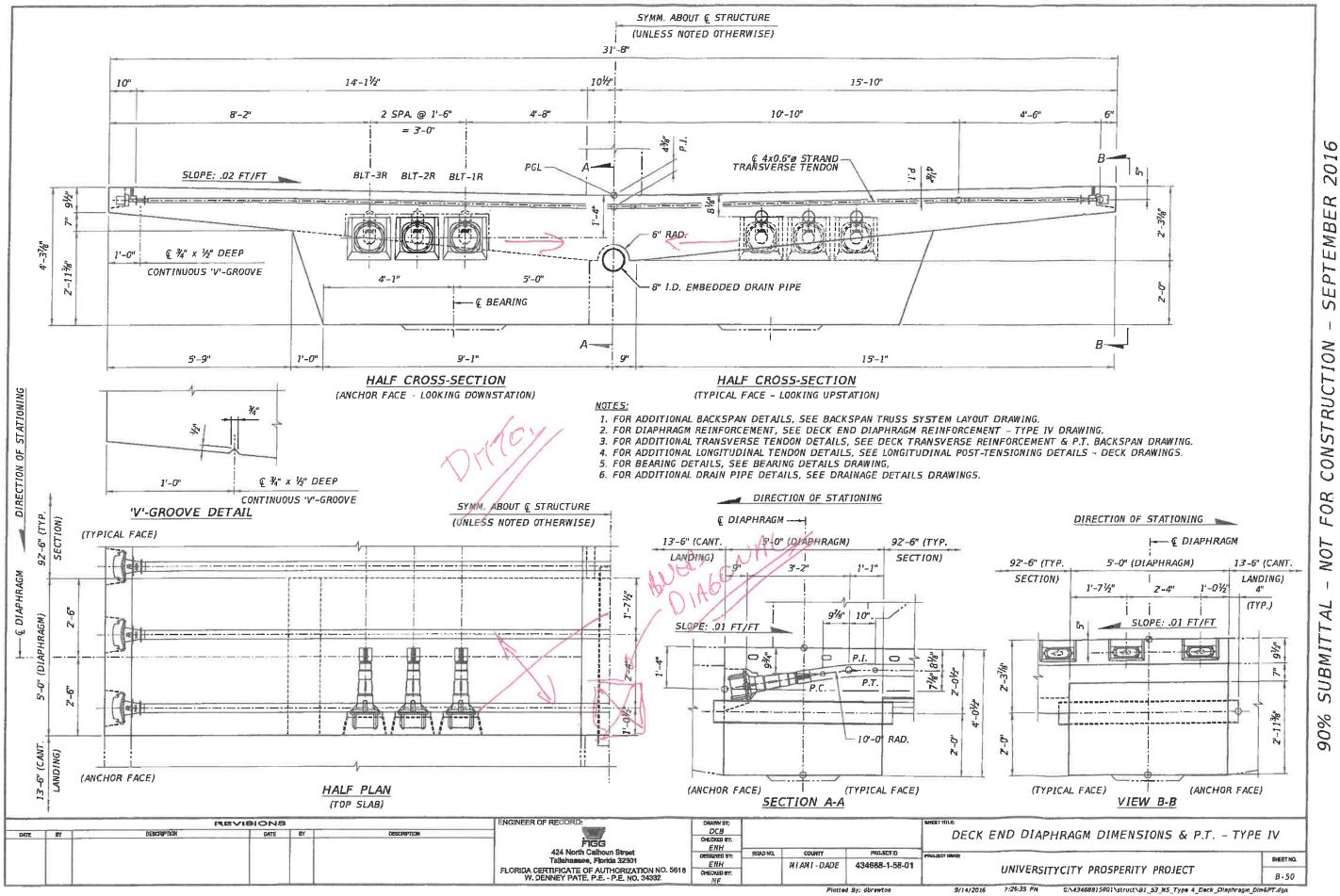


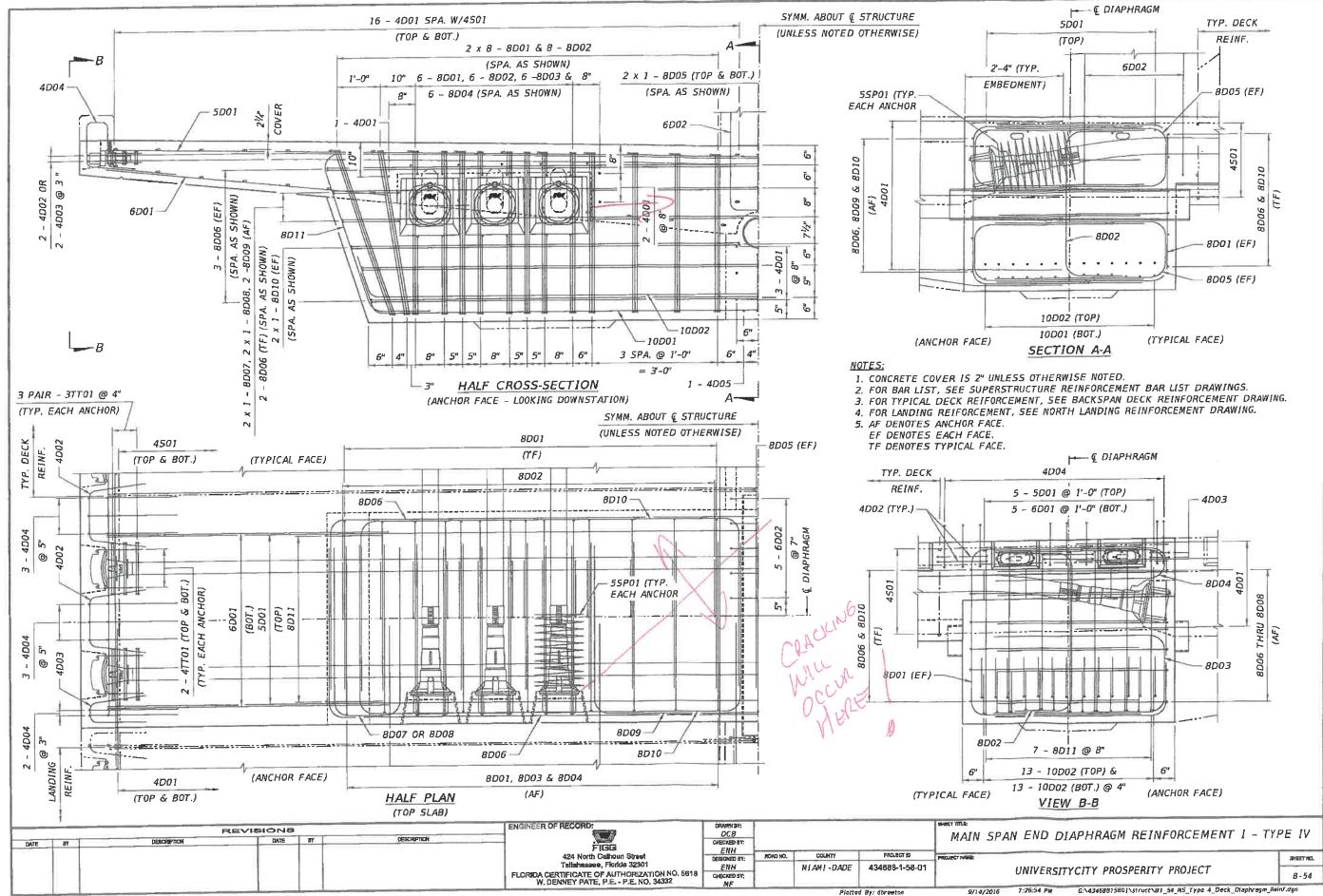
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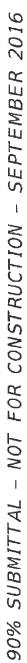
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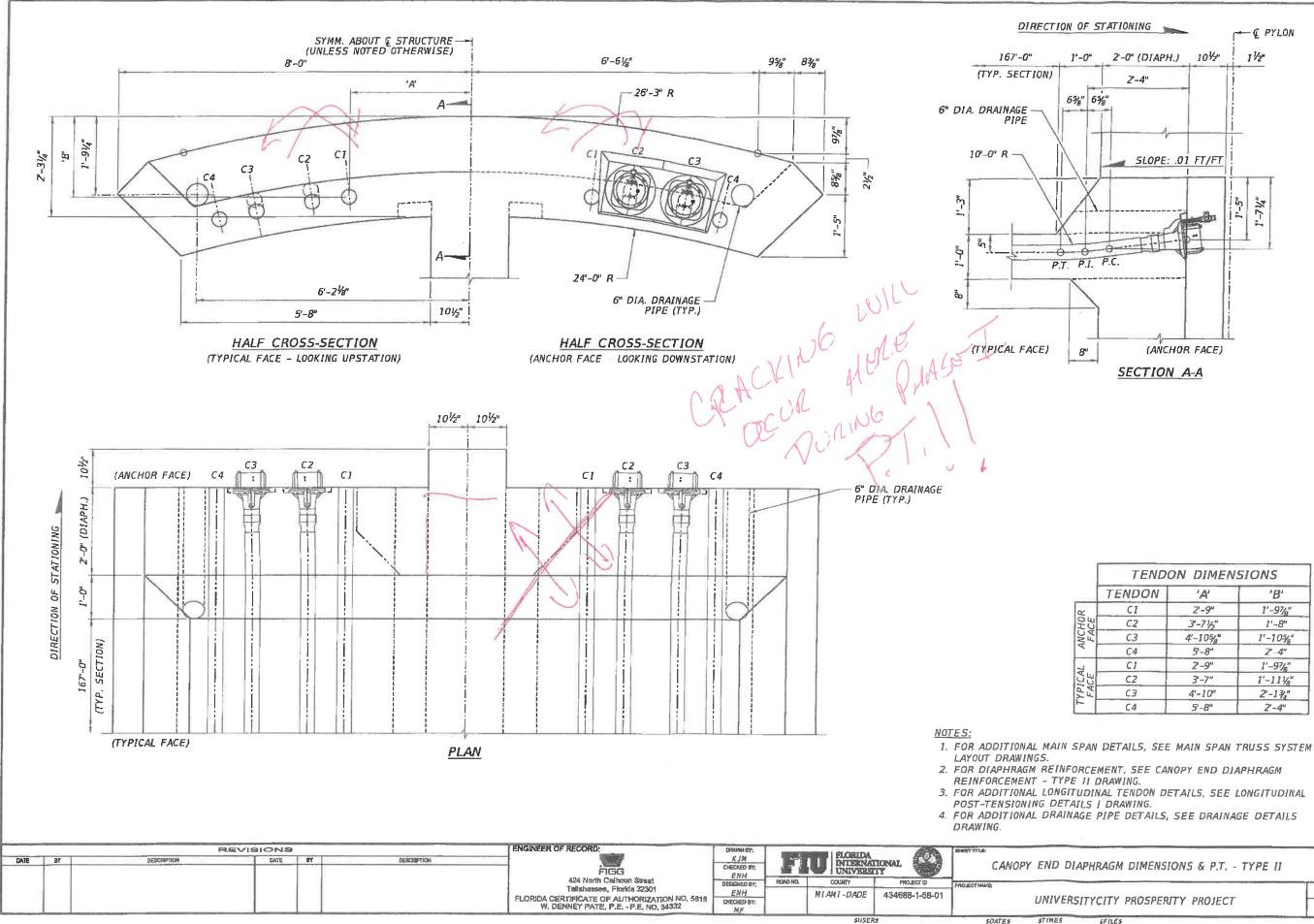
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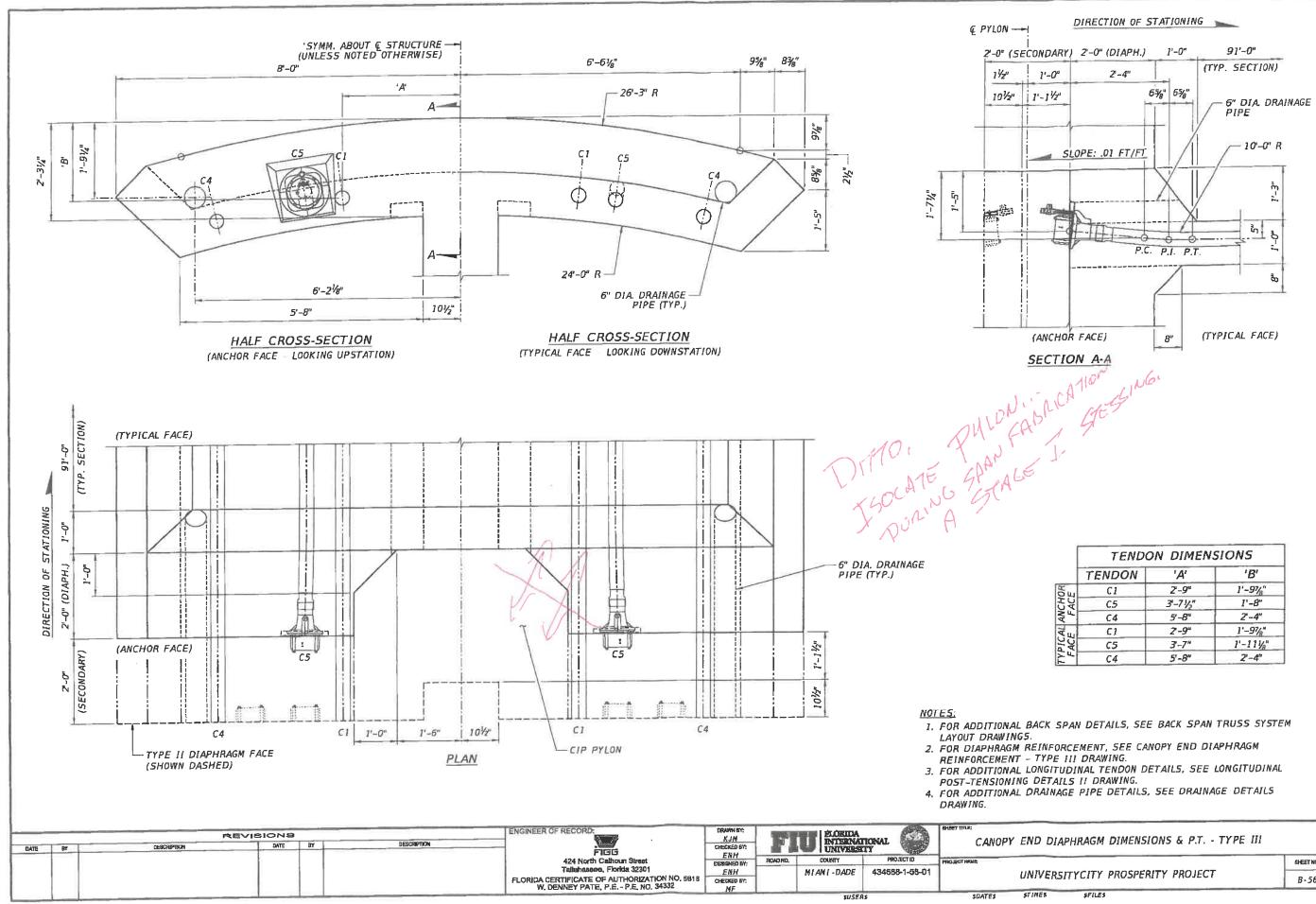




	TENDON DIMENSIONS			
	TENDON	'A'	'B'	
œ	CI	Z*-9*	1'-97/8"	
25	CZ	3'-71/5"	1'-8"	
ANCHOR FACE	C3	4'-10%"	1'-10%"	
▼	C4	5'-8"	Z'-4"	
4	C1	2"-9"	1'-97/8"	
TYPICAL FACE	C2	3'-7"	1'-111/3"	
F P	C3	4'-10"	2'-13/1"	
F [	C4	5'-8"	2'-4"	

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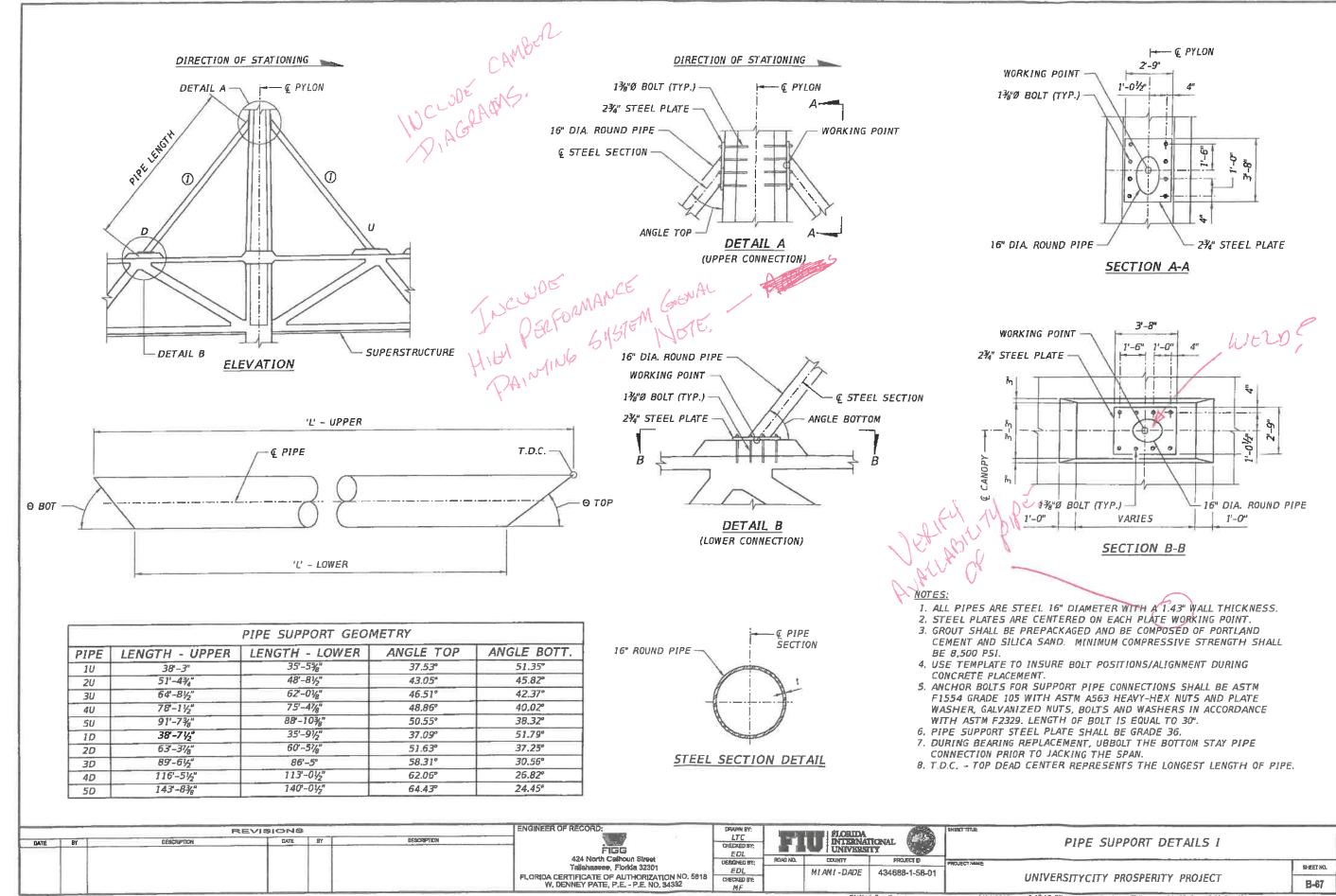
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[	TENDON DIMENSIONS			
t	TENDON	'A'	'B'	
S.u.	C1	2'-9"	1'-97/8"	
ANCHOR	C5	3'-71/2"	1'-8"	
Ϋ́Ϋ́Ύ	C4	5'- <b>8</b> "	2'-4"	
	C1	2-9"	1'-97/8"	
TYPICAL FACE	C5	3'-7"	1'-111/8"	
Ξű	C4	5'-8"	2'-4"	

D DIAPHRAGM DIMENSIONS & P.T TYPE III	1
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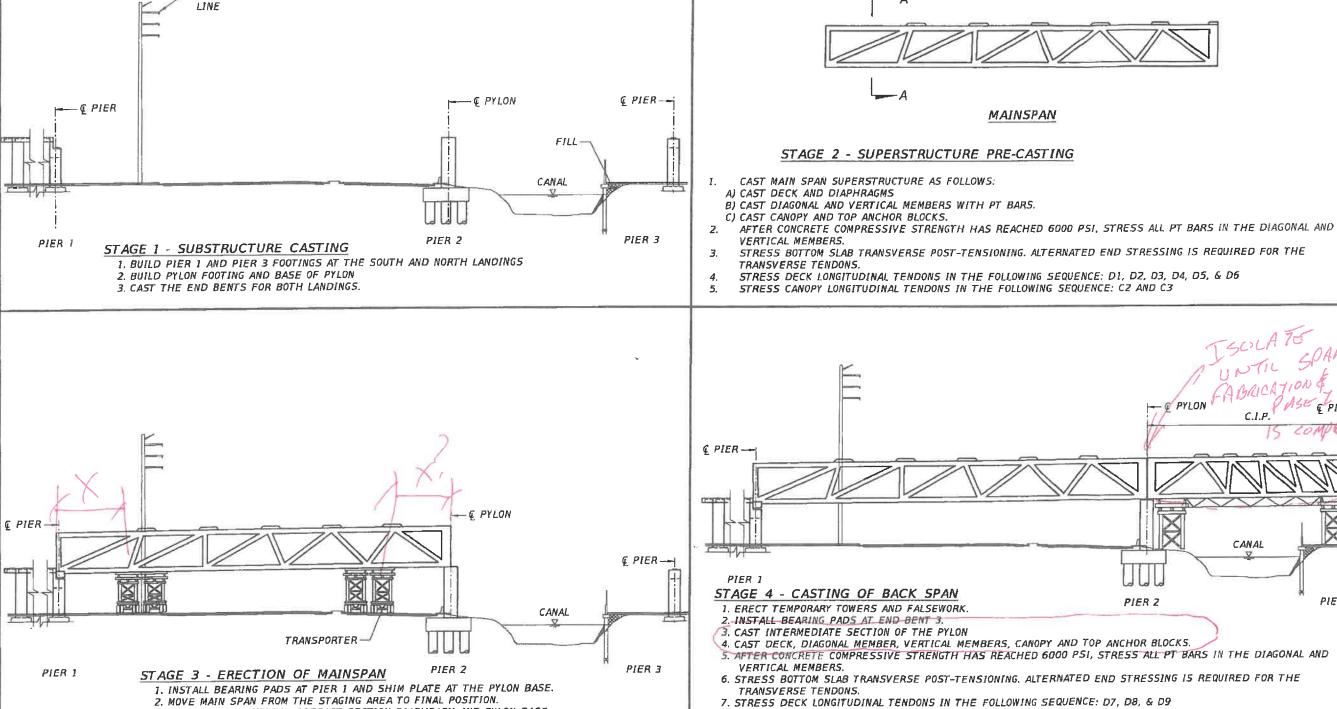
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SECTION A-A



3. GROUT SPACE BETWEEN PRECAST SECTION DIAPHRAGM AND PYLON BASE.

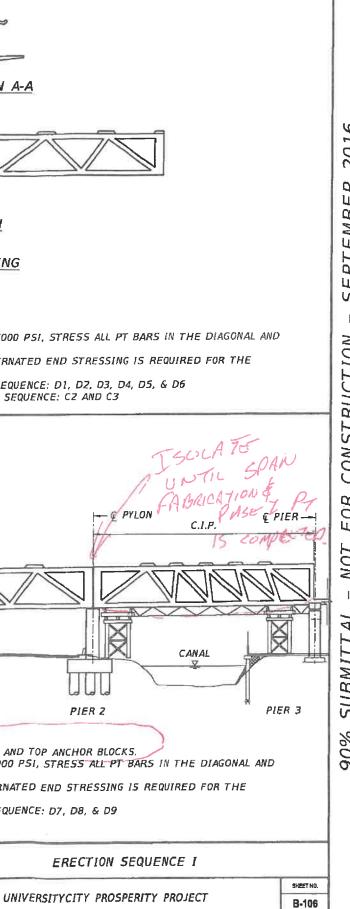
4. STRESS PYLON VERTICAL PT BARS.

DATE BY

POWER

9. REMOVE FALSEWORK OVER THE CANAL. NGINEER OF RECORD REVISIONS DRAWN BY: LTC CHECKED BY MF DATE DESCRIPTION DESCRIPTION FIGG 424 North Calhoun Street Tallahassee, Florida 32301 PROJECT ID COUNTY ROAD NO. DESIGNED BY: MF MI AMI - DADE 434688-1-58-01 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 5618 W. DENNEY PATE, P.E. - P.E. NO. 34332 CHECKED BY WDP

8. STRESS CANOPY LONGITUDINAL TENDON: C5



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Submitte	eport		0
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	9/28/2016	Response Due Date:	10/28/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	9/28/2016
Create User Id:	PD601MI	Last Update:	2/14/2017
		Last Update User Id:	PD601MI

Description:

434688-1: 90% Superstructure Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

1 1010

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 9/28/2016 Comments Due Date: 10/14/2016 Days Allowed for Review: 17 Review Meeting: 10/28/2016 10:00 AM to 11:00 AM @ Will be schedule if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail:

Phone #: Phase: 90% Superstructure Design Review Meeting will be schedule if needed Design Criteria is FDOT PPM Work Program Construction Budget: \$11,875,092 Production Date: DESIGN- BUILD

Threads:

)	Staty-	-	Current Holder	Reference	Categories
	CO	T AGREED WITH		General:	STRUCTURES
C	reated By		Created On	Version	Delegate For
Ť	homas And	dres	10/11/2016	1	، مەنىكە (1909)، مەنىيە (1904-192)، مەنىيە (1904-192)، مەنىيە (1904-192)، مەنىيە (1904-192)، مەنىيە (1904-192)،
	detailed The Erd - Position - Step-I limits. casting - Position the strue	d step-by-step fabrication s ection Manual shall include oning, use and sequencing by-step PT bar stressing a Also include a step-by-ste yard at the time of stressi oning, detailed step-by-ste uctural based on the support	sequence to be submitted in an Erecti e the following: g of falsework, jacking and/or releasin nd longitudinal tendon stressing sequ p casting and form stripping sequence ng. p erection plan of the Self-Propelled- ort conditions of the precast main-spai	on Manual submitted by a Spe g of falsework, formwork, tem ence so that stresses during fa e with clear delineation of requ Modular-Transporter (SPMT) r	
	drawing sequen	neral fabrication sequence gs). The erection manual v ice, and location of tempor ep-by-step erection plan of	vill provide the mentioned information	showing more details of the sl	as been provided as part of the plan set (see Erection Sequence tressing sequences, support conditions during casting, form stripping or's Specialty Engineer.
	This rea	sponse is okay provided th	hat the step-by-step information per re	sponse to Comment 10 is pro-	vided in the final plans.
М	ANUEL FE	, ,,	11/8/2016		
	Comme	ent Agreed & Closed			
r -	Status		Current Holder	Reference	Categories
	RESPO	ONSE ACCEPTED		General:	STRUCTURES
C	reated By		Created On	Version	Delegate For
Tł	homas And	ires	10/11/2016	Ĩ	the i as an indefinition of the same
	Provide	connection details betwee	en main span truss with the pylon.		
М	ANUEL FÉ	ELICIANO	10/28/2016	1	
	Connec	ction details between the n	nain span truss and pylon have been	provided on the substructure d	irawings.
TI	homas And	ires	11/1/2016	1	
	Respor	nse Accepted & Comment	Closed		
)	Status		Current Holder	Reference	Categories
	RESPO	ONSE ACCEPTED		Sheets B-38 thru B-45 and B-61, B-63, and B- 65:	STRUCTURES
C	reated By	AND SALES AND ALL AND	Created On	Version	Delegate For
T	homas And	ires	10/11/2016	1	1997 - Margani Milana andre
м		t as required to fit caps.	bottom) per SDG 1.11.2, Standard Ir 10/28/2016	dex 21802 and Specification 4	462-1.2.a consistent with approved FDOT PT systems and resize
	anchor out and	of each PT bar because e coated with a galvanizing	xposure levels and the risk of corrosic compound (e.g. Zinc Clad III HS) for	on are lower beneath the deck	per Standard Index No. 21802). Caps are not needed at the bottom . Dead end anchors will be cast with the precast section with no bloc
Tł	nomas And	ires	11/1/2016	1	

No	Stat		Current Holder	Reference	Categories	
10	ŖEŚ	E ACCEPTED		Sheets B-37 thru B-42, B-43, and B-ი.	STRUCTURES	
	Created By		Created On	Version	Delegate For	
	Thomas Andre	es	10/11/2016	1		
	code limit thru B-40 delineatio MANUEL FEL	<ul> <li>Also include a step-by- ) depict the support condit on of the SPMT support log ICIANO</li> </ul>	Step casting and form stripping sed tion at the near-site casting yard at cation on stage 3, Sheet B-108 (car 10/28/2016	uence with clear delineation of the time of stressing. Also che ttilever distance) consistent wi 1		
	showing : A step-by Support o	stresses during stressing of step casting and form str conditions for the main spa forary support conditions of	be provided with the Final submitta operations are below the allowable ipping sequence will be provided wi an during stressing operations will b luring transport shown on Sheet B- 11/1/2016	limits will be provided with the ith the Final submittal. e shown on the Final submitta	al.	
	Response	e Accepted & Comment C	losed			
No	Status		Current Holder	Reference	Categories	
11	RESPON	ISE ACCEPTED		Sheet B-37, Note 8:	STRUCTURES	
	Created By		Created On	Version	Delegate For	
	Thomas Andre	s	10/11/2016	1	and Management Andrews and and	
	Clarify that the PT bars for members 2 and 11 will not be grouted at the near-site casting yard but will be de-tensioned prior to grouting after span is transported via SPMT to					
	the site.		-			
	MANUEL FEL		10/28/2016	1		
	Note 8 ha	s been clarified.				
	Thomas Andre	S .	11/1/2016	1		
	Response	e Accepted & Comment C	osed			
No	Status		Current Holder	Reference	Categories	
12	RESPON	ISE ACCEPTED		Sheets B-48 and B-50:	STRUCTURES	
	Created By	10,051 (5. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Created On	Version	Delegate For	
	Thomas Andre	S	10/11/2016	1	, annaithe anns annsanna annsanna. Anns Anns	
	behind it.	This was an earlier comm	nent.	PT tendon anchor as the comp	pression zone drags the end web diagonal and pylon (Sheet B-48)	
	behind it. MANUEL FEL	This was an earlier comm ICIANO	nent. 10/28/2016	1		
	behind it. MANUEL FEL Reinforce	This was an earlier comm CIANO ment has been added to t	nent. 10/28/2016 he Type III and Type IV Deck Diapt	1 nragms to address this comme		
	behind it. MANUEL FEL Reinforce Thomas Andre	This was an earlier comm CIANO ment has been added to t s	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016	1		
	behind it. MANUEL FEL Reinforce Thomas Andre	This was an earlier comm CIANO ment has been added to t	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016	1 nragms to address this comme		
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	behind it. MANUEL FEL Reinforce Thomas Andre Response Status	This was an earlier comm CIANO ment has been added to t s	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016 losed	1 nragms to address this comme 1	Categories	
	behind it. MANUEL FEL Reinforce Thomas Andre Response Status	This was an earlier comm CIANO ment has been added to t s Accepted & Comment C	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016 losed	1 nragms to address this common 1 <b>Reference</b> Sheets B-53 (Section A	Categories	
	behind it. MANUEL FEL Reinforce Thomas Andre Response <b>Status</b> RESPON	This was an earlier comm CIANO ment has been added to t as Accepted & Comment C ISE ACCEPTED	nent. 10/28/2016 he Type III and Type IV Deck Diaph 11/1/2016 losed Current Holder Created On	1 nragms to address this commo 1 <b>Reference</b> Sheets B-53 (Section A A), B-55 (Section A-A),	ent. Categories A- STRUCTURES	
	behind it. MANUEL FEL Reinforce Thomas Andre Response Status RESPON Created By Thomas Andre	This was an earlier comm CIANO ment has been added to t as Accepted & Comment C ISE ACCEPTED	nent. 10/28/2016 he Type III and Type IV Deck Diaph 11/1/2016 losed Current Holder Created On 10/11/2016	1 nragms to address this comme 1 <b>Reference</b> Sheets B-53 (Section A A), B-55 (Section A-A), <u>Version</u> 1	ent. Categories A- STRUCTURES Delegate For	
	behind it. MANUEL FEL Reinforce Thomas Andre Response <b>Status</b> RESPON <b>Created By</b> Thomas Andre Extend th	This was an earlier comm CIANO ment has been added to t as Accepted & Comment C ISE ACCEPTED s e tie down stirrup legs long	nent. 10/28/2016 he Type III and Type IV Deck Diaph 11/1/2016 losed Current Holder Created On 10/11/2016 ger to be able to resist radial forces	1 nragms to address this comme 1 <b>Reference</b> Sheets B-53 (Section A A), B-55 (Section A-A), <b>Version</b> 1 in the curved zones of the ter	ent. Categories A- STRUCTURES Delegate For	
	behind it. MANUEL FEL Reinforce Thomas Andre Response <b>Status</b> RESPON <b>Created By</b> Thomas Andre Extend th MANUEL FEL	This was an earlier comm CIANO ment has been added to t as Accepted & Comment C ISE ACCEPTED s e tie down stirrup legs long CIANO	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016 losed Current Holder Created On 10/11/2016 ger to be able to resist radial forces 10/28/2016	1 nragms to address this comme 1 <b>Reference</b> Sheets B-53 (Section A A), B-55 (Section A-A), <u>Version</u> 1	ent. Categories A- STRUCTURES Delegate For	
<b>No</b> 13	behind it. MANUEL FEL Reinforce Thomas Andre Response <b>Status</b> RESPON <b>Created By</b> Thomas Andre Extend th MANUEL FEL	This was an earlier comm CIANO ment has been added to t as Accepted & Comment C ISE ACCEPTED s e tie down stirrup legs long CIANO wwn stirrup legs have been	nent. 10/28/2016 he Type III and Type IV Deck Diapt 11/1/2016 losed Current Holder Created On 10/11/2016 ger to be able to resist radial forces 10/28/2016	1 nragms to address this comme 1 <b>Reference</b> Sheets B-53 (Section A A), B-55 (Section A-A), <b>Version</b> 1 in the curved zones of the ter	ent. Categories A- STRUCTURES Delegate For	

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No	Stat	Current Holder	Reference	Categories
4	RES E ACCEPTED		Sheets B-56:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
		king due to tension behind the inner (phas	e 1 C5) PT tendon ancho	r as the compression zone drags the pylon behind it. This was an
	earlier comment. MANUEL FELICIANO	10/28/2016	1	
	Reinforcement has been added to	the Type III Canopy Diaphragm to addres	ss this comment.	
	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (	Closed		
0	Status	Current Holder	Reference	Categories
۲	RESPONSE ACCEPTED		Sheets B-60, and B- 108, Stage 3:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	both sheets consistent with the ca MANUEL FELICIANO		1	remain vertical during SPMT transport. Add the appropriate notes to
	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (			
0	Status	Current Holder	Reference	Categories
5	RESPONSE ACCEPTED		Sheets B-65, B-66, and B-67:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	Check the canopy design where the	he longitudinal tendons are deviated in pla	an view resulted in transve	erse bending of the canopy, due to PT eccentricity.
	MANUEL FELICIANO	10/28/2016	1	
		ongitudinal tendons has been taking into a	account in the design of th	ne canopy. Additional calculations will be provided with the Final
	submittal. Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (			
2	Status	Current Holder	Reference	Categories
,	RESPONSE ACCEPTED		Sheet B-69:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
			. Replace Anchorage Pro 1	tection Type 3 to Type 2 for longitudinal multi-strand tendons in the
	will be cast with the precast section Type 3 Anchorage Protection has Thomas Andres	n with no block out and coated with a galv been revised to Type 2 Anchorage Protec 11/1/2016	anizing compound (e.g. Z	d the risk of corrosion are lower beneath the deck. Dead end anchors inc Clad III HS) for additional protection.
	Decrement Accorded 8 Comment (			

No	Stat		Current Holder	Reference	Categories	
18	RE	<b>3E ACCEPTED</b>		Sheet B-70:	STRUCTURES	
C	reated By		Created On	Version	Delegate For	
1	homas Andr	es	10/11/2016	1	the stand with a second with the	
M	b. It is u moveme c. How i d. We h the oute e. Pipe s	nt for jacking? Suggest s inner surface of pipe pr ave long-term concerns v r pipes. Sheet B-70: The upport geometry: it appe fy the 16" stay pipe ASTM	fastened to the pylon. Show detail. If it that head of bolt be oriented outward wi rotected against corrosion? with cracking of the pipe at the welds. C stay pipe numbering system here is diff ars the pipe sagging and truss deforma	ith imbedded coupler inner s Consider an inner stiffener w ferent from sheet B-109.	how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. /ith a weld access hole to strengthen pipe/plate connection especially for I in the Angle Top and Angle Bottom of the steel pipe.	
			provided with the erection manual.	·		
	<ul> <li>b. Addit</li> <li>c. Weep</li> <li>pipe.</li> <li>d. Both</li> <li>stiffness</li> <li>be possi</li> <li>additiona</li> <li>e. The a</li> <li>superstri</li> <li>f. The A</li> </ul>	ional details will be provide the forces and variation i in order to meet specifie ble, it would create additi al residual thermal stress ingle top and angle botto ucture deformations is no STM spec has been refe	ded to show how the bolts are fastened t the bottom of each pipe in order to dra n force in the steel pipe sections are low d vibration frequencies. The areas were onal non-uniformity due to the stiffeners es. The simpler weld detail is preferred m were calculated based on the final pip t significant in the angle calculations. The	in any water due to conden w when compared to the cro e not based upon needed foi s and the access holes. Inst by the Designer. The stay th pe shape. The sagging of th	sation. This will reduce the possibility of corrosion at the bottom of the ess section area. The cross section areas were selected to provide rce resistance (strength). While the Department's suggested detail would allation of the stiffeners and the repair of the access holes would create pipe numbering on Sheet B-109 has been revised. he pipe will be eliminated with the camber of the pipe and the effect of the	
T	homas Andr		12/6/2016	1		
	Regardir ends). T sealed.	ng Item c, if the inner sur his will reduce the likelih	face of the pipe is not primed or coated ood of moisture condensation (corrosion	in any way, we suggest that n) over time and potential st	t the pipe be completely sealed prior to installation (including at the taining. SDG 10.7.D.2 requires tubular members to be capped and	
lo	Status		Current Holder	Reference	Categories	
9	RESPO	NSE ACCEPTED		Sheet B-103:	STRUCTURES	
C	reated By		Created On	Version	Delegate For	
	homas Andr	es	10/11/2016	1	- Maria - Saman - A Laboraran -	
М	b. Detail End Ben IANUEL FEL a. A cros	1: The side and top elast t 3, show the gap dimens ICIANO ss reference note has be	sions between the top surface of the end 10/28/2016 en added to Sheet B-103.	d bent and underneath of th 1		
	<li>b. The s added.</li>	ide elastomeric cover for	the steel plates has been revised to 1/4	4". The top elastomeric cov	er provided for the steel plates is 3/8". The gap dimensions have been	
T	homas Andr	es	11/1/2016	1		
		e Accepted & Comment				
lo	Status		Current Holder	Reference	Categories	
20		NSE ACCEPTED		Sheet B-104, Stage 4,	STRUCTURES	
				Step 3:		
C	reated By	<b>1</b> 00 ····	Created On	Version	Delegate For	
	homas Andr	es	10/11/2016	1	All M. Y. L. Austriaux.co.	
	There are concerns with connecting the back-span to the pylon prior fabricating span. Concerns include: a. Stresses of connection due to flexibility of formwork. b. Camber (rotational) stresses due to longitudinal P.T. c. Local stresses (shear lag) at inner anchor as the compression zone drags the pylon.					
M			10/28/2016	1		

#### FIU Superstructure 90% Comments

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 General: Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a more detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.

The Erection Manual shall include the following:

- Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.
- Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing.
- Positioning, detailed step-by-step erection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span during the SPMT move.
- 2. General: Provide connection details between main span truss with the pylon.
- Sheets B-38 thru B-45 and B-61, B-63, and B-65: Add PT bar anchor caps (top and bottom) per SDG 1.11.2, Standard Index 21802 and Specification 462-1.2.a consistent with approved FDOT PT systems and resize element as required to fit caps.
- 4. Sheets B-37 thru B-40, B-42, B-43, and B-69: Include step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. For the main span section (Sheets B-37 thru B-40) depict the support condition at the near-site casting yard at the time of stressing. Also check the temporary condition at the time of transport with a clear delineation of the SPMT support location on stage 3, Sheet B-108 (cantilever distance) consistent with the calculations.
- 5. Sheet B-37, Note 8: Clarify that the PT bars for members 2 and 11 will not be grouted at the near-site casting yard but will be de-tensioned prior to grouting after span is transported via SPMT to the site.
- Sheets B-48 and B-50: There is concern of potential cracking due to tension behind the inner PT tendon anchor as the compression zone drags the end web diagonal and pylon (Sheet B-48) behind it. This was an earlier comment.
- Sheets B-53 (Section A-A), B-55 (Section A-A), B-57 (Section A-A), B-59 (Section A-A), B-51 (Section A-A and View B-B): Extend the tie down stirrup legs longer to be able to resist radial forces in the curved zones of the tendons.
- Sheets B-56: There is concern of potential cracking due to tension behind the inner (phase 1 C5) PT tendon anchor as the compression zone drags the pylon behind it. This was an earlier comment.
- 9. Sheets B-60, and B-108, Stage 3: The support conditions at the near site casting yard and during SPMT transport is critical (P.T. stressing through SPMT transport). The support needs to be provided at the ends through the end diaphragm at the element lifts off formwork during

longitudinal/transverse stressing in the near site casting yard. Support needs to stay in the middle (specify distance) of the cross section during SPMT transport. Also the main span element needs to remain vertical during SPMT transport. Add the appropriate notes to both sheets consistent with the calculations.

- 10. Sheets B-65, B-66, and B-67: Check the canopy design where the longitudinal tendons are deviated in plan view resulted in transverse bending of the canopy, due to PT eccentricity.
- 11. Sheet B-69: Specify PT Anchorage Protection Type 8 for down STA (non-stressing end). Replace Anchorage Protection Type 3 to Type 2 for longitudinal multi-strand tendons in the deck and canopy. Note: Type 3 is for segmental match-cast joint.
- 12. Sheet B-70:

6 ...

- a. Provide pipe camber diagrams.
- b. It is unclear how the bolts are fastened to the pylon. Show detail. If the nut is oriented outward how is simply removing the nut sufficient for allowing the necessary movement for jacking? Suggest that head of bolt be oriented outward with imbedded coupler inner shank, nut and plate washer.
- c. How is inner surface of pipe protected against corrosion?
- d. We have long-term concerns with cracking of the pipe at the welds. Consider an inner stiffener with a weld access hole to strengthen pipe/plate connection especially for the outer pipes. Sheet B-70: The stay pipe numbering system here is different from sheet B-109.
- e. Pipe support geometry: it appears the pipe sagging and truss deformation have not been included in the Angle Top and Angle Bottom of the steel pipe.
- f. Specify the 16" stay pipe ASTM spec.
- 13. Sheet B-103:
  - a. Add cross reference note to Sheet B-70 for unbolting pipe supports.
  - b. Detail 1: The side and top elastomeric cover for the steel plates, show 1/8" thick. FDOT Standard Index No.20510 required ¼" thick. In elevation view End Bent 1 and End Bent 3, show the gap dimensions between the top surface of the end bent and underneath of the superstructure.
- 14. Sheet B-104, Stage 4, Step 3: There is still a concern with connecting the back-span to the pylon prior fabricating span. Concerns include:
  - a. Stresses of connection due to flexibility of formwork.
  - b. Camber (rotational) stresses due to longitudinal P.T.
  - c. Local stresses (shear lag) at inner anchor as the compression zone drags the pylon.

Submitt ?e	port		<u></u>
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	10/17/2016	Response Due Date:	11/14/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	10/17/2016
Create User Id:	PD601MI	Last Update:	10/17/2016
		Last Update User Id:	PD601MI

#### Description:

434688-1: Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 10/17/2016 Comments Due Date: 10/28/2016 Days Allowed for Review: 12 Review Meeting: 11/14/2016 10:00 AM to 11:00 AM @ To be schedule if required Field Meeting: Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail: Phone #: Section: Phase: 100% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779

Production Date: DESIGN- BUILD

## Threads:

1111C				
No	Status	Current Holder	Reference	Categories
12	RESPONSE ACCEPTED		Sheets B-24, Cross Section and Section A- A:	STRUCTURES
C	reated By	Created On	Version	Delegate For
Т	homas Andres	10/28/2016	1	
	The scale of the sections make it clarify intent.	difficult to understand detailer's intent.	Also showing all bars instead	d of first and last grouping of the bars would help reduce congestion and
M	ANUEL FELICIANO	11/14/2016	1	
	New details were previously devel	loped using a bigger scale. The Contra	actor has reviewed this drawi	ng and believes that these details are clear for construction.
т	nomas Andres	12/6/2016	1	
	The details are Observe D. 0.4 states	the second second set of Observations - Detailing	- Manual Ocations 0.0 and 0	

The details on Sheet B-24 violate the requirements of Structures Detailing Manual Sections 2.8 and 2.9.

No	Stat	Current Holder	Reference	Categories		
13	RES SE ACCEPTED		Sheets B-24 and	STRUCTURES		
	Created By	Created On	Version	Delegate:For		
	Thomas Andres	10/28/2016	1	an in an		
	The pouring sequence of the pylon column and CIP backspan and limits of the various construction joints is unclear.					
	MANUEL FELICIANO	11/14/2016	1			
	The pouring sequence is shown on that these details are clear for cons	struction.	omitted with the 90% Superst	ructure plans. The Contractor has reviewed these drawings and believe		
	Thomas Andres	12/6/2016	1			
	We still feel that plans are not as cl	lear as they should be.				
No	Status	Current Holder	Reference	Categories		
14	RESPONSE ACCEPTED		Sheet B-24, Section A A and Detail 1:	A- STRUCTURES		
	Created By	Created On	Version	Delegate For		
	Thomas Andres	10/28/2016	1	and a state of a		
	Clarify on the precast mainspan side of Section View that the Pylon Base / Precast Mainspan interface is to be grouted.					
	MANUEL FELICIANO	11/14/2016	1			
	A note has been added to clarify th	e interface to be grouted.				
	Thomas Andres	12/6/2016	1			
	Response Accepted & Comment C	losed				
No	Status	Current Holder	Reference	Categories		
15	RESPONSE ACCEPTED	ourront monuer	Sheets B-24, Detail1,	STRUCTURES		
10			and Sheet B-25, Section E			
	Created By	Created On	Version	Delegate For		
!	Thomas Andres	10/28/2016	1			
	Is the intent to embed a section of drainage pipe in the pour then couple the pipe either-side of pour? The structural plans need to be detailed accordingly and sections					
	need to accommodate the pipe join ERIKA HANGO	ns. 11/14/2016	1			
		e opening (6" radius) has been size	ed to accommodate the PVC	coupling (<5" radius). Additional details are provided on the		
	Superstructure plans.					
	Thomas Andres	12/6/2016	1			
	Response Accepted & Comment C	losed		տու մես անուլումությունություն		
No	Status	Current Holder	Reference	Categories		
16	RESPONSE ACCEPTED		Sheet B-25:	STRUCTURES		
	Created By	Created On	Version	Delegate For		
1	Thomas Andres	10/28/2016	1	. Li e Banjit den Melenne Bolen		
	Include a Note 8 which states that t	the annulus between the 11P06 ba	rs and the 4" I.D. reinforceme	nt sleeve is to be grouted prior to concreting.		
I	MANUEL FELICIANO	11/14/2016	1			
	The suggested note has been adde	ed.				
	Thomas Andres	12/6/2016	1			
	Response Accepted & Comment C	lanad				

No Stat	Current Holder	Reference	Categories
17 RES SE ACCEPTED		Sheet B-26, Secti C:	STRUCTURES
Created By	Created On	Version	Delegate For
Thomas Andres	10/28/2016	1	1997 Mali minandi upinatifi s
Show the 11P06 bars.			
MANUEL FELICIANO	11/14/2016	1	
The 11P06 bars are shown on She	et B-26 as hollow circles. The 11P0	6 bars are cast with the inter	mediate pylon and splice with the 11P01 bars in the upper pylon.
Thomas Andres	12/6/2016	1	

Okay. Call-out the IIP06 hollow bars in Section C-C.

# Submitt: Peport

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	2/14/2017	Response Due Date:	3/23/2017
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	2/14/2017
Create User Id:	PD601MI	Last Update:	6/13/2017
		Last Update User Id:	KNKSARA

#### Description:

434688-1: 100% Superstructure Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 2/14/2017 Comments Due Date: 3/7/2017 Days Allowed for Review: 22 Review Meeting: 3/23/2017 10:00 AM to 11:00 AM @ To be schedule if required Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Phase: 100% Superstructure Design Review Meeting will be schedule if needed Design Criteria is FDOT PPM Work Program Construction Budget: \$11,875,092 Production Date: DESIGN- BUILD

## Threads:

1 I H S	aug.			
No	Status	Current Holder	Reference	Categories
3	RESPONSE ACCEPTED		B-39, B-40, B-43 and B- 69:	STRUCTURES
C	reated By	Created On	Version	Delegate For
т	homas Andres	2/20/2017	1	ا ت ماندانه ماند.
	Corrosion protection is not in compliance v	vith Design Index 21802.		
м	This comment requires a written response ANUEL FELICIANO	3/30/2017	1	
TI	Permanent grout caps are provided at the end anchors will be cast within the precast corrosion protection as the exposure levels homas Andres	section with no block out. Th	e dead end anchor will be coa	pe 9 per Standard Index No. 21802) as shown on Sheet B-69. Dead ted with a galvanizing compound (e.g. Zinc Clad III HS) for additional
	Response Accepted & Comment Closed			

1	RES E ACCEPTED	Current Holder	Reference	Categories STRUCTURES		
	Created By	Created On	B-39, B-40, and L Version			
	Thomas Andres	2/20/2017	1	Delegate For		
	Provide geometry control for both spans (deck elevations and camber diagrams). Include a plan note to require shop drawing for forming details including a step-by-step forming plan; including support conditions and forming design, camber details and calculations based on forming stiffness, etc.					
	This comment requires a written r MANUEL FELICIANO	response. 3/30/2017	1			
	temporary towers. In addition, a t	the requested information showing m table of elevations has been added to drawing requirements will be added 4/3/2017	Sheets B-37 & B-41.	litions during casting, form stripping sequence, and location of FC package.		
	Response Accepted & Comment	Closed				
0	Status	Current Holder	Reference	Categories		
	RESPONSE ACCEPTED		B-38 and B-109 Stage 2, Step 2:	STRUCTURES		
	Created By	Created On	Version	Delegate For		
	Thomas Andres	2/20/2017	1	· · · · · · · · · · · · · · · · · · ·		
I	This comment requires a written r MANUEL FELICIANO	ng in adjacent members prior to longit response. 3/30/2017	1			
	<ul> <li>a. Sheet B-109, Stage 2, Steps 1.A through 1.C give the casting sequence of the main span superstructure elements. Labels have also been added to the cross section to further clarify.</li> <li>b.i. The diagonals are members with PT bars while the vertical members are reinforced concrete members. A note has been added to Sheet B-109, Stage 2 to further clarify.</li> <li>b-ii. A more detailed stressing sequence has been provided on Sheet B-109 (Stage 2) for clarification. This sequence has been added to the RFC Submittal plan sheet.</li> <li>b-iii. The effect of the PT bars has been considered in the finite element model analysis (LUSAS Bridge plus) of the main span. PT bars are defined in the truss diagonal members. The stressing sequence of all PT has been checked with the finite element model to ensure the structure is within the allowable limits as each member is stresse</li> </ul>					
-	b-ii. A more detailed stressing sec b-iii. The effect of the PT bars has members. The stressing sequence	s been considered in the finite eleme	nt model analysis (LUSAS Brid	tge plus) of the main span. PT bars are defined in the truss diagonal		
	b-ii. A more detailed stressing sec b-iii. The effect of the PT bars has	s been considered in the finite eleme ce of all PT has been checked with th 4/3/2017	nt model analysis (LUSAS Brid	tge plus) of the main span. PT bars are defined in the truss diagonal		
	b-ii. A more detailed stressing sec b-iii. The effect of the PT bars has members. The stressing sequence Thomas Andres Response Accepted & Comment (	s been considered in the finite eleme te of all PT has been checked with th 4/3/2017 Closed	nt model analysis (LUSAS Brid	dge plus) of the main span. PT bars are defined in the truss diagonal re the structure is within the allowable limits as each member is stresse		
0	b-ii. A more detailed stressing sec b-iii. The effect of the PT bars has members. The stressing sequenc Thomas Andres	s been considered in the finite eleme ce of all PT has been checked with th 4/3/2017	nt model analysis (LUSAS Brid e finite element model to ensu 1	tge plus) of the main span. PT bars are defined in the truss diagonal		
0	b-ii. A more detailed stressing sec b-iii. The effect of the PT bars has members. The stressing sequence Thomas Andres Response Accepted & Comment of Status	s been considered in the finite eleme te of all PT has been checked with th 4/3/2017 Closed	nt model analysis (LUSAS Brid e finite element model to ensu 1 <b>Reference</b> B-42, B-109 Stage 5,	dge plus) of the main span. PT bars are defined in the truss diagonal re the structure is within the allowable limits as each member is stresse Categories		
lo	b-ii. A more detailed stressing set b-iii. The effect of the PT bars has members. The stressing sequence Thomas Andres Response Accepted & Comment ( Status RESPONSE ACCEPTED Created By Thomas Andres During the stressing of the PT bar post-tensioned. The temporary st i. Clarify what order to stress men	s been considered in the finite eleme ce of all PT has been checked with th 4/3/2017 Closed Current Holder Created On 2/20/2017 rs in Stage 5, Step 5, there is a conce ress check needs to account for the i	nt model analysis (LUSAS Brid e finite element model to ensu 1 <b>Reference</b> B-42, B-109 Stage 5, Step 5: <b>Version</b> 1 rn with cracking the adjacent r igidity of the joints. nt members. Consider stressi	dge plus) of the main span. PT bars are defined in the truss diagonal re the structure is within the allowable limits as each member is stresse <b>Categories</b> STRUCTURES <b>Delegate For</b>		
lo	b-ii. A more detailed stressing set b-iii. The effect of the PT bars has members. The stressing sequence Thomas Andres Response Accepted & Comment ( Status RESPONSE ACCEPTED Created By Thomas Andres During the stressing of the PT bar post-tensioned. The temporary st i. Clarify what order to stress men	s been considered in the finite eleme ce of all PT has been checked with th 4/3/2017 Closed Current Holder Created On 2/20/2017 The sin Stage 5, Step 5, there is a conce tress check needs to account for the in mbers to minimize cracking of adjaceing g in adjacent members prior to longitu	nt model analysis (LUSAS Brid e finite element model to ensu 1 <b>Reference</b> B-42, B-109 Stage 5, Step 5: <b>Version</b> 1 rn with cracking the adjacent r igidity of the joints. nt members. Consider stressi	dge plus) of the main span. PT bars are defined in the truss diagonal re the structure is within the allowable limits as each member is stresse <b>Categories</b> STRUCTURES <b>Delegate For</b>		

ii. The stressing sequence of the longitudinal PT has been checked to ensure the structure is within the allowable limits as each tendon is stressed.

To clarify, this response applies to Sheets B-109 (Stage 4) and B-110 (Stage 5). Thomas Andres 4/3/2017 1

	Stat - RE ISE ACCEPTED	Current Holder	B54 thru B-59;	Categories STRUCTURES		
C	Created By	Created On	Version	Delegate For A		
7	Thomas Andres	2/20/2017	1			
	There is a concern that without transverse PT of the canopy end diaphragms that cracking will develop during longitudinal PT stressing. The concern is that the web will get dragged behind the compression zone. See sketch below.					
M	This comment requires a written re MANUEL FELICIANO	esponse. 3/30/2017	1			
ſT	The concrete tensile stress was checked and is less than 3sqrt(fc). In addition, 6#8 bars are provided at the face of the Type II canopy diaphragm and 3#8 bars are provided at the face of the Type III canopy diaphragm based on our strut and tie analysis. Thomas Andres 4/3/2017 1					
	Response Accepted & Comment C	Closed				
)	Status	Current Holder	Reference	Categories		
	RESPONSE ACCEPTED		B-57, Section A-A; B- 59, Section A-A:	STRUCTURES		
C	Created By	Created On	Version	Delegate For		
Th	Thomas Andres	2/20/2017	1			
	The 5S03 bars do not appear to be long enough to resist the radial tendon force.					
M	This comment requires a written re MANUEL FELICIANO	esponse. 4/4/2017	1			
Tł	The 5S03 bars cannot be extended down per the provided sketch because the vertical member does not exist at the location of the tendon anchorages. The 5S03 bar legs tie into the reinforcement mat at the bottom of the canopy with a 90 degree standard hook. The 5S03 bars have been extended up to tie into the diagonal bar at the top face of the diaphragm for the RFC submittal. Thomas Andres 4/11/2017 1					
	Response Accepted & Comment C					
	Status	Current Holder	Reference	Categories		
	RESPONSE ACCEPTED		B-70, Detail A:	STRUCTURES		
Ci	Created By	Created On	Version	Delegate For		
1	homas Andres	2/20/2017	1			
	Suggest that 2 1/2" grout pad be ad	ded to facilitate fit-up.				
	This comment requires a written re	esponse. 3/30/2017	4			
M			l e nines near the nylon (Detail	۵)		
	A 1" thick grout pad will be added t	to the bearing plates at the end of the	e pipes near the pylon (Detail	A).		
	A 1" thick grout pad will be added the formas Andres	to the bearing plates at the end of the 4/3/2017	e pipes near the pylon (Detail 1	A).		
T۲	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C	to the bearing plates at the end of the 4/3/2017	e pipes near the pylon (Detail 1 <b>Reference</b>	A). Categories		
T۲	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment Co Status	to the bearing plates at the end of the 4/3/2017 Closed	1			
Tł	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment Co Status RESPONSE ACCEPTED	to the bearing plates at the end of the 4/3/2017 Closed Current Holder	1 Reference	Categories STRUCTURES Delegate For		
Tł	A 1" thick grout pad will be added to homas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Freated By	to the bearing plates at the end of the 4/3/2017 Closed Current Holder Created On	1 Reference B-109: Version	Categories STRUCTURES		
Tł	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Freated By Thomas Andres a. Stage 2, Steps 4 and 5: Sugges stresses in the span (e.g. Stress T	to the bearing plates at the end of the 4/3/2017 Closed Current Holder Created On 2/20/2017 st that not all walkway tendons D1 th Fendons D1 thru D4, Stress C2 and C	1 <b>Reference</b> B-109: <b>Version</b> 1 ru D6 be stressed prior to stre C3, Stress D5 and D6).	Categories STRUCTURES Delegate For		
Th Gi	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Freated By Thomas Andres a. Stage 2, Steps 4 and 5: Sugges stresses in the span (e.g. Stress T	to the bearing plates at the end of the 4/3/2017 Closed Current Holder Created On 2/20/2017 st that not all walkway tendons D1 th Fendons D1 thru D4, Stress C2 and C ocations consistent with the design c	1 <b>Reference</b> B-109: <b>Version</b> 1 ru D6 be stressed prior to stre C3, Stress D5 and D6).	Categories STRUCTURES Delegate For essing canopy tendons. Sequence stressing to reduce temporary		
Th Gi	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Treated By Thomas Andres a. Stage 2, Steps 4 and 5: Sugges stresses in the span (e.g. Stress T b. Stage 3: Show SPMT support to This comment requires a written re- MANUEL FELICIANO a. The erection manual will provide submittal.	to the bearing plates at the end of the 4/3/2017 Closed Current Holder 2/20/2017 St that not all walkway tendons D1 th Fendons D1 thru D4, Stress C2 and C ocations consistent with the design c esponse. 3/30/2017 e more details of the stressing sequen	1 Reference B-109: Version 1 ru D6 be stressed prior to stre 23, Stress D5 and D6). alculations. Check span for to 1 nce. A proposed stressing se	Categories STRUCTURES Delegate For essing canopy tendons. Sequence stressing to reduce temporary emporary hauling boundary conditions.		
Th Gi	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Thomas Andres a. Stage 2, Steps 4 and 5: Sugges stresses in the span (e.g. Stress T b. Stage 3: Show SPMT support to This comment requires a written re- MANUEL FELICIANO a. The erection manual will provide submittal. b. The design calculations are cons-	to the bearing plates at the end of the 4/3/2017 Closed Current Holder Created On 2/20/2017 st that not all walkway tendons D1 th Fendons D1 thru D4, Stress C2 and C ocations consistent with the design c esponse. 3/30/2017 e more details of the stressing sequent sistent with the current location of the	1 Reference B-109: Version 1 ru D6 be stressed prior to stre C3, Stress D5 and D6). alculations. Check span for to 1 nce. A proposed stressing se a SPMT supports shown on S	Categories STRUCTURES Delegate For essing canopy tendons. Sequence stressing to reduce temporary emporary hauling boundary conditions.		
Th o D Th MA	A 1" thick grout pad will be added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Thomas Andres a. Stage 2, Steps 4 and 5: Sugges stresses in the span (e.g. Stress T b. Stage 3: Show SPMT support to This comment requires a written re- MANUEL FELICIANO a. The erection manual will provide submittal. b. The design calculations are cons-	to the bearing plates at the end of the 4/3/2017 Closed Current Holder Created On 2/20/2017 st that not all walkway tendons D1 th Fendons D1 thru D4, Stress C2 and C ocations consistent with the design c esponse. 3/30/2017 e more details of the stressing sequent sistent with the current location of the	1 Reference B-109: Version 1 ru D6 be stressed prior to stre C3, Stress D5 and D6). alculations. Check span for to 1 nce. A proposed stressing set a SPMT supports shown on S	Categories STRUCTURES Delegate For essing canopy tendons. Sequence stressing to reduce temporary emporary hauling boundary conditions.		

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No Stat	Current Holder	Reference B-109 and B-110. Stage 4, Step 3, and Stage 5, St	Categories STRUCTURES
11 RES JE ACCEPTED			
Created By	Created On	Version	Delegate For
Thomas Andres	2/20/2017	1	n ist in the second

These steps are not clear. It is not clear from the Substructure Pylon details the limits of intermediate pylon region to be cast and closure pour region to be cast. Add additional details to clarify intent.

1

This comment requires a written response. MANUEL FELICIANO

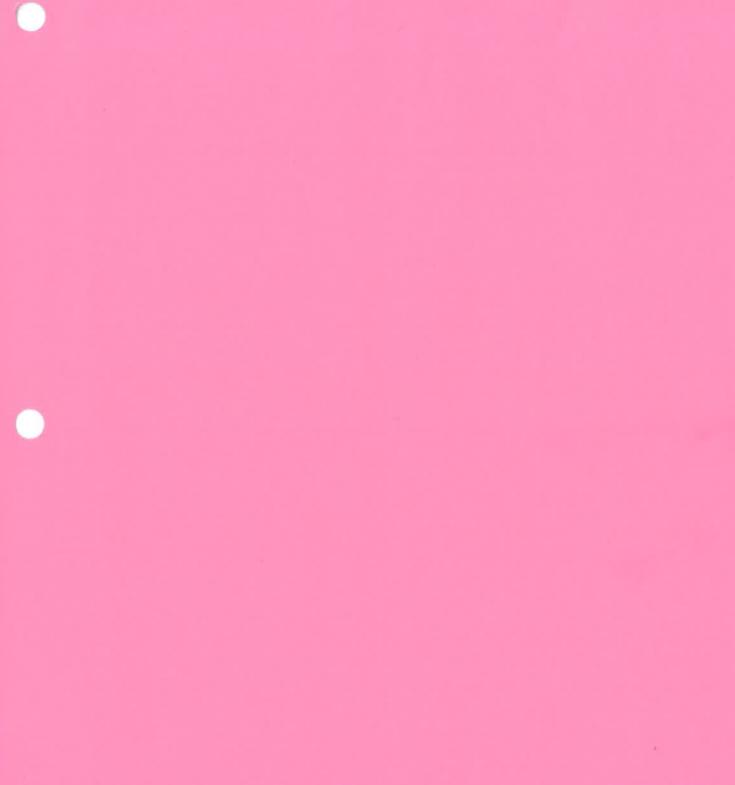
3/30/2017

Once the precast main span unit is in place, the pylon intermediate section (Sheets B-24 thru B-25) will be cast with construction joints that will connect with the back span deck, diagonals, and canopy will be cast in the order listed. Finally, the closure will be poured to connect the deck and canopy sections. 4/3/2017 1

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Thomas Andres

ALL ERC STRUCTURES COMMENTS



## Submitte `eport

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE I	Submital Staff Type:	CONSULTANT
Recieved Date:	3/8/2016	Response Due Date:	3/25/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	3/8/2016
Create User Id:	PD601MI	Last Update:	8/31/2016
		Last Update User Id:	KNKSARA

Description:

434688-1: FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 2/29/2016 Comments Due Date: 3/14/2016 Days Allowed for Review: 15 Review Meeting: 3/25/2016 10:00 AM to 12:00 PM @ TBD If needed-Coordinate with FIU Plans Format: Electronic Comments: External Project Manager: Dwight Dempsey E-mail: Section: Phase: 30% preliminary Design Review Meeting will be schedule if needed Design Criteria is FDOT Work Program Construction Budget: \$11,875,092 Production Date: DESIGN-BUILD

## Threads:

Theads.				
No Status	Current Holder	Reference	Categories	
43 COMMENT RESOLVED			STRUCTURES, TRANSIT	
Created By	Created On	Version	Delegate For	
An the second second second	3/14/2016	1		
Coordinate design of AIMS Plat	tform to be located east of the PG5 Ga	rage with FIU Parking an	d Transportation.	
	4/1/2016	1		
The design of the AIMS platforr	n will be coordinated with FIU Parking	and Transportation.		
Alfredo Reyna	8/16/2016	1		
Comment Closed				

1.50%

RÉ JE ACCEPTED		General and Shi B-3:	STRUCTURES	
Created By	Created On	Version	Delegate For	and the second second
Thomas Andres	3/25/2016	1		
Comments 1 thru 22 below are for i	nformation only. No response is re	equired. The comments are i	ntended to assist in providing general feedback to the DBF.	
1. General: a. See CADD Manual, pg. 4-41 t	thru 4-47 for structures plans nami	ng and numbering conventior	and sheet order.	
http://www.dot.state.fl.us/ecso/dowr	nloads/publications/manual/CADD	Manual2015/Files/10.1.15/CA	DDManual2015.pdf	
<ul> <li>c. Include Traffic Control Plans ferrit</li> </ul>	port and borings in next submittal. or SW 8th Street in next submittal.			
	seline tied-in via survey? Include p tilities within the project limits in ne		n next submittal.	
2. Sheet B-2:				
<ul> <li>a. Include a note for lightning pro code) and NFPA 780 (Standard for</li> </ul>	tection design criteria. fib Bulletin the Installation of Lightning Protection	I No. 30 "Acceptance of Stay	Cable Systems using Prestressing Steels", NFPA 70 (Nation	nal Electric
b. Expand "Screeding Deck Slab	Note" to say: TO ENSURE A U	INIFORM TEXTURE OF THE	FINAL COMPLETED STRUCTURE." to ensure that the C	IP and precast
deck interfacing surfaces also meet	finish requirements.			
c. Rename "Deck Planing and Pl	rofilographing" note title to "Deck F	inishing" since the short-bride	e criteria will be used.	
<li>d. Note 4: If SIP Forms are pern design.</li>	nitted, the designer needs to includ	te the dead load (forms and t	e weight of the concrete to fill the flutes) which were assum	ned in the
	Include a step to unbolt the botton	m stay pipe connection (Deta	B, Sheet B-16) prior to jacking span or incorporate Comme	ent 11.c below.
f. Per, SDG 2.4.1.E, since bridge	e is higher than 75 ft. Evaluate gu	st factor per ASCE/SEI 7-05.	Show gust factor G that was used in General Notes.	
3. Sheet B-3:				
b. Call-out the existing overhead	AND ELEVATION DRAWING req utility. Is it to remain? Can it be s		line? If so, include voltage. Is the clearance the minimum of	distance or
the vertical distance? Clarify.	nlieations exacted by nort of the es	ntinuaria /fax [1] atmatura ha	no founded on deep foundations and part founded on success	al fa atiman
c. Review strain-compatibility imp Although there is likely surface rock	at the site, any settlement of the a 4/22/2016	abutments relative to the pyloi 1	ng founded on deep foundations and part founded on sprea need to be accounted for in the design.	ia iooungs.
progressing the DBF's concept to 90	0% plans.		is required at this time. These comments are intended to a	
progressing the DBF's concept to 90	0% plans.		is required at this time. These comments are intended to a	
(3) It is our understanding that these progressing the DBF's concept to 90	e comments were provided for info 0% plans.	rmation only and no response	is required at this time. These comments are intended to a	SSIST IN
Thomas Andres	4/25/2016	1		

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No	_ State	Current Holder	Reference	Categories
108	RES SE ACCEPTED		Shts B-4 thru B-7	STRUCTURES
C	reated By	Created On	Version	Delegate For
Ťľ	nomas Andres	3/25/2016	1	, increase à la décede, la
Tř	<ul> <li>water. Provide pipe cleanout</li> <li>c. Consider the following c</li> <li>corners.</li> <li>post tensioning stresses. This Also all diagonal Type B mer</li> <li>between the elements.</li> <li>5. Sheet B-5: <ul> <li>a. Spread footing layouts of</li> <li>b. See SDG 3.8 for spread</li> <li>c. See SDM, Chapter 11 fc</li> <li>d. Show critical temporary</li> <li>e. Include Roadway Plan S</li> <li>construction under existing ro</li> </ul> </li> <li>6. Sheets B-6 and B-7: Bu</li> <li>(4) It is our understanding that progressing the DBF's concept</li> <li>(5) It is our understanding that progressing the DBF's concept</li> </ul>	lopes will be difficult to maintain. Greate details during final design and verify that ross section shape related issues: i. Add a large 2'-0" chamfer at canon ii. Review section for buckling of the iii. Review the shape of the canopy a iv. The inset pipe in the bottom cente is also an issue at the locations where f mber anchors appear to conflict with the v. There is insufficient details of the v lo not match B-19 thru B-21. footing requirements. or foundation layout sheet requirements. walls which are required to construct pyle Set which includes requirements for traffic adway. any top of footing a minimum of 3'-0" below 4/22/2016 t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans. t these comments were provided for infor ot to 90% plans.	8 inch diameter pipe is su py-web interfaces and at w unbraced compression fla t the outer fibers— high cor r of the walkway will likely the live end of the PT bar i drainage pipe. walkway deck web interfac on footing alongside SW 8 c control and pavement an w finished ground per SDC 1 mation only and no respon	valkway-web interfaces to reduce the likelihood of cracking at the 90 degree nge (canopy). npression will occur at the top two corners. create a weak point which will be a crack initiation point due to transverse s at the bottom of the truss - if a recess anchor is used. See B-17, Detail 'A'. the and the canopy web interface where there is significant interfacing shear th Street. d striping restoration of SW 8th Street required to facilitate the Pylon footing
No	Status	Current Holder	Reference	Categories
109	RESPONSE ACCEPTED	outont norder	B-8:	STRUCTURES
	reated By	Created On	Version	Delegate For
Server .	omas Andres	3/25/2016	1	
	include: i. Ability to consolidate ii. Ability to splice PT ba	grout/concrete in the 3" vertical gap. ar duct. ate fit-up with hauling defection (SPMTs)	-	t. closure pour throughout. Issues with the 3" CIP vertical closure joint

(7) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.
 Thomas Andres
 4/25/2016

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No	Staty	-	Current Holder	Reference	Categories
110	RES	E ACCEPTED		Shts. B-9 and B-1	STRUCTURES
Cř	eated By		Created On	Version	Delegate For
Th	omas Andr	es	3/25/2016	1	

#### 8. Sheets B-9 and B-10:

a. Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such a way that the heel does not spall or crack as the element cambers up and drags on its heel (region 2).

b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments such that members stay in compression. Also predicting where the PT stressing actually goes will be tricky. For instance any forces imposed on web joints affect all members framing into the joint. Longitudinal stressing of the canopy/walkway will tend to go into the stiff web element and not in the canopy/walkway. Also the design needs to pay particular shear lag affects and member interface shear (horizontal shear) through all phases of stressing.

c. There is a concern with tension behind the compression zone due to longitudinal PT of the walkway at the member ends as the top of the web and canopy element gets dragged along (shear lag in region 3).

d. There appears to be significant shear lag issues in both the canopy and walkway as the stiff web element is being dragged behind the compression zone. The designer needs to pay particular attention in these areas. Moving the canopy continuity tendon to the middle tendon spot may improve the issue. Consider adding additional longitudinal tendons in the added 2 ft. corner chamfers (Comment 4.c.i).

e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).

#### 4/22/2016

(8) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

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Thomas Andres 4/25/2016

Response Accepted & Comment Closed

No	Status	<b>Current Holder</b>	Reference	Categories	<i></i>
111	RESPONSE ACCEPTED		Shts B-11 thru B-16:	STRUCTURES	
C	eated By	Created On	Version	Delegate For	
T	omas Andres	3/25/2016	1	a farma ter any and any	

9. Sheets B-11, B-12, B-14, and B-15: Duct radii are less than the minimum radii required by SDG Table 1.11.4-2. Also provide a tangent of 5'-0" at all anchorages - industry practice.

10. Sheet B-13:

a. Verify stability of the structure during fabrication as the outer two ends of the walkway support beams are cambered upward due to the transverse PT in the deck.

b. The 3 ¾" distance to the flat duct is insufficient when accounting for an outer duct diameter of 1.54". See SDG Table 1.11.4-1.

11. Sheet B-16:

a. The longest pipe (145'-9") will deflect 2.44 inches under its own dead load. This assumes a standard pipe wall thickness. Even thicker walled 16 inch pipes appear to be unacceptable solutions. Consider a 20 inch or 24 inch O.D. with an X-Heavy wall thickness for the longest pipe and a standard pipe thickness for the rest.

b. Are the anchor bolts to be embedded in the members? Avoid drill and epoxy options if possible. See suggested detail below in item C to facilitate fit-up.

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c. The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of the pipes. Require pipes to be completely sealed against rain intrusion.

d. Given the sharply acute angles - How is quality welded insured? Also it is nearly impossible to inspect / perform NDT.

#### 4/22/2016

(9) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(10) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(11) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

1 4/25/2016 Thomas Andres

No Statu	Current Holder	Reference	Categories
112 RES E ACCEPTED		Shts B-17 and B-2	STRUCTURES
Created By	Created On	Version	Delegate For
Thomas Andres	3/25/2016	1	ativite

12. Sheet B-17:

See comment 8 above regarding providing a detailed stressing sequence. All web members may have to be stressed (even members 1, 9, 11 thru 14 and 24) to avoid a. cracking. See Comment 8.c above.

The PT bars at the bottom joint intersection member 7 and 8 conflict (the bars are in the same vertical plane). h

In the case where the bars are stressed from the bottom, how is stressing accessed? Also if an anchor recess is provided at this location, the recess will weaken the C. member.

Include reinforcing and bursting steel details in the next submittal. d.

Recommend showing section views for members without PT bars. e.

The web truss will be very difficult to form without shrinkage cracking of the geometrically constrained members. Concrete placed around rigid inner forms are prone to f. shrinkage cracking and difficult to strip without damaging the member. See sketch below. Also over the length of the web element how will shrinkage be facilitated - will the inner forms be allowed to float or will the element be cast in stages? Recommend a shrinkage reducing admixture, a staged construction process and possibly call-for all of the inner forms to be lined with thin compressible rubber liners.

#### 13. Sheet B-26:

Expand SPMT support beam details including dimensions from the end of the precast truss and analyze/design the precast truss system for the hauling support a. stresses consistent with the plan details and assumed support conditions.

Outside of the roadway pavement limits, the SPMTs will have to roll on steel plates or mats. Show on this sheet or B-27. b.

Require shop drawings for the SPMT move in final plans - give requirements related to maximum twist and differential boundary conditions during the move to avoid C. cracking of the element. 1

4/22/2016

(12) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(13) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans. 1

Thomas Andres

4/25/2016

**Response Accepted & Comment Closed** 

No	Status	Current Holder	Reference	Categories
113	RESPONSE ACCEPTED		Shts B-17, B-27 and B- 28,	STRUCTURES
Cr	eated By	Created On	Version	Delegate For
Ťh	omas Andres	3/25/2016	1	. 1989 lõni , annum, an täisen taisõhallundijalut kin juli täiti kõhnunen an kaadideteksesis ka – † eist, skaku õhdekku

14. Sheet B-27 and B-17: For the CIP truss span, it is unclear how the bottom live-end PT bar for member 23 can be stressed with the support/abutment in the way. Also see Comment 12.c above regarding stressing access with the forming system in the way.

Sheets B-27 and B-28: Expand to include member fabrication forming and stressing, and continuity stressing steps in sufficient detail. 15.

Sheet B-28, Step 5: Include continuity stressing steps. See Comment 7.e above. 16. 4/22/2016 1

(14) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(15) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans.

(16) It is our understanding that these comments were provided for information only and no response is required at this time. These comments are intended to assist in progressing the DBF's concept to 90% plans. 4/25/2016

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Thomas Andres

No State	Current Holder	Reference	0	Categories	
114 RE SEACCEPTED		General:		STRUCTURES	
Created By	Created On	Version		Delegate For	
Thomas Andres	3/25/2016	1		and a should all the second and the	
	ould meet IESNA and CPTED (crit		es thru (	environmental design).	
	cluded curb element will attract sk			ind anyor/chuba balaw 2' tall to aliminate biding places	

Sheet 16 of 106: Follow CPTED standards: Keep tree branches > 6' above ground, and ground cover/shubs below 2' tall to eliminate hiding places. Sheet 17 of 106: Benches should have center arm rest or similar to keep people from sleeping on them. Sheet 55 of 106: Panels create an opportunity for local artwork – creates ownership and reduces vandalism. 19.

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20.

21.

Sheet 92 of 106: Follow CPTED Guidelines - cut off fixture, reduced glare, etc. 22.

4/1/2016

(17) The project will be designed to the relevant standards and guidelines of the Illuminating Engineering Society (IES) and the Crime Prevention Through Environmental Design Association (CPTED). This would include: illuminance levels, lighting uniformity, glare control, light source color, impact of lighting on perceived safety/security and light's use to enhance wayfinding and orientation. (19) Understood, the design will follow CPTED standards and will be further detailed in the 90% landscaping submittal.

(22) Understood. These details will be further developed and provided in the 90% submittal. 4/14/2016

Thomas Andres

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# Submitta ~ port

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE II	Submital Staff Type:	CONSULTANT
Recieved Date:	5/10/2016	Response Due Date:	6/16/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	5/10/2016
Create User Id:	PD601MI	Last Update:	5/10/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 5/10/2016 Comments Due Date: 5/23/2016 Days Allowed for Review: 14 Review Meeting: 6/16/2016 2:00 PM to 4:00 PM @ TBD if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Section: Phase: 90% Foundation Design Review Meeting will be schedule if needed

Review Meeting will be schedule if needed Design Criteria is Florida Green Book Work Program Construction Budget: Production Date: DESIGN- BUILD



lo Statu	-	Current Holder	Reference	Categories
5 " CON	Γ AGREED WITH		Sheet B-5 and Calculations:	STRUCTURES
<b>Created By</b>	The second second	Created On	Version	Delegate For
Thomas An	dres	6/6/2016	1	Will Bright
founda design	tions. This information was a assumptions related to the b	not included in the 90% Foundatio ridge superstructure and cross sec	n Component Submittal Pa ction. See the highlighted o	etails and backup information necessary to substantiate the loading on the ckage. In addition, the previous 30% comments questioned many of the comments in attached pdf. For this reason, the 90% Foundation Componer tes to substantiate the loading on the foundations.
The ba informa	ickup information (structural c ation to substantiate the loadi	alculations) was submitted with th ng on the foundations.	e 90% foundation submitta	. Please check the structural calculations that contain all the necessary
The 30 not exp Thomas And	pecting any significant change	elated to the superstructure design in the superstructure design that 9/19/2016	n. The responses to these of will affect the dimensional of 1	comments will be provided with the 90% superstructure submittal. We are characteristics of the footings.
It was a	agreed that the foundations w	rould be designed with a small res	erve so that the superstruct	ture comments could be resolved at a future date.
		9/19/2016	1	
Comm	ent Agreed & Closed			
lo Status	8	Current Holder	Reference	Categories
6 RESP	ONSE ACCEPTED		Sheet B-9:	STRUCTURES
<b>Created By</b>	*	Greated On	Version	Delegate For
Thomas And	dres	6/6/2016	1	
Verify t	he 127 ton uplift resistance re	equirement. It is not clear why suc	h a large up-lift resistance i	is required (simple span dead loads and continuous live loads).
		6/16/2016	1	
The up	lift resistance requirement is t	o meet the wind loading demand i	in accordance with the proj	ect design criteria.
Thomas And	dres	6/23/2016	1	
Respor	nse Accepted & Comment Clo	osed		
o Status		Current Holder	Reference	Categories
7 RESP	ONSE ACCEPTED		General	STRUCTURES
<b>Created By</b>		Created On	Version	Delegate For
Thomas And		6/8/2016	1	
stay, it	is designed for simple span d	ead loads made continuous for liv	e loads; it also is classified	d by PPM 26.3.2 and PPM 26.12. Although the structure is a fake cable as unique bridge type with component-to-component configurations and Component Package include a peer review.

The Independent Review for the bridge component submittals is being performed by a separate FIGG office that acts independently, was not involved in the original design and does not have any other responsibilities on this project. The independent review is being performed with separately generated structural models, analysis methods and calculations. This process is consistent with the project specific Design Quality Management Plan and the MCM/FIGG technical proposal that were accepted by FIU as part of the design-build contract which is being administered by FIU through the FDOT Local Agency Program. This is the same Design Quality Management procedure that FIGG has successfully performed for all of our major bridges around the country. We will submit the tabulated list of all review comments from the independent review and responses from the originator of the design along with the signed independent review certification letter for the 90% Foundations Submittal. 9/19/2016 1

Thomas Andres

Submitte -	eport		$\sim$
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	6/15/2016	Response Due Date:	7/13/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	6/15/2016
Create User Id:	PD601MI	Last Update:	10/17/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 6/16/2016 Comments Due Date: 7/1/2016 Days Allowed for Review: 16 Review Meeting: 7/13/2016 9:00 AM to 11:00 AM @ TBD no meeting schedule Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail:

### Phone

Section: Phase: 90% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

## Threads:

No	Status	Current Holder	Reference	Categories
1	RESPONSE ACCEPTED		General:	STRUCTURES
C	reated By	Created On	Version	Delegate For
Ť	nomas Andres	6/17/2016	1	tiŭ pγ,_ anda antoni,napolaŭ an_aŭpas.

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The RFP requires sufficient information in component submittals to allow for a complete review. As previously stated in the 90% Foundation Component Submittal, this submittal lacks sufficient backup information necessary to substantiate the loading on the elements supporting the superstructure. As previously stated, the previous 30% comments questioned many of the design assumptions related to the bridge superstructure and cross section. See the highlighted comments in attached pdf. For this reason, the 90% Substructure Component Submittal needs to be resubmitted with the necessary back-up information and comment responses to substantiate the loading on the substructure.

### 7/21/2016

As agreed at the meeting held on 6/30/2016 between FDOT Central Office, FIU, and FIGG, the 90% substructure submittal will be resubmitted including a summary of the C/D ratios for all the substructure components supporting the bridge. 7/28/2016 1

Thomas Andres

No	Statur		Current Holder	Reference	Categories
2	RE	3E ACCEPTED		General:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas And		6/17/2016	1	ու հատորական պաշտում, քիստիսիս այլու քիստիս առամ՝ միկանեցում տրան՝ է հատրեկերետններին, առաջերի է է։ էլ, առ
	stay, it is details n	designed for simple span ot normally used in Florida ad at the meeting held on 6	dead load made continuous for live . We therefore request that the res 7/21/2016	loads; it also is classified a ubmitted 90% Foundation ( 1	red by PPM 26.3.2 and PPM 26.12. Although the structure is a fake cable as unique bridge type with component-to-component configurations and Component Package include a peer review.
	Thomas Andr		7/28/2016	1	
	Respons	se Accepted & Comment C	losed		
No	Status		Current Holder	Reference	Categories
3	RESPO	NSE ACCEPTED		Sheet B-1:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas Andr	es	6/17/2016	1	
	missing in compo substruc	the pylon diaphragm dimen onent submittals to allow for	sions and reinforcing and the uppe r a complete review. Also the FDO	r pylon dimensions and rei T Boilerplate states that pa	Scheets B-36 and B-37). The 90% Substructure Component Submittal inforcing (Sheets B-24 and B-25). The RFP requires sufficient information rtial submittals will not be allowed. (i.e. Further dividing the foundation, portant that the interfacing elements be provided so that a complete review.
	The upp	er and intermediate pylon v	vill be included with the 90% substru	ucture resubmittal.	
	Thomas Andr	es	7/28/2016	1	
	Respons	e Accepted & Comment Cl	osed		
lo	Status		Current Holder	Reference	Categories
4	RESPO	NSE ACCEPTED		Sheet B-23:	STRUCTURES
i i	Created By	WA STOLLAR STREET	Created On	Version	Delegate For
- 0	Thomas Andr	es	6/17/2016	1	
	a. Ind	icate that concrete for the p	ylon is to be mass concrete.		
	submitta	).			s not match the 2 x 11 Pylon dowels shown on Sheet B-10 (previous nent above. The concern is potential camber-growth over time and the
	effects o	n the grouted shim joint. S	ee previous 30% comment related 7/21/2016	to continuous for LL design 1	
	b) The do c) Yes, th	owel detail has been furthe here will be interfacing stee alyzed and its effect on the			v the requested reinforcement details. The effect of the camber-growth has
		e Accepted & Comment Cl			
lo	Status		Current Holder	Reference	Categories
5		NSE ACCEPTED		5. Sheets B-2, B-70 thru B-83:	STRUCTURES
	Created By Thomas Andre	98	Created On 6/17/2016	Version 1	Delegate For
	Verify that	t all concrete covers meet	the requirements of SDG Table 1.4	.2-1. See attached docum	ent for Department's interpretation of requirements.
<u>.</u>			7/21/2016	1	
			THE HEOTO	•	

No	State	Current Holder	Reference	Categories
26	RES JE ACCEPTED			STRUCTURES
Cr	reated By	Created On 7/1/2016	Version 1	Delegate For
	pylon for axial and flexura designed; however, inform	l loads presents the governing load combina nation on how these loads were obtained are	ations for the design as we e not included in the calcu	w a complete review of the pylon design. For example, the design of the ell as the results of the nominal loads for the particular element being lations. Please provide all the necessary backup information to substantiate ictural model of the structure indicating all the primary loads applied to the
		7/21/2016	1	
	All the required input infor calculation binder includin		l in the 90% foundation si 1	ubmittal. However, for future substructure submittals, a section in the
	Response Accepted & Co			
lo	Status	Current Holder	Reference	Categories
7	RESPONSE ACCEPTED			STRUCTURES
Cr	reated By	Created On 7/1/2016	Version 1	Delegate For
	An integrated 3-D drawing connection details will be	shown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s	1 otential conflict between the The sketch shown on she	re rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss
	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con	7/21/2016 has been developed in order to evaluate po shown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed	1 otential conflict between the The sketch shown on she splices between rebar em 1	ne rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon.
	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con Status	7/21/2016 has been developed in order to evaluate po shown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016	1 otential conflict between the The sketch shown on she	he rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon.
8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con Status RESPONSE ACCEPTED	7/21/2016 has been developed in order to evaluate po shown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed	1 otential conflict between the The sketch shown on she splices between rebar em 1	ne rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon. <b>Categories</b> STRUCTURES
No 28 Cre	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con Status	7/21/2016 has been developed in order to evaluate po shown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed <b>Current Holder</b>	1 otential conflict between t The sketch shown on she splices between rebar em 1 <b>Reference</b>	he rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon.
.8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con <b>Status</b> RESPONSE ACCEPTED <b>eated By</b> 90% Calculations Pylon Si allowed a limiting strain of capacity of the column. It in/in. Please clarify. Note that this is a servicea	7/21/2016 has been developed in order to evaluate poshown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed Current Holder Created On 7/1/2016 ubstructure Design, Sheet 42: The FDOT re 24ksi/E and a strain in the concrete of 0.00 is not clear to the reviewer if a strength capa bility criteria and the level of straining in the	1         betential conflict between the sketch shown on she splices between rebar em         1 <b>Reference</b> Version         1         aquirement for crack contribution acity has been performed         arebar and the concrete h	The rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon. Categories STRUCTURES Delegate For- ol (SDG 3.1) has been implemented by a strain criteria in which the steel is a have been performed with the same software used to compute the strength by allowing the rebars to yield at 24 ksi and the concrete to crush at 0.003 ave to be found using equilibrium, strain compatibility and the stress-strain
8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con <b>Status</b> RESPONSE ACCEPTED <b>eated:By</b> 90% Calculations Pylon St allowed a limiting strain of capacity of the column. It in/in. Please clarify. Note that this is a servicea response of the concrete a concrete and the steel will computation is performed.	7/21/2016 has been developed in order to evaluate poshown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed Current Holder Created On 7/1/2016 ubstructure Design, Sheet 42: The FDOT re 24ksi/E and a strain in the concrete of 0.00 is not clear to the reviewer if a strength capa bility criteria and the level of straining in the ind the rebar that equilibrate the applied load be in the elastic range. Please provide detailed	1 ptential conflict between the The sketch shown on she splices between rebar em 1 <b>Reference</b> Version 1 equirement for crack contri- 3 in/in. The computation acity has been performed rebar and the concrete h ds. Most probably at the ails of the computation or	the rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon. <b>Categories</b> STRUCTURES <b>Delegate For</b> Tol (SDG 3.1) has been implemented by a strain criteria in which the steel is a have been performed with the same software used to compute the strength by allowing the rebars to yield at 24 ksi and the concrete to crush at 0.003 ave to be found using equilibrium, strain compatibility and the stress-strain service level the concrete section will be behaving as a crack member but th a copy of the program manual that indicates how this service condition
8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con <b>Status</b> RESPONSE ACCEPTED <b>eated:By</b> 90% Calculations Pylon St allowed a limiting strain of capacity of the column. It in/in. Please clarify. Note that this is a servicea response of the concrete a concrete and the steel will computation is performed.	7/21/2016 has been developed in order to evaluate poshown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed Current Holder Created On 7/1/2016 ubstructure Design, Sheet 42: The FDOT re 24ksi/E and a strain in the concrete of 0.00 is not clear to the reviewer if a strength capa bility criteria and the level of straining in the and the rebar that equilibrate the applied load	1 ptential conflict between the The sketch shown on she splices between rebar em 1 <b>Reference</b> Version 1 equirement for crack contri- 3 in/in. The computation acity has been performed rebar and the concrete h ds. Most probably at the ails of the computation or	the rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon. <b>Categories</b> STRUCTURES <b>Delegate For</b> Tol (SDG 3.1) has been implemented by a strain criteria in which the steel is a have been performed with the same software used to compute the strength by allowing the rebars to yield at 24 ksi and the concrete to crush at 0.003 ave to be found using equilibrium, strain compatibility and the stress-strain service level the concrete section will be behaving as a crack member but th a copy of the program manual that indicates how this service condition
8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con <b>Status</b> RESPONSE ACCEPTED <b>eated:By</b> 90% Calculations Pylon St allowed a limiting strain of capacity of the column. It in/in. Please clarify. Note that this is a servicea response of the concrete a concrete and the steel will computation is performed. This comment is general a	7/21/2016 has been developed in order to evaluate postown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed <b>Current Holder</b> <b>Created On</b> 7/1/2016 ubstructure Design, Sheet 42: The FDOT re 24ksi/E and a strain in the concrete of 0.00 is not clear to the reviewer if a strength capa bility criteria and the level of straining in the und the rebar that equilibrate the applied load be in the elastic range. Please provide detain nd applicable for all the service computation 7/21/2016 gram calculates a service interaction diagram	1         bitential conflict between the sketch shown on she splices between rebar em         1 <b>Reference</b> Version         1         active the computation active has been performed         rebar and the concrete h         ds. Most probably at the ails of the computation or his presented in this subm         1       and the concrete h         1       an that represents the max	the rebars, drainage system, post-tensioning anchorages, and PT bars. All the et 92 depicts an irregular rebar spacing to avoid any conflict with the truss bedded in the end post and the pylon. <b>Categories</b> STRUCTURES <b>Delegate For</b> Tol (SDG 3.1) has been implemented by a strain criteria in which the steel is a have been performed with the same software used to compute the strength by allowing the rebars to yield at 24 ksi and the concrete to crush at 0.003 ave to be found using equilibrium, strain compatibility and the stress-strain service level the concrete section will be behaving as a crack member but th a copy of the program manual that indicates how this service condition
8	An integrated 3-D drawing connection details will be s end post. In addition, the s Response Accepted & Con <b>Status</b> RESPONSE ACCEPTED <b>eated By</b> 90% Calculations Pylon Si allowed a limiting strain of capacity of the column. It in/in. Please clarify. Note that this is a servicea response of the concrete a concrete and the steel will computation is performed. This FIGG proprietary prog exceed the boundaries of the	7/21/2016 has been developed in order to evaluate poshown in the 90% superstructure submittal. tirrups of the pylon will be detailed to have s 8/3/2016 mment Closed <b>Current Holder</b> <b>Created On</b> 7/1/2016 ubstructure Design, Sheet 42: The FDOT re 24ksi/E and a strain in the concrete of 0.00 is not clear to the reviewer if a strength capa bility criteria and the level of straining in the und the rebar that equilibrate the applied load be in the elastic range. Please provide detain nd applicable for all the service computation 7/21/2016 gram calculates a service interaction diagram the interaction diagram, the requirements of	1 beential conflict between the The sketch shown on she splices between rebar em 1 <b>Reference</b> Version 1 equirement for crack contri- 3 in/in. The computation acity has been performed rebar and the concrete h ds. Most probably at the ails of the computation or ns presented in this subm 1 n that represents the max crack control are met. The	The rebars, drainage system, post-tensioning anchorages, and PT bars. All the end post and the pylon.  Categories STRUCTURES Delegate For  ol (SDG 3.1) has been implemented by a strain criteria in which the steel is a have been performed with the same software used to compute the strength by allowing the rebars to yield at 24 ksi and the concrete to crush at 0.003 ave to be found using equilibrium, strain compatibility and the stress-strain service level the concrete section will be behaving as a crack member but th a copy of the program manual that indicates how this service condition ttal.

The reviewer disagrees with the methodology used by the designer. This is a service condition and as such the behavior of the concrete section should be considered as linearly-elastic but most probably cracked and the steel linearly-elastic. The methodology used by the designer is theoretically not correct and not necessarily conservative. The only reason why this comment is accepted is that an independent evaluation shows that service conditions are not controlling the design.

	State		Current Holder	Reference	Categories	
29	RES	3E ACCEPTED	A A A A A A A A A A A A A A A A A A A		STRUCTURES	
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	00% Cal	aulatiana Dulan Qubata	7/1/2016	ا الم المحمد محمد محمد الم	The Tamp - EE ( 4001) and well wind had ( 0001). The set	
	most pro	bably will generate imp	ortant forces at the junction between the ble to handle these forces. 7/21/2016	ne two spans (compressi 1	y TU+ Temp_diff (-458k) and uplift wind loads (-206k). These on at the top and tension at the bottom). Please verify that the	proposed joir
	The back around th	span will be cast-in-plate ne main span and mone	ace and it will be connected with mild r olithic with a portion of the back span.	einforcing to the main sp	an. Furthermore, the pylon intermediate section (deck level) w	ill be cast
	The load	due to self-weight of th	e superstructure (+2,100 kips) exceed 8/3/2016	ls the uplift forces that an 1	generated by thermal effects and wind loading.	
		concern is bending ter on should be appropriat		ing conditions at the junc	tion between the two spans. These forces should be evaluate	d and the
No	Status		Current Holder	Reference	Categories	
30	RESPO	NSE ACCEPTED			STRUCTURES	
C	reated By	the second second	Created On	Version	Delegate For	
36.22	annanation canadi .		7/1/2016	1	ta a 1999 ila dila dalam dalam dina manita dia manina banya kana katika dila dila dia dia dia dia dia dia dia d	
	90% Calo	culations Pylon Substru	cture Design: provide calculations for	the PT bar anchoring the	main span truss system to the pylon.	
			7/21/2016	1		
	These ca	lculations were provide	d on page 180 of the 90% pylon subst	ructure calculations.		
			8/3/2016	1		
	The refer clear to th	ne reviewer is why thes	e PT are bars needed and how they w	oylon base (additional how rere sized. Note that the	izontal bars to take the tension field generated by the PT force response to Comment 29 indicate that there are not uplift force	e). What is no
	junction h	notwoon the superstruc	ture and the hylon base			00 01 010
No	junction t Status	between the superstruc	ture and the pylon base Current Holder	Reference	Categories	
	Status	NSE ACCEPTED	and the second sec	Reference	Categories STRUCTURES	
No 31 Ci	Status RESPON		and the second sec	Reference Version	STRUCTURES	
31	Status		Current Holder			
31	Status RESPON reated By 90% Sub	NSE ACCEPTED	Current Holder Created On 7/1/2016 procement and dimensions of the upper	Version 1 portion of the pylon are r	STRUCTURES	
31	Status RESPON reated By 90% Sub reinforcen FIGG is f	NSE ACCEPTED structure Plans: Reinfor ment is dependent upo ollowing the linear prog	Current Holder Created On 7/1/2016 procement and dimensions of the upper in the connection between the pylon ar 7/21/2016	Version 1 portion of the pylon are r id the truss system, these 1 uilt in the submittal proces	STRUCTURES Delegate For nissing in this submittal (Sheets B-24 and B-25). Also, since th	ne pylon
31	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru	NSE ACCEPTED structure Plans: Reinfor ment is dependent upo ollowing the linear prog	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but is included in the 90% resubmittal of th 8/3/2016	Version 1 portion of the pylon are r id the truss system, these 1 uilt in the submittal proces	STRUCTURES Delegate For nissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal.	ne pylon
31	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru	NSE ACCEPTED structure Plans: Reinfor ment is dependent upo ollowing the linear prog octure connection will be	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but is included in the 90% resubmittal of th 8/3/2016	Version 1 portion of the pylon are r id the truss system, these 1 uilt in the submittal proces	STRUCTURES Delegate For nissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal.	ne pylon
31 Ĉi	Status RESPON reated By 90% Sub reinforcer FIGG is f superstru Response Status	NSE ACCEPTED structure Plans: Reinfor ment is dependent upo ollowing the linear prog octure connection will be	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but a included in the 90% resubmittal of th 8/3/2016 t Closed	Version 1 portion of the pylon are n id the truss system, these 1 wilt in the submittal process e substructure. 1	STRUCTURES Delegate For hissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylor	ne pylon
31 Ci No 32	Status RESPON reated By 90% Sub reinforcer FIGG is f superstru Response Status	NSE ACCEPTED structure Plans: Reinforment is dependent upo ollowing the linear prog icture connection will be e Accepted & Commen	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but a included in the 90% resubmittal of th 8/3/2016 t Closed	Version 1 portion of the pylon are n id the truss system, these 1 wilt in the submittal process e substructure. 1	STRUCTURES Delegate For hissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylow Categories	ne pylon
31 Ci No 32	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru Response Status RESPON	NSE ACCEPTED structure Plans: Reinforment is dependent upo ollowing the linear prog icture connection will be e Accepted & Commen	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but is included in the 90% resubmittal of the 8/3/2016 t Closed Current Holder	Version 1 portion of the pylon are in d the truss system, these 1 uilt in the submittal process e substructure. 1 <b>Reference</b>	STRUCTURES Delegate For nissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylor Categories STRUCTURES	ne pylon
31 Ci No 32	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru Response Status RESPON reated By 90% Sub	NSE ACCEPTED structure Plans: Reinfor ment is dependent upo ollowing the linear prog icture connection will be e Accepted & Commen NSE ACCEPTED	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but included in the 90% resubmittal of th 8/3/2016 t Closed Current Holder Created On 7/1/2016 B-23: Based on the truss system dime	Version 1 portion of the pylon are in id the truss system, these 1 wilt in the submittal process e substructure. 1 Reference Version 1	STRUCTURES Delegate For nissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylor Categories STRUCTURES	ne pylon n-
31 Ci No 32	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru Response Status RESPON reated By 90% Sub	NSE ACCEPTED structure Plans: Reinfor ment is dependent upor ollowing the linear prog icture connection will be e Accepted & Commen NSE ACCEPTED structure Plans, Sheet	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are but included in the 90% resubmittal of th 8/3/2016 t Closed Current Holder Created On 7/1/2016 B-23: Based on the truss system dime	Version 1 portion of the pylon are in id the truss system, these 1 wilt in the submittal process e substructure. 1 Reference Version 1	STRUCTURES Delegate For hissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylow Categories STRUCTURES Delegate For	ne pylon n-
31 Ci No 32	Status RESPON reated By 90% Sub reinforcen FIGG is f superstru Response Status RESPON reated By 90% Sub conflict w	NSE ACCEPTED structure Plans: Reinfor ment is dependent upor ollowing the linear prog icture connection will be a Accepted & Commen NSE ACCEPTED structure Plans, Sheet ith the truss system. P	Current Holder Created On 7/1/2016 orcement and dimensions of the upper in the connection between the pylon ar 7/21/2016 ression of how the components are bu e included in the 90% resubmittal of th 8/3/2016 t Closed Current Holder Created On 7/1/2016 B-23: Based on the truss system dime lease verify.	Version 1 portion of the pylon are in id the truss system, these 1 will in the submittal process e substructure. 1 Reference Version 1 ensions shown in the preference 1	STRUCTURES Delegate For hissing in this submittal (Sheets B-24 and B-25). Also, since the plans also need to be included in this submittal. s for this design-build project. As requested, the detail of pylor Categories STRUCTURES Delegate For minary submittal some of the 11P03 rebars and the couplers of	ne pylon n-

33	RESI E ACCEPTED	Current Holder		STRUCTURES
-	reated By	Created On	Version	Delegate For
		7/1/2016	1	
	90% Calculations_Landing Substr information for these forces.		aring reactions applied to the	he LARSA model have not been documented. Please provide backup
	mormation to mose fores.	7/21/2016	1	
	The bearing reactions were docun	nented in the 90% foundation subm	ittal. However, the 90% su	ubstructure resubmittal will also include this information.
		8/3/2016	1	
	Response Accepted & Comment (	Closed		
No	Status	Current Holder	Reference	Categories
34	RESPONSE ACCEPTED			STRUCTURES
C	reated By	Created On 7/1/2016	Version 1	Delegate For
	well as effects of concrete shrinka		design. Input data shown	ed by uniform temperature expansion or contraction of the framed piers as that bridge bearing reactions due to temperature effects has been considered counted for. Please clarify.
				A. The effect of the deck movements and loads are applied to the applied to the design of the end bents.
	The shrinkage effect of the reinfore significant.	ced concrete end bents and TU effe	ect were checked as part o	of the substructure resubmittal and it was found that these effects are not
		ced concrete end bents and TU effe 8/3/2016	ect were checked as part o	of the substructure resubmittal and it was found that these effects are not
		8/3/2016	·	of the substructure resubmittal and it was found that these effects are not
No	significant. Response Accepted & Comment 0	8/3/2016 Closed	·	Sectors and the sector
	significant. Response Accepted & Comment C	8/3/2016	1	of the substructure resubmittal and it was found that these effects are not Categories STRUCTURES
35	significant. Response Accepted & Comment C Status RESPONSE ACCEPTED	8/3/2016 Closed Current Holder	1 Reference	Categories STRUCTURES
35	significant. Response Accepted & Comment C	8/3/2016 Closed Current Holder Created On	1	Categories
35	significant. Response Accepted & Comment O Status RESPONSE ACCEPTED reated By	8/3/2016 Closed Current Holder Created On 7/1/2016	1 Reference Version 1	Categories STRUCTURES Delegate For
35	significant. Response Accepted & Comment O Status RESPONSE ACCEPTED reated By	8/3/2016 Closed Current Holder Created On 7/1/2016	1 Reference Version 1	Categories STRUCTURES
35	significant. Response Accepted & Comment ( Status RESPONSE ACCEPTED reated By 90% Calculations_Landing Substru	8/3/2016 Closed Current Holder Created On 7/1/2016 ucture Design, Sheet 101: Same as	1 <b>Reference</b> Version 1 s comment No. 2, i.e., clar	Categories STRUCTURES Delegate For
35	significant. Response Accepted & Comment O Status RESPONSE ACCEPTED reated By	8/3/2016 Closed Current Holder Created On 7/1/2016 ucture Design, Sheet 101: Same as	1 <b>Reference</b> Version 1 s comment No. 2, i.e., clar	Categories STRUCTURES Delegate For
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35 Ç	significant. Response Accepted & Comment O Status RESPONSE ACCEPTED reated By 90% Calculations_Landing Substru- See response to comment no. 28. See remarks for Comment 28.	8/3/2016 Closed Current Holder Created On 7/1/2016 ucture Design, Sheet 101: Same as 7/21/2016	1 <b>Reference</b> Version 1 s comment No. 2, i.e., clar 1	Categories STRUCTURES Delegate For
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<b>No</b> 36	significant. Response Accepted & Comment ( Status RESPONSE ACCEPTED reated By 90% Calculations_Landing Substra See response to comment no. 28, See remarks for Comment 28. Status	8/3/2016 Closed Current Holder Created On 7/1/2016 ucture Design, Sheet 101: Same as 7/21/2016 8/3/2016 Kurrent Holder Created On	1 Reference Version 1 s comment No. 2, i.e., clar 1 1 Reference	Categories STRUCTURES Delegate For ify methodology used to check service conditions under flexo-compression.
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35 C No 36	significant. Response Accepted & Comment O Status RESPONSE ACCEPTED reated By 90% Calculations_Landing Substru See response to comment no. 28. See remarks for Comment 28. Status RESPONSE ACCEPTED reated By 90% Substructure Plans. Sheet B-	8/3/2016 Closed Current Holder Created On 7/1/2016 ucture Design, Sheet 101: Same at 7/21/2016 8/3/2016 Current Holder Created On 7/1/2016 2: Since some of the South and No WS 402-13 code, these codes shoul 7/21/2016	1 Reference Version 1 s comment No. 2, i.e., clar 1 1 Reference Version 1 rth landing structural complete to the lit	Categories STRUCTURES Delegate For ify methodology used to check service conditions under flexo-compression. Categories STRUCTURES Delegate For

No	Statu -		Current Holder	Reference	Categories
37	, RESI	<b>E ACCEPTED</b>			STRUCTURES
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· · ·	adding the state of the second		7/1/2016	1	and the second
	Since the	e submitted calculations a	nd plans are incomplete as indicate	ed in some of the previous	s comments, this submittal package requires a resubmittal.
			7/21/2016	1	
	The 90%	substructure package wil	l be resubmitted in order to provide	additional information ab	out the capacity/demand ratios for the substructure elements.
			8/3/2016	1	
	Respons	e Accepted & Comment C	Closed		
No	Status		Current Holder	Reference	Categories
38	RESPO	NSE ACCEPTED			STRUCTURES
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100	All the second second second		7/1/2016	1	a the matter of alternates
	The subr	nittal does not include cal	culations and plans for the foundati	on system for either the la	anding structures or the bridge piers. Please include these components in the
	new resu	ibmittal package.	7/04/0040	4	
	Th- 000/	for a deline or boothed area	7/21/2016	l Control Office has reasoned	
		all of the foundations.	submitted on May 2, 2016. FDO1	Central Office has reques	sted a resubmittal of the 90% foundation in order to include capacity/demand
			8/3/2016	1	
	Respons	e Accepted & Comment C	Closed		
lo	Status		Current Holder	Reference	Categories
9	RESPO	NSE ACCEPTED			STRUCTURES
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P32	The and the set		7/1/2016	1	
	In accord	lance with the FDOT PPM	Section 26.3.2 this structure is cla	ssified as a Category 2 st	ructure and as such PPM 26.12 requires an independent peer review. Please
	include th	his review with the resubm	ittal package. 7/21/2016	4	
	FDOT O	whet effect has several to		i wy prior to the DEC substr	
	FUUTUE	entral office has agreed to	include the independent peer revie		ructure submittai.
	Deserves	· Assessed & Commission C	8/3/2016	I	
		e Accepted & Comment C			a manufacture and the second
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40	RESPO	NSE ACCEPTED			STRUCTURES
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#### General:

A. Truss system section appears stiff for flexure about the horizontal axis but weak for torsion. The canopy which will be under compression is unrestrained for moving laterally (except at the pylon support). Global stability of the system needs to be investigated. The structure first buckling mode will most probably be lateral torsional bucking, i.e., the structure rotating about its shear center which is located close to the bottom slab. A buckling load analysis shall be performed to make sure that the structure has enough safety margins against instability.

B. Bridge vibration needs to be considered as indicated by the AASHTO Specifications for Pedestrian bridges, Section 6. Again, the weak torsional stiffness of the bridge will be the main concern and most probably the first mode of vibration may be rotation of the bridge about its longitudinal center of mass. This may induce important vertical displacement at the tips of the bottom slab which may produce discomfort of the users. A vibration analysis should be performed to assess this phenomenon.
7/21/2016
1

a) The buckling analysis of the canopy was performed and the canopy buckling load is much greater that the loading demand. The global stability calculations for the system will be included in the 90% superstructure submittal.

b) The natural frequency analysis was performed for the first mode of vibration in the vertical and horizontal directions. The analysis shows that the vertical natural frequency is greater than 3 hz and the horizontal frequency is greater than 1.3 hz. Therefore, the design of the structure meets this aspect of the RFP document requirements.

### 8/3/2016

Note that due to the relatively low torsional stiffness of this bridge (as compared to its vertical and horizontal bending stiffness); torsional vibration should also be evaluated. Most probably this should be the first mode of vibration with a frequency smaller than the horizontal and vertical frequencies. Although this mode is not indicated in the AASHTO Specifications for Pedestrian Bridges Section 6- Vibrations, we consider that this particular vibration mode needs to be evaluated.

1

# Submitta eport

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	6/29/2016	Response Due Date:	7/29/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	6/29/2016
Create User Id:	PD601MI	Last Update:	10/24/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: Bulkhead Wall at Tamiami Canal for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 6/28/2016 Comments Due Date: 7/13/2016 Days Allowed for Review: 16 Review Meeting: 7/29/2016 9:00 AM to 12:00 PM @ TBD, Schedule if needed Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail: Phone #: Section: Phase: 90% Bulkhead wall at Tamiami canal Review Meeting will be schedule if needed

Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

## Threads:

THO					
No	Status	Current Holder	Reference	Categories	
11	RESPONSE ACCEPTED			STRUCTURES	
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	Calcs General: Show geotechnica	I recommendation or backup for so	oil parameters. Earth pres	sure loads cannot be verified.	
		8/2/2016	1		
	Geotechnical Recommendation wil	ll be added to the calculations.			
		8/17/2016	1		
	Response Accepted & Comment C	Closed			

STATES IN

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12	RES JE ACCI	EPTED		writeup example	STRUCTURES
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			n approach. See attached ex bad Factors and Factors of Sa 8/2/2016		wall. Describe design criteria and methods for Embedment, Deflection, and
	Design methodolog	y write-up will be pro	vided.		
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	Loop Capacity Calo	ulations will be provid	ded.		
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120	enough for the 75 y	ears service life, or i	7/7/2016 gs "and/or" sacrificial thickness f some sacrificial thickness of 8/2/2016	anchor rod is warranted per 1	1. Provide clarification if the epoxy mastic wrap and galvanization is Table 3.1-1 based on environmental classification
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		7/7/2016	1	ار کار مانداند. معیره کا معنی دیگھ <u>ان</u> دان میگر میں	
	Calcs, Page 28: Confirm Florida I	imerock properties were used for Ed	c		
		8/2/2016	1		
	Concrete modulus will be verified	and updated as required.			
		8/17/2016	1		
	Response Accepted & Comment	Closed			
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3	RESPONSE ACCEPTED			STRUCTURES	
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		7/7/2016	1	A A Light and a second se	
	Calcs, Page 78: The moments for	the final condition (service and fact	ored) do not match page	63 & 75. Please clarify.	
		8/2/2016	1		
	Will update for consistency.				
		8/17/2016	1		
	Response Accepted & Comment	Closed			
0	Status	Current Holder	Reference	Categories	
9	RESPONSE ACCEPTED			STRUCTURES	
Cre	eated By	Created On	Version	Delegate For	
2000		7/7/2016	1		
	Plans General: Use FY 2016-17 v	version FDOT Standards on cover p	age and elsewhere. See	FDOT implementation memo.	
		8/2/2016	1		
	Agree, will use FY 2016-17.				
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	Response Accepted & Comment	Closed			
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)	RESPONSE ACCEPTED			STRUCTURES	
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17750	New York Control of Co	7/7/2016	1	The second second	and the set of a substant
	Plans sheet BW-0: Show Certifica	te of Authorization (COA)# under Co	ompany Name.		
	•	8/2/2016	1		
	Agree, CA will be added.				
	Agree, CA will be added.	8/17/2016	1		

<b>No</b> 21	RE: Statue	Current Holder	Reference	Categories STRUCTURES
	reated By	Created On	Version	Delegate For
1	. Mar	7/7/2016	1	
	construction. b.)Show di	ne baseline shown and baseline referenced by the sposition of existing fence. c.)Verify minimum dir ent with stationing of corners. e.) Show separate 8/2/2016	mension from propos	rent. Only show the baseline and associated stationing that will be used for red structure to gas line is in compliance with utility requirements. d.)122'-2 ¾" g for the boring that is shown in plan view.
	<ul> <li>b) Disposition will be sho</li> <li>c) Dimension has been v</li> </ul>	erified and is in compliance. fied and updated as required.	eline for information (	only
		8/17/2016	1	
	Response Accepted & Co	omment Closed		The start is imply that
No	Status	Current Holder	Reference	Categories
22	RESPONSE ACCEPTED	D		STRUCTURES
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	Plans sheet BW-2: State	environmental classification.		
		8/2/2016	1	
	Environmental Classificat	tion will be added (Moderately Aggressive).		
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	Response Accepted & Co	omment Closed		
No	Status	Current Holder	Reference	Categories
23	RESPONSE ACCEPTED	D		STRUCTURES
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Buars .	and and a	7/7/2016	1	
	sewer man hole. c.)One have piles, show them he direction of stationing nee a.) Agree, symbol will be b.) We have verified with c.) Yes, we will consider r	anchor appears to be in clear cover area of footing re so any conflicts with anchors may be resolved eded if there are no stations or baseline shown or 8/2/2016 removed. contractor that this can be constructed as shown rotating/relocating anchor. footing foundations adjacent to the wall. on BW-3.	ng, which may cause I. e.)Show legend to 1 this sheet? 1	do not require anchors. b.)Verify anchors are constructible next to sanitary spalling. Can anchor be rotated or relocated? d.)If any proposed foundations define DHW and OWC. f.) check word spacing format of coupler note 2. g.) Is
		8/17/2016	1	
	Response Accepted & Co	omment Closed		
	Status	Current Holder	Reference	Categories
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No 24	RESPONSE ACCEPTED		Contract of the second s	
24	RESPONSE ACCEPTED eated By	Created On	Version	Delegate For
24	eated By	Created On 7/7/2016 tended for the thread bar to be sole sourced? Ca 8/2/2016	1	
24	eated By Plans sheet BW-8: Is it inf	7/7/2016 tended for the thread bar to be sole sourced? Ca	1 n equivalent product 1	

No	Stat	Current Holder	Reference	Categories
25	RE JE ACCEPTED			STRUCTURES
Ci	eated By	Created On	Version	Delegate For
1	and all all and a second se	7/7/2016	1	
	Plan sheet BW-9: Show Section B-I	3 label in plan view.		
		8/2/2016	1	
	Agree, section B-B will be added to	plan view.		
		8/17/2016	1	
	Response Accepted & Comment Cl	osed		
0	Status	Current Holder	Reference	Categories
8	RESPONSE ACCEPTED		Sheet BW-1	STRUCTURES
Cr	eated By	Created On	Version	Delegate For
Th	omas Andres	7/13/2016	1	

a. Section A-A: Specification 455-5.15.3 allows for a batter tolerance of 1/4 inches per foot from vertical therefore the panels will not likely bear on both piles for their full length. The concern is that soil fines will migrate through the open joint. Require filter fabric to be attached to back-of-wall across panels via an approved mastic. b. Filter Fabric Placement Detail: The bottom-of-panel elevation appears to be lower than top-of-rock in a few locations. Is it the EOR's intent that the toe be preformed? Are there any requirements for grouting the toe at these locations?

These comments require a written response.

8/16/2016

a) Filter fabric will be placed across panel joints via approved mastic.

b) All panels will be embedded a minimum of 2 ft below top of natural rock. The canal needs to be excavated to achieve the proposed cross section as shown on the drainage plans. A trench will be excavated to set the panels given the hard natural limestone. The purpose of setting the panels into the limestone is to avoid soil migration under the panels. There are not any requirements for grouting the toe at these locations.

Т	homas Andres	8/18/2016	1	
	Response Accepted & Comment C	losed		
No	Status	Current Holder	Reference	Categories
49	RESPONSE ACCEPTED		Sheet BW-7:	STRUCTURES
C	reated By	Created On	Version	Delegate For
т	homas Andres	7/13/2016	1	المن شید ؟

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a. Note 5: Expand note for galvanizing to include nuts, bearing plates and couplers.

b. Section A-A: The anchor bars appear to go-through the proposed foundations. Please address the following:

I. Has the design of the retaining wall accounted for the influence of the spread footing surcharge loadings?

II, Clarify if the PVC pipe shown on Sheet BW-8 is to be embedded into the spread footings. If so, address how concrete cover will be maintained. If not, address impact of Spread Footing Settlement on possible anchor bar kinking.

These comments require a written response.

8/2/2016

a) Note will be expanded.

b) Yes, surcharge loading from adjacent foundations has been included in the design.

c) Yes, PVC pipe will be embedded into spread footing. We will coordinate with bridge designer to include appropriate notes with respect to cover. 8/18/2016

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Thomas Andres

Submitt	eport		$\sim$
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	8/3/2016	Response Due Date:	9/2/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	8/3/2016
Create User Id:	PD601MI	Last Update:	8/3/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: RE-SUBMITTAL of Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 8/3/2016 Comments Due Date: 8/19/2016 Days Allowed for Review: 17 Review Meeting: 9/2/2016 10:00 AM to 11:00 AM @ TBD if needed Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail:

Phone #:

Section: Phase: Re-submittal of 90% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

## Threads:

No	Status	Current Holder	Reference	Categories	
2	COMMENT AGREED WITH		General:	STRUCTURES	
C	reated By	Created On	Version	Delegate For	
T	nomas Andres	8/8/2016	1	A REAL PROPERTY OF A REAL PROPER	

The RFP, page 27; PPM 26.3.2 and PPM 26.12 requires an independent peer review as part of the 90% Substructure Component Package. As discussed in our project meeting, we agree to wave the this specific requirement for this submittal however a completed independent peer review is required prior to RFC of the plans.

9/7/2016

Comment Agreed & Closed

	Current Holder	Reference	Categories
RES E ACCEPTED		Sheet B-23:	STRUCTURES
Created By	Created On	Version	Delegate for
Thomas Andres	8/8/2016	1	. mit. 200 - Andre Marder - Mitlane forth
Are the 2-2"utility conduits to be cas	t into the pylon base? If so, includ	le on sheet.	
	9/12/2016	1	
No, there are no utility conduits in th	ne pylon base.		
Thomas Andres	9/15/2016	1	
Response Accepted & Comment Cle	osed		
o Status	Current Holder	Reference	Categories
RESPONSE ACCEPTED		Sheet B-24:	STRUCTURES
Created By	Created On	Version	Dalegatestor
Thomas Andres	8/8/2016	1	

b. The sheet is not legible due to the very small scale of the section views. See SDM 2.9. Separate this sheet into two or three sheets to better communicate to the Contractor what is intended.

c. The CIP pylon/precast walkway connections are extremely congested. Show larger scale 2D or 3D integrated drawings per SDM Chapter 20 to insure that there are no conflicts of embedded items (PT ducts, PT anchors, anchor caps, couplers, reinforcing steel, conduits, piping, etc.).

d. Section B-B: How will column concrete below the precast canopy surface be consolidated such that honeycombing is avoided (roughly 2'-0" x 6'-0" horizontal surface)? Consider casting-in bleed holes or pour holes in overlying portion of precast element.

e. Section D-D: The inner two PT anchor caps appear to conflict with the 11P03 rebar couplers.

f. Section D-D: It is not clear why the inner two PT anchor caps are not depicted in the Cross Section View.

g. Section A-A: Is the pipe cast in the precast walkway component? Is the pipe sections connected with bell and spigot joints and provide interfacing details. Clarify intent. 9/7/2016 1

a. The details on sheet B-24 show that the vertical member of the back span will be cast monolithically with the intermediate section of the pylon. The assumed back span and intermediate pylon construction sequence is attached for your review.

b. The drawing will be revised to show a bigger scale using more than one drawing.

c. An integrated 3-D drawing was developed to ensure the embedded items are not in conflict. This drawing will be used by the design build team during the planning phase for the construction of this section of the bridge.

d. The contractor is planning to cast the canopy section (2'x6') at the same time as the intermediate section of the pylon to avoid any possibility of imperfection in the pour.

e. We have verified that the 11P03 bars do not conflict with the anchor caps. It appears that the rebar couplers are in conflict with the anchor caps, but the couplers are located at a different elevation than the anchor caps.

f. The cross section (looking upstation) shows the back span tendons and Section D-D only shows the main span tendons because the plan view is not wide enough to show the back span tendons.

g. The pipe is not cast with the precast walkway component. A section of the drain pipe will be cast in the pylon CIP section and the embedded pipe will be connected to the exterior pipe under the deck.

Thomas Andres

9/16/2016

On Response a, if vertical member of the back span will is cast monolithically with the intermediate section of the pylon then the design assumptions of simple span for dead loads is not correct. As the forms deflect under concrete weight, continuity stresses will be developed between the pylons and the span.

9/22/2016

The simple span condition only occurs during the main span erection. The back span is designed to resist the continuity forces between the pylon and the truss. After the transverse closures are poured the continuity tendons are stressed creating a two span continuous structure. 9/26/2016

Thomas Andres

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Okay, but the acceptability of this design approach depends on the Contractor's formwork stiffness - if he chooses a fairly stiff forming system then the design assumptions may be okay - if not then I would except cracking.

more than 7-#8 bars wi factoring-in that the col account for the soil spir b. Include a call-out at have column/building e a. A sensitivity study wi therefore, the design is b. The call-out will be a Thomas Andres For Comment a, the fra column. Either the 48-4 The moment in the neg are adequate to resist fi column. The 48-#11 ba wider column will create Thomas Andres Okay, but make sure th No Status 6 RESPONSE ACCEPT Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & I No Status 15 RESPONSE ACCEPTI Created By Elevation View: FDOT	Current Holder	Reference	Categories
Thomas Andres a. By inspection, the re- more than 7-#8 bars wi factoring-in that the col account for the soil spr b. Include a call-out at have column/building e a. A sensitivity study wi therefore, the design is b. The call-out will be a Thomas Andres For Comment a, the fra- column. Either the 48-4 The moment in the neg are adequate to resist fi column. The 48-#11 ba wider column will create Thomas Andres Okay, but make sure th to Status RESPONSE ACCEPTI Greated By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & 10 Status Elevation View: FDOT	TED	Sheets B-70 and	STRUCTURES
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more than 7-#8 bars wi factoring-in that the col account for the soil spr b. Include a call-out at have column/building e a. A sensitivity study wi therefore, the design is b. The call-out will be a Thomas Andres For Comment a, the fra column. Either the 48-4 The moment in the neg are adequate to resist if column. The 48-#11 ba wider column will create Thomas Andres Okay, but make sure th o Status RESPONSE ACCEPTI Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & Status RESPONSE ACCEPTI Created By Elevation View: FDOT	8/9/2016	1	a fina iza ula 1.000.000 Million Inginanya ingi
therefore, the design is b. The call-out will be a Thomas Andres For Comment a, the fra column. Either the 48-4 The moment in the neg are adequate to resist t column. The 48-#11 ba wider column will create Thomas Andres Okay, but make sure th o Status RESPONSE ACCEPT Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & O Status 5 RESPONSE ACCEPT Created By Elevation View: FDOT	vill be required in the negative moment regions of olumn is only 2 ft. wide. Also verify that the footin rings of the spread footings. See attached sketo at the column plaza concrete slab interface. Req elements that interface the plaza concrete slab. 9/7/2016	of the frame (outer third of ca ngs have been designed to r ch. uire 3/4" premolded expansi 1	bars are required in the 5 ft. cap positive moment region, then significant ap-around corners and along outer face of column into footings) especially resist the sliding forces of the frame pier and that the moments in the pier ion material on all four sides of column. Typical comment on all sheets the
For Comment a, the fra column. Either the 48- The moment in the neg are adequate to resist t column. The 48-#11 ba wider column will create Thomas Andres Okay, but make sure th o Status RESPONSE ACCEPT Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & Status RESPONSE ACCEPT Created By Elevation View: FDOT	is adequate. Soil springs will increase the flexib	ns are flexible and only a sm illity of the columns and resu	all amount of negative moment exists at the face of the columns; It in a decrease in pier moments.
column. Either the 48- The moment in the neg are adequate to resist the column. The 48-#11 bar wider column will create Thomas Andres Okay, but make sure the o Status RESPONSE ACCEPTI Created By Thomas Andres Response Accepted & 10 o Status 5 RESPONSE ACCEPTI Created By Elevation View: FDOT	9/16/2016	1	
are adequate to resist t column. The 48#11 ba wider column will create Thomas Andres Okay, but make sure th Io Status RESPONSE ACCEPTI Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & Io Status 5 RESPONSE ACCEPTI Created By Elevation View: FDOT	ramed pier is not balanced. The moment at the e #11s is excessive or the 7-#8s is too little. I sus 9/22/2016	center of the cap is a function spect that less than 48#11 an 1	n of the moments that have to be carried around the corners into the required and more than 7-#8s are required.
RESPONSE ACCEPT Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & <b>o Status</b> <b>5</b> RESPONSE ACCEPT Created By Elevation View: FDOT	the beam moment demand. The same area of s	steel is placed at the outside emand. The moment distribu 1	olumn (see attachment). Therefore, the 7-#8 bars at the top of the beam face of the column. Note that the beam depth is 2.5 time the depth of the tion along the beam is directly related to the stiffness of the columns. A
Created By Thomas Andres Separate into two shee The drawing will be rev Thomas Andres Response Accepted & <b>o Status</b> <b>5 RESPONSE ACCEPTI</b> Created By Elevation View: FDOT	Current Holder	Reference	Categories
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Thomas Andres Response Accepted & Status RESPONSE ACCEPT Created By Elevation View: FDOT	ets. Sheet is difficult to read because scale of de	etails are too small. See SD	M 2.9.
Thomas Andres Response Accepted & Status RESPONSE ACCEPT Created By Elevation View: FDOT	9/7/2016	1	
Response Accepted & <b>Status</b> <b>RESPONSE ACCEPT</b> <b>Created By</b> Elevation View: FDOT	vised to show a bigger scale using more than on	ne drawing.	
o Status 5 RESPONSE ACCEPT Created By Elevation View: FDOT	9/15/2016	1	
5 RESPONSE ACCEPT Created By Elevation View: FDOT	Comment Closed		
Created By Elevation View: FDOT	Current Holder	Reference	Categories
Elevation View: FDOT	TED	B-23	STRUCTURES
	Created On 8/19/2016	Version 1	Delegate For
The elevation view will	SDG 3.11.2C requires a minimum of three feet	from the finish grade elevati	ion to the top of footing. Please revise.
The elevation view will	9/7/2016	1	
	be revised to show the 3'-0" minimum cover.		
	9/26/2016	1	

)	Staty	Current Holder	Reference	Categories
	· RES E ACCEPTED		B-24	STRUCTURES
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	ALL DESCRIPTION OF A DESC INTRODOPA DESCRIPTION OF A DESC	8/19/2016	1	
	of the junction between the two spa	ans. Section C-C shows only a col preement is enough to transfer tens	umn stirrup bar sticking o	tensile forces can be generated at the top (canopy) and bottom chord (deck) ut of the precast section and lapped with the 5P01 CIP column stirrups. ottom chord (analysis shows significant forces due to temperature,
	According to our analysis, tension that the tensile stresses are within			(4) longitudinal internal tendons running in the canopy. The analysis shows
w 7	Please verify if some particular load seems that you checked that.	به چربیده ده در ده	orces in the bottom chord	(temperature gradient) for example. The response is accepted since it
lo	Status	Current Holder	Reference	Categories
7	RESPONSE ACCEPTED		B-24	STRUCTURES
			Venetow	
C	reated By	Created On	Version	Delegate For
C	reated By	8/19/2016	1	Delegareter
e	This drawing is in general difficult to	8/19/2016 o read. Please reevaluate items su	1 ch as scale (Cross Sectio	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
C	This drawing is in general difficult to	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle an 9/7/2016	1 ch as scale (Cross Section nd the top portion of the c 1	n and Section A-A), additional details etc. for improving clarity. The same
C	This drawing is in general difficult to label has been used for the column	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle an 9/7/2016 v a bigger scale using more than of	1 ch as scale (Cross Section nd the top portion of the c 1 ne drawing.	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
C	This drawing is in general difficult to label has been used for the column The drawing will be revised to show	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle an 9/7/2016 v a bigger scale using more than of	1 ch as scale (Cross Section nd the top portion of the c 1 ne drawing.	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
C	This drawing is in general difficult to label has been used for the column The drawing will be revised to show	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle at 9/7/2016 v a bigger scale using more than ou and the bottom of Section A-A are the 9/26/2016	1 ch as scale (Cross Section nd the top portion of the c 1 ne drawing.	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
	This drawing is in general difficult to label has been used for the column The drawing will be revised to show The rebar designations at the top a	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle at 9/7/2016 v a bigger scale using more than ou and the bottom of Section A-A are the 9/26/2016	1 ch as scale (Cross Section nd the top portion of the c 1 ne drawing.	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
<b>C</b> 10 8	This drawing is in general difficult to label has been used for the column The drawing will be revised to show The rebar designations at the top a Response Accepted & Comment C	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle at 9/7/2016 v a bigger scale using more than or and the bottom of Section A-A are the 9/26/2016	1 ch as scale (Cross Section nd the top portion of the c 1 ne drawing. ne same because they and 1	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion.
о 3	This drawing is in general difficult to label has been used for the column The drawing will be revised to show The rebar designations at the top a Response Accepted & Comment C Status	8/19/2016 o read. Please reevaluate items su n rebars at the bottom the middle at 9/7/2016 v a bigger scale using more than or and the bottom of Section A-A are the 9/26/2016	1 ch as scale (Cross Section d the top portion of the c 1 ne drawing. ne same because they an 1 <b>Reference</b>	n and Section A-A), additional details etc. for improving clarity. The same olumn which may also create confusion. e the same type and size rebars.

common software used for this purpose. Please explain the use of the voided section; is this trying to simulate the drain pipe? 9/7/2016

We are not aware of commercially available software that combines mild reinforcement with post-tensioning. The FIGG proprietary software has the capability of combining the mild reinforcement with post-tensioning bars. FIGG's software has been used in many projects with excellent results. The reported C/D ratio of 1.05 is for the strength load combination III, which includes 150 mph wind speed with an equivalent design pressure of 91 psf on the upper pylon. Therefore, the pylon design meets the code requirements.

placed. In fact all the column reinforcing in the precast portion consist of 2 # 11 bars and 2-1.375" PT bars. The evaluation should be performed using one of commercially

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According to AASHTO Section 5.7.4.2, a reduced effective area of the column member can be used when the cross-section is larger than that required to resist the applied loading. The voided section was used to meet the minimum area of reinforcement requirement for this member. 9/26/2016 1

The comment is accepted. The reviewer will independently review this section for the next submittal.

## 404000 4 50 04 1 I D

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	7/14/2016	Response Due Date:	8/17/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	7/14/2016
Create User Id:	PD601MI	Last Update:	7/14/2016
		Last Update User Id:	PD601MI

### Description:

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Culous Hall Tour

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 7/15/2016 Comments Due Date: 8/3/2016 Days Allowed for Review: 20 Review Meeting: 8/17/2016 9:30 AM to 11:00 AM @ Conference room B (If needed) Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Section: Phase: 90% Foundation Design-Resubmittal Review Meeting will be schedule if needed Design Criteria is Florida Green Book

### Threads:

Work Program Construction Budget: Production Date: DESIGN-BUILD

1 1 1 1 1 A				
No	Status	Current Holder	Reference	Categories
1	RESPONSE ACCEPTED		Calculations General:	STRUCTURES
3	Reated By	Created On	Version	Delegate For
	homas Andres	7/15/2016	1	ing selahan kala dekamankanan sastat da

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The reserve capacity for the various spread footings appear to enough to account for any future design refinements to the superstructure (all C/Ds ≥ 1.12). However the calculations for the pylon pile compression C/D = 1.04, and the pile geotechnical capacity C/D ratio =1.00. See attached.

We are thinking that a 6-8% reserve would be a reasonable cushion in order to relax the project contract requirements which would allow superstructure design refinements to occur later so that we could move forward with the 90% foundation submittal package.

DI ANIO

Either resolve the outstanding superstructure comments or resubmit the plans and calcs. for the pylon to give a larger C/D cushion.

7/19/2016

Per our telephone conversation on 7/18/16, please find attached the revised Pile Data Table drawing (Sheet B-9) showing the maximum "Required Nominal Bearing Resistance" of 450 tons. We agreed to show the required nominal bearing resistance (RNBR) in the "installation criteria" of the Pile Data Table instead of showing the factored design load divided by the resistance factor (phi). As I mentioned to you, the original design assumed a nominal bearing resistance of 450 tons despite the fact that the pile data table was presenting a lower value equal to the factored design load divided by the resistance factor. Also attached is a summary of the calculations showing the updated values for your review. 1

Thomas Andres

7/25/2016

Will base review on this response.

No	Statu		Current Holder	Reference	Categories
8	COM	AGREED WITH	2	General:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas Andres	3	7/25/2016	1	
	Per our dis comments	scussions, we have agree	solution and signed and sealed co	peer review to be in the 90% su	28 and PPM Chapter 26. Jomittal provided that the independent peer review (Engineer's component plans prior to Releasing For Construction Plans for each
	Comment	Agreed & Closed			
No	Status		Current Holder	Reference	Categories
)	RESPON	SE ACCEPTED		Sheets B-11 and B-15:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas Andres	5	7/25/2016	1	an a t <u>arra tarra</u>
	Add note t	hat says: Construct shall	ow foundations in accordance with	Specification 455.	
			8/17/2016	1	
	The sugge	sted note will be added to	all applicable drawings.		
	Thomas Andres	3	8/18/2016	1	
	Response	Accepted & Comment Cle	osed		
No	Status		Current Holder	Reference	Categories
20	RESPONS	SE ACCEPTED			STRUCTURES
	Created By		Created On	Version	Delegate For
	and the age and a state of		8/3/2016	1	ا يعين المراجع

90% Calculations Pylon Foundation and Footing Design, Page 378: The FDOT requirement for crack control (SDG 3.1) has been implemented by strain criteria in which the steel is allowed a limiting strain of 24ksi/E and a strain in the concrete of 0.003 in/in. The computations have been performed with the same software used to compute the strength capacity of the column. The reported nominal capacity of the section corresponds to the rebars yielding at 24 ksi and the concrete crushing at 0.003 in/in. The applied service moment is compared against this fictitious service moment capacity and assuming that if the applied moment does not exceed the boundaries of the interaction diagram the stresses in the rebars will be smaller than the 24 ksi required by FDOT SDG 3.1. This comment has been raised previously indicating that since this is a service condition the level of stresses in the rebars needs to be calculated considering the behavior of the section under service loads (concrete linear but most probably cracked and the reinforcement linear). The designer has argued that the procedure used is conservative but we disagree with the approach since it is not theoretically correct and not necessarily conservative. Note that once the first rebar reaches 24 ksi under service conditions, the procedure used will allow the section to continue deforming until the ultimate strain in the concrete is reached and several layers of rebars has yielded at 24 ksi and deformed beyond the 24ksi/E value. Although service conditions are not expected to be the controlling factor in these designs the procedure used is from our point of view not appropriate. Please revise. This comment is general and applicable to all service computations presented in this submittal.

#### 8/17/2016

The attached calculations, performed with a commercially available program (Xtract), show that the rebar stress at the base of the pylon (column dowels) is less than 24 ksi. Therefore, the design meets the requirements of crack control per SDG Section 3.10. 8/26/2016

Response Accepted & Comment Closed

No	Status	Current Holder	Reference	Categories
21	RESPONSE ACCEPTED			STRUCTURES
C	reated By	Created On 8/3/2016	Version 1	Delegate for

1

90% Calculations Pylon Foundation and Footing Design, Page 314 and Plans Sheet B-9: The preliminary geotechnical recommendations included in Page 14 of the North Plaza Foundation calculations indicate recommended 24" PC piles capacities of 405 Tons for compression and 80 Tons for tension. The calculated factored loads indicated in the calculation and drawings exceed these capacities x Strength reduction factor. Please confirm that the final geotechnical report recommends capacities compatible with the level of loads obtained in the design 1

#### 8/17/2016

The final geotechnical report will show updated pile capacities.

### 8/26/2016

No	Statu	Current Holder	Reference	Categories
22	RES /E ACCEPTED			STRUCTURES
C	reated By	Created On	Version	Delegate For
\$\$	and the california	8/3/2016	1	
	90% Foundation Plans, Sheet B- indicate that they are not permitte		ndicates that they are per	mitted. Due to the aesthetic requirements of this structure, shouldn't the note
		8/17/2016	1	
		s (Design Criteria – Section 5.8), stay hat stay-in-place forms are not allowe 8/26/2016		tted. However, the proposed structure does not have stay-in-place forms. The
	Response Accepted & Comment	Closed		
lo	Status	Current Holder	Reference	Categories
3	RESPONSE ACCEPTED			STRUCTURES
C	reated By	Created On	Version	Delegate For
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	comment applies to all pier-colum	8/17/2016	1	
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90% Calculations Pylon Foundation and Footing Design, Page 378: The FDOT requirement for crack control (SDG 3.1) has been implemented by strain criteria in which the steel is allowed a limiting strain of 24ksi/E and a strain in the concrete of 0.003 in/in. The computations have been performed with the same software used to compute the strength capacity of the column. The reported nominal capacity of the section corresponds to the rebars yielding at 24 ksi and the concrete crushing at 0.003 in/in. The applied service moment is compared against this fictitious service moment capacity and assuming that if the applied moment does not exceed the boundaries of the interaction diagram the stresses in the rebars will be smaller than the 24 ksi required by FDOT SDG 3.1. This comment has been raised previously indicating that since this is a service condition the level of stresses in the rebars needs to be calculated considering the behavior of the section under service loads (concrete linear but most probably cracked and the reinforcement linear). The designer has argued that the procedure used is conservative but we disagree with the approach since it is not theoretically correct and not necessarily conservative. Note that once the first rebar reaches 24 ksi under service conditions, the procedure used will allow the section to continue deforming until the ultimate strain in the concrete is reached and several layers of rebars has yielded at 24 ksi and deformed beyond the 24ksi/E value. Although service conditions are not expected to be the controlling factor in these designs the procedure used is from our point of view not appropriate. Please revise. This comment is general and applicable to all service computations presented in this submittal.

#### 8/17/2016

The attached calculations, performed with a commercially available program (Xtract), show that the rebar stress at the base of the pylon (column dowels) is less than 24 ksi. Therefore, the design meets the requirements of crack control per SDG Section 3.10. 1

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90% Foundation Plans: The note for Stay-In Place forms indicates that they are permitted. Due to the aesthetic requirements of this structure, shouldn't the note indicate that they are not permitted?       8/17/2016       1         According to the RFP documents (Design Criteria – Section 5.8), stay-in-place forms are not alwowd. 8/18/2016       1         Response Accepted & Comment Closed       1         Status       Current Holder       Reference       Catagories         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         00% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.         00% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.         00% Foundation plans, Gotings, FDOT Central office has agreed to maintain the 2-0° minimum dimension shown on this drawing will be updated to 3-0°. For the north and south plaza footings, FDOT Central office has agreed to maintain the 2-0° cover for the main footings and 1-0° cover for the stair footings. It is our understanding that the SDG 3-0° cover requirement is applicable to areas where vegetation growth is desirable. For this specific requires the specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed       Status         Status       Current Holder       Reference		(On babalf	of Dofool Ecinevines)	0/3/2010	1	
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note will be modified to indicate that stay-in-place forms are not allowed. 8/18/2016 1 Response Accepted & Comment Closed		india anoy an	e not permiteet	8/17/2016	1	
Status     Current Holder     Reference     Categories       RESPONSE ACCEPTED     Sheet B-10     STRUCTURES       Created By     Created On     Version       0 No behalf of Rafael Foinquinos)     8/3/2016     1       90% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.     8/17/2016       1     The minimum 3'-0" cover dimension is the proposed cover for the pylon foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0".       For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings. It is our understanding that the SDG 3'-0" cover for cover revigetation growth is desirable. For this specific project, the north and south plaza so on have this specific requirement around the columns.       8/18/2016     1       Response Accepted & Comment Closed     5       Status     Current Holder     Reference       Created By     Sheet B-10       STRUCTURES       Created By     Signate and the referring to Sheet B-6 or the location of the tension piles.       8/13/2016     1       Response Accepted & Comment Closed     5       Status     Current Holder     Reference       Greated Di     8/3/3/2016     1       (On behalf of Rafael Foinquinos)				t stay-in-place forms are not allowe	ed.	. However, the proposed structure does not have stay-in-place forms. Th
RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Created By       Created GN       Version       Delegate For         8/3/2016       1       (On behalf of Rafael Foinquinos)       90% Foundation Plans. Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.       8/17/2016       1         The minimum 3'-0" cover dimension is the proposed cover for the poly foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings. It is our understanding that the SDG 3'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plaza footings. FDOT Central office has agreed to maintain the 2'-0" cover for the specific project, the north and south plaza footings. It is our understanding that the SDG 3'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plazas do not have this specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed       Status         Created By       Created ON         8/3/2016       1         (On behalf of Rafael Foinquinos)       Sig2016         90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles. 8/1		Response /	Accepted & Comment C	losed		
Created By       Created On       Version       Delegate For         8/3/2016       1         (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.       8/17/2016       1         The minimum 3'-0" cover dimension is the proposed cover for the pylon foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings.         For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the specific project, the north and south plazas do not have this specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed       1         Status       Current Holder       Reference       Categories         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         0%/3/2016       1       1         (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.         8/17/2016       1       1         The suggested note will be added to sheet B-10.       8/17/2016         8/18/2016       1 </td <td></td> <td>Status</td> <td></td> <td>Current Holder</td> <td>Reference</td> <td>Categories</td>		Status		Current Holder	Reference	Categories
8/3/2016       1         (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.         8/17/2016       1         The minimum 3'-0" cover dimension is the proposed cover for the pyton foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the stair footings and 1'-0" cover for the stair footings. The other and south plaza footings and 1'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plazas do not have this specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed       1         Status       Current Holder       Reference       Categories         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         On behalf of Rafael Foinquinos)       8/3/2016       1         90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.       8/17/2016         90% Foundation Plans, Sheet B-10.       1         The suggested note will be added to sheet B-10.       1			E ACCEPTED		Sheet B-10	
(On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pler-column footings.         8/17/2016       1         The minimum 3'-0" cover dimension is the proposed cover for the pylon foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings. It is our understanding that the SDG 3'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plaza do the olumns.         8/18/2016       1         Response Accepted & Comment Closed         Created Office Reference         8/13/2016       1         RESPONSE ACCEPTED         Status       Current Holder       Reference       Categories         8/3/2016       1       1         Created Office Reside To Pylon (Turdet Poinguinos)         90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet For       8/3/2016       1         Created Office Reserves a note referring to Sheet B-8 for the location of the tension piles.         8/17/2016       1	C	reated By	evisti na i seg			Delegate For
90% Foundation Plans, Sheet B-10, View A-A: FDOT SDG 3.11.2C requires a minimum of three feet from the finish grade elevation to the top of footing. Please revise. The comment applies to all pier-column footings.       8/17/2016       1         Mainteend of the minimum 3-0° cover dimension is the proposed cover for the pylon foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDOT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings. It is our understanding that the SDG 3'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plazas do not have this specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed         Status       Current Holder         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Of the fort for afael Foinquinos)         90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.         8/17/2016       1         The suggested note will be added to sheet B-10.				8/3/2016	1	
8/17/2016       1         The minimum 3'-0" cover dimension is the proposed cover for the pylon foundation. The 2'-0" minimum dimension shown on this drawing will be updated to 3'-0". For the north and south plaza footings, FDDT Central office has agreed to maintain the 2'-0" cover for the main footings and 1'-0" cover for the stair footings. It is our understanding that the SDG 3'-0" cover requirement is applicable to areas where vegetation growth is desirable. For this specific project, the north and south plazas do not have this specific requirement around the columns.         8/18/2016       1         Response Accepted & Comment Closed       1         Status       Current Holder       Reference       Categories         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Created By       Created On       Version       Delegate For         8/17/2016       1       1         (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.       8/17/2016         8/18/2016       1       1         The suggested note will be added to sheet B-10.       8/18/2016       1						
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Response Accepted & Comment Closed       Current Holder       Reference       Categories         No       RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Created By       Created Oh       Version       Delegate For         8/3/2016       1       Intersection of the tension piles.         0% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.       1         The suggested note will be added to sheet B-10.       8/18/2016       1		90% Found	lation Plans, Sheet B-10	footings.		et from the finish grade elevation to the top of footing. Please revise. Thi
Status       Current Holder       Reference       Categories         RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Created By       Created Oh       Version       Delegate For         8/3/2016       1       (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.       8/17/2016       1         The suggested note will be added to sheet B-10.       8/18/2016       1       1		90% Found comment a The minimu For the nor understand	lation Plans, Sheet B-10 pplies to all pier-column um 3'-0" cover dimensio th and south plaza footir ing that the SDG 3'-0" c	footings. 8/17/2016 n is the proposed cover for the pylongs, FDOT Central office has agree over requirement is applicable to a nd the columns.	1 on foundation. The 2'-0" minin ed to maintain the 2'-0" cover	num dimension shown on this drawing will be updated to 3'-0". for the main footings and 1'-0" cover for the stair footings. It is our
RESPONSE ACCEPTED       Sheet B-10       STRUCTURES         Created By       Created On       Version       Delegate For         8/3/2016       1         (On behalf of Rafael Foinquinos)       90% Foundation Plans, Sheet B-10, Tension Pile Detail: Suggest to provide a note referring to Sheet B-8 for the location of the tension piles.         8/17/2016       1         The suggested note will be added to sheet B-10.       8/18/2016         8/18/2016       1		90% Found comment a The minimu For the nor understand have this sp	lation Plans, Sheet B-10 pplies to all pier-column um 3'-0" cover dimension th and south plaza footin ing that the SDG 3'-0" c pecific requirement arou	footings. 8/17/2016 n is the proposed cover for the pylongs, FDOT Central office has agree over requirement is applicable to a nd the columns. 8/18/2016	1 on foundation. The 2'-0" minin ed to maintain the 2'-0" cover	num dimension shown on this drawing will be updated to 3'-0". for the main footings and 1'-0" cover for the stair footings. It is our
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		90% Found comment a The minimu For the nori understand have this sy Response / Status RESPONS reated By (On behalf	lation Plans, Sheet B-10 pplies to all pier-column um 3'-0" cover dimension th and south plaza fooding ing that the SDG 3'-0" c pecific requirement arou Accepted & Comment C BE ACCEPTED of Rafael Foinguinos)	footings. 8/17/2016 n is the proposed cover for the pylon ngs, FDOT Central office has agree over requirement is applicable to an nd the columns. 8/18/2016 losed Current Holder Created Oh 8/3/2016 , Tension Pile Detail: Suggest to pr	1 on foundation. The 2'-0" minined to maintain the 2'-0" cover reas where vegetation growth 1 <b>Reference</b> Sheet B-10 <b>Version</b> 1	num dimension shown on this drawing will be updated to 3'-0". for the main footings and 1'-0" cover for the stair footings. It is our is desirable. For this specific project, the north and south plazas do not <b>Categories</b> STRUCTURES Delegate For
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## Submitte Deport

Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	9/28/2016	Response Due Date:	10/28/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	9/28/2016
Create User Id:	PD601MI	Last Update:	2/14/2017
		Last Update User Id:	PD601MI

### Description:

434688-1: 90% Superstructure Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 9/28/2016 Comments Due Date: 10/14/2016 Days Allowed for Review: 17 Review Meeting: 10/28/2016 10:00 AM to 11:00 AM @ Will be schedule if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Phase: 90% Superstructure Design Review Meeting will be schedule if needed Design Criteria is FDOT PPM Work Program Construction Budget: \$11,875,092 Production Date: DESIGN- BUILD

## Threads:

0	Stati		Current Holder	Reference	Categories
	RES	E ACCEPTED		STRUCTURES MAINTENANCE	STRUCTURES
C	reated By	4. 31. a. a. 1	Created On	Version	Delegate For
M	ARIA CARA	SA	10/11/2016	1	er Marier - A. T. San, radione, and a second address and an annual g
	B-4 Plans At End Br B-5 Shee B-8 Not c	& Élev. Call for End Bri idge: Tie Center Line El t Tittle: Consider adding lear what is the control c	are not in AASHTO 17 Edition. dge Deck as done for Begin Bridge I evator Tower and Center Line Landii "Superstructure" (Typical Superstruc of geometry, specifically the columns is to R/W at North End. CL of bearin	ng Columns to End Bridge a cture Cross-Section) supporting the Bridge.	uld be the control for Geometry). s done for Begin Bridge. should be the CL column. Tie CL Columns to Begin/End Bridge. Show
	Begin Brid Verify wh	dge & End Bridge Station y East Column foundation	ns. ons (Type 1 & 7) is larger than West (		•••
	B-11 Veri		orners (Not usually done in detailing		ns) Apply to the 4 Columns supporting the Bridge Ends.
			" for walls up to $15' \pm high$ (wall 5 at	0	12)
		·	bw 2 different columns bars together		
			is is an Elevator Footing		
		e Comment as in B-14 (	/		
	B-20 & 21	Missing calling for view	B-B in plan view 10/11/2016	1	
			Final Foundation submittal?		
M	ARIA CARAS	SA	12/14/2016	1	
• • 2	Yes		i ayat i a a an an an ay an ang		Brannes Mil
0	Status		Current Holder	Reference	Categories
	COMME	NT AGREED WITH		General:	STRUCTURES
C	reated By		Created On	Version	Delégate For
Th	nomas Andre		10/11/2016	1	
	detailed s The Erect - Positioni - Step-by- limits. Als casting ya	tep-by-step fabrication s ion Manual shall include ng, use and sequencing step PT bar stressing ar o include a step-by-step rd at the time of stressir	equence to be submitted in an Erect the following: of falsework, jacking and/or releasir ind longitudinal tendon stressing sequ o casting and form stripping sequence ig.	ion Manual submitted by a s ng of falsework, formwork, te uence so that stresses during e with clear delineation of re	e precast main-span and CIP back span. The TSP should require a more Specialty Engineer. In porary towers, supports and the like. If fabrication of both main span and back span stay below design code quired construction joints. Depict the support condition at the near-site
	the structu	iral based on the suppor	t conditions of the precast main-spa 10/28/2016	n during the SPMT move. 1	
	drawings) sequence	. The erection manual w and location of tempora	ill provide the mentioned information	showing more details of the	has been provided as part of the plan set (see Erection Sequence e stressing sequences, support conditions during casting, form stripping ctor's Specialty Engineer.
	The sten-I	-, eap account plan of		1	
Th	iomas Andre		11/1/2016		
Th	iomas Andre		at the step-by-step information per re 11/8/2016	esponse to Comment 10 is p 1	rovided in the final plans.

	Statu -	Current Holder		Categories
3	RESI E ACCEPTED		General:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	Provide connection details betwee	en main span truss with the pylon.		
		10/28/2016	1	
	Connection details between the m	ain span truss and pylon have been	provided on the substructure d	Irawings.
	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (	Closed		
No	Status	Current Holder	Reference	Categories
9	RESPONSE ACCEPTED		Sheets B-38 thru B-45 and B-61, B-63, and B- 65:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	Add PT bar anchor caps (top and	bottom) per SDG 1.11.2, Standard In	idex 21802 and Specification 4	I62-1.2.a consistent with approved FDOT PT systems and resize
	element as required to fit caps.			
		10/28/2016	1	er Standard Index No. 21802). Caps are not needed at the bottom
	Thomas Andres Response Accepted & Comment (	compound (e.g. Zinc Clad III HS) for 11/1/2016 Closed	1	
No	Status	Current Holder	Reference	Categories
10	RESPONSE ACCEPTED		Sheets B-37 thru B-40,	STRUCTURES
			B-42, B-43, and B-69:	
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	Version 1	
	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequ	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec	ring fabrication of both main span and back span stay below design frequired construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear
	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp	10/11/2016 sing and longitudinal tendon stressing -step casting and form stripping sequilition at the near-site casting yard at the focation on stage 3, Sheet B-108 (can 10/28/2016	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal.	rring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.
	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequ ition at the near-site casting yard at the pocation on stage 3, Sheet B-108 (can 10/28/2016 Il be provided with the Final submitta operations are below the allowable lit tripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal.	rring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.
	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment C	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequ ition at the near-site casting yard at the pocation on stage 3, Sheet B-108 (can 10/28/2016 Il be provided with the Final submitta operations are below the allowable lit tripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal.	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.
No	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequition at the near-site casting yard at the boation on stage 3, Sheet B-108 (can 10/28/2016 Il be provided with the Final submitta operations are below the allowable litripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 1. The longitudinal tendon stress imits will be provided with the F th the Final submittal. a shown on the Final submittal 108 (Stage 3) have been revise 1	rring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.
<b>No</b>	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED	10/11/2016 sing and longitudinal tendon stressing -step casting and form stripping sequition at the near-site casting yard at the bocation on stage 3, Sheet B-108 (can 10/28/2016) Il be provided with the Final submitta operations are below the allowable if tripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed Current Holder	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 1. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal. 108 (Stage 3) have been revised 1 Reference	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 sk the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. <b>Categories</b> STRUCTURES
<b>No</b>	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment C Status	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequition at the near-site casting yard at the boation on stage 3, Sheet B-108 (can 10/28/2016 Il be provided with the Final submitta operations are below the allowable litripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stres imits will be provided with the F th the Final submittal. e shown on the Final submittal. 108 (Stage 3) have been revise 1 <b>Reference</b> Sheet B-37, Note 8:	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed.
<b>No</b> 11	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment O Status RESPONSE ACCEPTED Created By Thomas Andres Clarify that the PT bars for membe	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequilation at the near-site casting yard at the pocation on stage 3, Sheet B-108 (can 10/28/2016 It be provided with the Final submitta operations are below the allowable litripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed Current Holder 10/11/2016	Version         1         g sequence so that stresses du         uence with clear delineation of         he time of stressing. Also chec         tillever distance) consistent with         1         1. The longitudinal tendon stress         imits will be provided with the F         th the Final submittal.         e shown on the Final submittal.         08 (Stage 3) have been revised         1         Reference         Sheet B-37, Note 8:         Version         1	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. <b>Categories</b> STRUCTURES
<b>No</b>	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment O Status RESPONSE ACCEPTED Created By Thomas Andres	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequilation at the near-site casting yard at the pocation on stage 3, Sheet B-108 (can 10/28/2016 It be provided with the Final submitta operations are below the allowable litripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed Current Holder 10/11/2016	Version         1         g sequence so that stresses du         uence with clear delineation of         he time of stressing. Also chec         tillever distance) consistent with         1         1. The longitudinal tendon stress         imits will be provided with the F         th the Final submittal.         e shown on the Final submittal.         08 (Stage 3) have been revised         1         Reference         Sheet B-37, Note 8:         Version         1	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. Categories STRUCTURES Delegate For
<b>No</b> 11	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment O Status RESPONSE ACCEPTED Created By Thomas Andres Clarify that the PT bars for membe	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequition at the near-site casting yard at the ocation on stage 3, Sheet B-108 (can 10/28/2016) It be provided with the Final submitta operations are below the allowable if tripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed Current Holder Created On 10/11/2016 ars 2 and 11 will not be grouted at the	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal 108 (Stage 3) have been revised 1 Reference Sheet B-37, Note 8: Version 1 e near-site casting yard but will	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-37 ck the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. Categories STRUCTURES Delegate For
<b>No</b> 11	Thomas Andres Include step-by-step PT bar stress code limits. Also include a step-by thru B-40) depict the support cond delineation of the SPMT support lo The PT bar stressing sequence wi showing stresses during stressing A step-by-step casting and form st Support conditions for the main sp The temporary support conditions Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Created By Thomas Andres Clarify that the PT bars for member the site.	10/11/2016 sing and longitudinal tendon stressing y-step casting and form stripping sequition at the near-site casting yard at the ocation on stage 3, Sheet B-108 (can 10/28/2016) It be provided with the Final submitta operations are below the allowable if tripping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Closed Current Holder Created On 10/11/2016 ars 2 and 11 will not be grouted at the	Version 1 g sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the F th the Final submittal. e shown on the Final submittal 108 (Stage 3) have been revised 1 Reference Sheet B-37, Note 8: Version 1 e near-site casting yard but will	ring fabrication of both main span and back span stay below design required construction joints. For the main span section (Sheets B-3) of the temporary condition at the time of transport with a clear h the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.

No	Stat	Current Holder	Reference	Categories
42	REL SE ACCEPTED		Sheets B-48 and	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	<ul> <li>, i Al modified inter lessin</li> </ul>
	There is concern of potential cra behind it. This was an earlier co		PT tendon anchor as the com	pression zone drags the end web diagonal and pylon (Sheet B-48)
		10/28/2016	1	
	Reinforcement has been added	I to the Type III and Type IV Deck Diap	phragms to address this comm	ient.
	Thomas Andres	11/1/2016	1	
	Response Accepted & Commer	nt Closed		
No	Status	Current Holder	Reference	Categories
13	RESPONSE ACCEPTED		Sheets B-53 (Section A-A), B-55 (Section A- A),	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
		longer to be able to resist radial forces	s in the curved zones of the te	ndons.
		10/28/2016	1	
	The tie down stirrup legs have b			
	Thomas Andres	11/1/2016	1	
			I	
	Response Accepted & Commer	· · · · · · · · · · · · · · · · · · ·		5 W 1
No		Current Holder	Reference	Categories
14	RESPONSE ACCEPTED		Sheets B-56:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	. 1	
		acking due to tension behind the inner	(phase 1 C5) PT tendon anche	or as the compression zone drags the pylon behind it. This was an
	earlier comment.	10/28/2016	1	
	Reinforcement has been added	to the Type III Canopy Diaphragm to a		
	Thomas Andres	11/1/2016	1	
	Response Accepted & Commen		I	
	-10-01-01-01-01-01-01-01-01-01-01-01-01-			
No	Status	Current Holder	Reference	Categories
15	RESPONSE ACCEPTED		Sheets B-60, and B- 108, Stage 3:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	ends through the end diaphragn	n at the element lifts off formwork durin ection during SPMT transport. Also the	ng longitudinal/transverse stres	sing through SPMT transport). The support needs to be provided at th ssing in the near site casting yard. Support needs to stay in the middle o remain vertical during SPMT transport. Add the appropriate notes to
	(specify distance) of the cross so both sheets consistent with the o			
	both sheets consistent with the	10/28/2016	1	
	both sheets consistent with the		1 Stage 3). 1	

6	Stat	Current Holder	Reference	Categories
	REL 3E ACCEPTED		Sheets B-65, B-6 B-67:	STRUCTURES
Сг	eated By	Created On	Version	Delegate For
Th	omas Andres	10/11/2016	1	and the second
	Check the canopy design where the	e longitudinal tendons are deviated i	n plan view resulted in trans	sverse bending of the canopy, due to PT eccentricity.
		10/28/2016	1	
		ongitudinal tendons has been taking i	into account in the design o	f the canopy. Additional calculations will be provided with the Final
Th	submittal. omas Andres	11/1/2016	4	
110	Response Accepted & Comment C		I	
	· · · · · · · · · · · · · · · · · · ·	a an		
2	Status	Current Holder	Reference	Categories
	RESPONSE ACCEPTED		Sheet B-69:	STRUCTURES
15 N	eated By	Created On	Version	Delegate For
The	omas Andres	10/11/2016	1	
	Specify PT Anchorage Protection T deck and canopy. Note: Type 3 is 1		end). Replace Anchorage I	Protection Type 3 to Type 2 for longitudinal multi-strand tendons in the
The	omas Andres Response Accepted & Comment C	······································	1	
Ó .	Status	Current Holder	Reference	Categories
•			Itererenee	
	RESPONSE ACCEPTED		Sheet B-70:	STRUCTURES
		Created On		
Gre	RESPONSE ACCEPTED sated By pmas Andres a. Provide pipe camber diagrams.	Created On 10/11/2016	Sheet B-70: Version 1	STRUCTURES Delegate For
3 Cre	RESPONSE ACCEPTED ated By omas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fa: movement for jacking? Suggest that c. How is inner surface of pipe prod d. We have long-term concerns will the outer pipes. Sheet B-70: The st	Created On 10/11/2016 astened to the pylon. Show detail. It at head of bolt be oriented outward v tected against corrosion? th cracking of the pipe at the welds. ay pipe numbering system here is di sy the pipe sagging and truss deform spec.	Sheet B-70: Version 1 f the nut is oriented outward vith imbedded coupler inner Consider an inner stiffener fferent from sheet B-109.	STRUCTURES Delegate For I how is simply removing the nut sufficient for allowing the necessary
3 Cre	RESPONSE ACCEPTED ated By omas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fa: movement for jacking? Suggest that c. How is inner surface of pipe prof d. We have long-term concerns with the outer pipes. Sheet B-70: The st e. Pipe support geometry: it appear	Created On 10/11/2016 Instened to the pylon. Show detail. If at head of bolt be oriented outward w tected against corrosion? th cracking of the pipe at the welds. it or acking of the pipe at the welds. it pipe numbering system here is di rs the pipe sagging and truss deform	Sheet B-70: Version 1 f the nut is oriented outward vith imbedded coupler inner Consider an inner stiffener fferent from sheet B-109.	STRUCTURES Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for
3 Creating The	RESPONSE ACCEPTED ated By pmas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fa: movement for jacking? Suggest that c. How is inner surface of pipe proti- d. We have long-term concerns withe outer pipes. Sheet B-70: The st e. Pipe support geometry: it appear f. Specify the 16" stay pipe ASTM st a. The camber diagrams will be provide c. Weep holes will be provided at the pipe. d. Both the forces and variation in the stiffness in order to meet specified to be possible, it would create additional additional residual thermal stresses e. The angle top and angle bottom superstructure deformations is not st f. The ASTM spec has been reference	Created On 10/11/2016 astened to the pylon. Show detail. If at head of bolt be oriented outward w tected against corrosion? th cracking of the pipe at the welds. tay pipe numbering system here is di rs the pipe sagging and truss deform spec. 11/11/2016 ovided with the erection manual. do to show how the bolts are fastened he bottom of each pipe in order to dr force in the steel pipe sections are lo vibration frequencies. The areas wer nal non-uniformity due to the stiffene s. The simpler weld detail is preferred were calculated based on the final p significant in the angle calculations.	Sheet B-70: Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener fferent from sheet B-109. ation have not been include 1 d to the pylon on the final st ain any water due to conder wwhen compared to the ci re not based upon needed f rs and the access holes. Ins d by the Designer. The stag- pipe shape. The sagging of The maximum rotation is 0.0	STRUCTURES Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for ed in the Angle Top and Angle Bottom of the steel pipe. Jointtal. Insation. This will reduce the possibility of corrosion at the bottom of the ross section area. The cross section areas were selected to provide force resistance (strength). While the Department's suggested detail would stallation of the stiffeners and the repair of the access holes would create pipe numbering on Sheet B-109 has been revised.
8 The	RESPONSE ACCEPTED ated By omas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are far movement for jacking? Suggest that c. How is inner surface of pipe prod d. We have long-term concerns will the outer pipes. Sheet B-70: The st e. Pipe support geometry: it appear f. Specify the 16" stay pipe ASTM s a. The camber diagrams will be provide b. Additional details will be provided at the pipe. d. Both the forces and variation in the stiffness in order to meet specified to be possible, it would create additional additional residual thermal stresses e. The angle top and angle bottom superstructure deformations is not st	Created On 10/11/2016 Instened to the pylon. Show detail. If at head of bolt be oriented outward we tected against corrosion? th cracking of the pipe at the welds. tay pipe numbering system here is direct the pipe sagging and truss deform spec. 11/11/2016 ovided with the erection manual. Noted to show how the bolts are fastened the bottom of each pipe in order to dr force in the steel pipe sections are low vibration frequencies. The areas were nal non-uniformity due to the stiffene s. The simpler weld detail is preferred were calculated based on the final p significant in the angle calculations.	Sheet B-70: Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener fferent from sheet B-109. ation have not been include 1 d to the pylon on the final st ain any water due to conder wwwhen compared to the ci- re not based upon needed f re and the access holes. Ins d by the Designer. The stay pipe shape. The sagging of	STRUCTURES Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for ed in the Angle Top and Angle Bottom of the steel pipe. Jointtal. Insation. This will reduce the possibility of corrosion at the bottom of the ross section area. The cross section areas were selected to provide force resistance (strength). While the Department's suggested detail would stallation of the stiffeners and the repair of the access holes would create pipe numbering on Sheet B-109 has been revised.

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0	Staty -		Current Holder	Reference	Categories
)	RES 3E ACCE	EPTED		Sheet B-103:	STRUCTURES
C	reated By		Created On	Version	Delegate For
٦ł	homas Andres		10/11/2016	1	
	b. Detail 1: The side	e and top elastom	B-70 for unbolting pipe supports eric cover for the steel plates, shi s between the top surface of the 10/28/2016	ow 1/8" thick. FDOT Standard	Index No.20510 required ¼" thick. In elevation view End Bent 1 and e superstructure.
TI			added to Sheet B-103. steel plates has been revised to 11/1/2016	1/4". The top elastomeric cov	er provided for the steel plates is 3/8". The gap dimensions have bee
	Response Accepte	d & Comment Clo	sed		
225454	Status		Current Holder	Reference	Categories
	RESPONSE ACCE	EPTED		Sheet B-104, Stage 4, Step 3:	STRUCTURES
C	reated By	Seas and the state	Created On	Version	Delegate For
T	nomas Andres		10/11/2016	<u> </u>	a an dhin an alandan dhina ka
	a. FIGG has evaluated force between the b	ection due to flexil al) stresses due to shear lag) at inner ated the back spar back span canopy	o longitudinal P.T. anchor as the compression zone 10/28/2016 n to pylon connection assuming t element and the pylon. The con	e drags the pylon. 1 hat the falsework is a very flexi	ble system in order to get an upper bound value for the design tensic resist construction loads. Please refer to pg. 477-478 of Pylon
Th	<ul> <li>b. Camber (rotation</li> <li>c. Local stresses (s</li> <li>a. FIGG has evaluation force between the b</li> <li>Substructure Final st</li> <li>b. The rotational st</li> <li>addition, the maxim</li> <li>c. Additional reinform</li> </ul>	ection due to flexil al) stresses due to shear lag) at inner ated the back span back span canopy Design Calculatior resses due to pos um tensile and co	bility of formwork. b longitudinal P.T. anchor as the compression zone 10/28/2016 n to pylon connection assuming t element and the pylon. The con is. Intensioning have been evaluated mpressive stresses due to the lo provided between the interface of	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r d. According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tension resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In llowable limits by the AASHTO code.
Tŀ	<ul> <li>b. Camber (rotation</li> <li>c. Local stresses (s</li> <li>a. FIGG has evaluated force between the betwee</li></ul>	ection due to flexil al) stresses due to shear lag) at inner ated the back span cack span canopy Design Calculatior resses due to pos um tensile and co rcement has been	bility of formwork. b longitudinal P.T. anchor as the compression zone 10/28/2016 n to pylon connection assuming t element and the pylon. The con is. t-tensioning have been evaluated mpressive stresses due to the lo provided between the interface 11/1/2016	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r d. According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tensic resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In llowable limits by the AASHTO code.
••• <b>•</b>	<ul> <li>b. Camber (rotation</li> <li>c. Local stresses (s</li> <li>a. FIGG has evaluated force between the base of the structure final is the substructure final is the structure final structure for the structure final structure for the structure final structure for the structure final structure final</li></ul>	ection due to flexil al) stresses due to shear lag) at inner ated the back span cack span canopy Design Calculatior resses due to pos um tensile and co rcement has been	bility of formwork. anchor as the compression zone 10/28/2016 In to pylon connection assuming the element and the pylon. The con- its. t-tensioning have been evaluated impressive stresses due to the lo- provided between the interface of 11/1/2016 sed	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r d. According to our model the n ngitudinal P.T. are within the al of the diaphragm and the pylon 1	ble system in order to get an upper bound value for the design tensic resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code.
Tř	<ul> <li>b. Camber (rotation</li> <li>c. Local stresses (stresses)</li> <li>a. FIGG has evaluated force between the substructure Final stresses addition, the maximum c. Addition, the maximum c. Additional reinformates and the substructure stresses and the substructure stresses addition addition and the substructure stresses addition a</li></ul>	ection due to flexil al) stresses due to shear lag) at inner ated the back span back span canopy Design Calculatior resses due to pos um tensile and co recement has been d & Comment Clos	bility of formwork. b longitudinal P.T. anchor as the compression zone 10/28/2016 n to pylon connection assuming t element and the pylon. The con is. t-tensioning have been evaluated mpressive stresses due to the lo provided between the interface 11/1/2016	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r d. According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tensic resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In llowable limits by the AASHTO code.
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C	<ul> <li>b. Camber (rotation</li> <li>c. Local stresses (s</li> <li>a. FIGG has evaluated force between the base structure Final I</li> <li>b. The rotational structure Final I</li> <li>b. The rotational reinformation of the maximum c. Additional reinformation and ress</li> <li>Response Accepted Status</li> <li>COMMENT AGRE</li> <li>Reated By ARIA CARASA</li> </ul>	ection due to flexil al) stresses due to shear lag) at inner ated the back span back span canopy Design Calculatior resses due to pos um tensile and co rcement has been d & Comment Clos ED WITH	bility of formwork. b longitudinal P.T. anchor as the compression zone 10/28/2016 n to pylon connection assuming the element and the pylon. The con- is. t-tensioning have been evaluated mpressive stresses due to the lo- provided between the interface of 11/1/2016 sed Current Holder 10/12/2016 ture Design	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r d. According to our model the n ngitudinal P.T. are within the al of the diaphragm and the pylon 1 <b>Reference</b> Structure Maintenance Version 1	ble system in order to get an upper bound value for the design tensic resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In llowable limits by the AASHTO code.
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Ci M/	b. Camber (rotation c. Local stresses (s a. FIGG has evaluation force between the the Substructure Final 1 b. The rotational st addition, the maxim c. Additional reinfor homas Andres Response Accepted Status COMMENT AGRE reated By ARIA CARASA No Comment for the Comment Agreed 8 Status	ection due to flexil al) stresses due to shear lag) at inner ated the back span back span canopy Design Calculation resses due to pos um tensile and co recement has been d & Comment Close ED WITH	bility of formwork. b longitudinal P.T. anchor as the compression zone 10/28/2016 In to pylon connection assuming the element and the pylon. The con- its. International have been evaluated impressive stresses due to the lo- provided between the interface of 11/1/2016 Sed Current Holder 10/12/2016 ture Design 10/28/2016	e drags the pylon. 1 hat the falsework is a very flexi nection has been designed to r 1. According to our model the n ngitudinal P.T. are within the al of the diaphragm and the pylon 1 <b>Reference</b> Structure Maintenance Version 1 1 <b>Reference</b> Superstructure Design	ble system in order to get an upper bound value for the design tension resist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In llowable limits by the AASHTO code.  Categories STRUCTURES Dategate For

Superstructure Longitudinal Model (Larsa Model): The effect of the longitudinal post-tensioning on the main deck and the canopy has been correctly incorporated into the structural model. However the effect of the PT bars on the truss diagonal members has not been considered. Since the truss connections are rigid connections, a portion of the PT force will be transferred to adjacent elements as axial forces, moments and shears, i.e., the PT will not be 100% effective and will also be subject to losses due to creep and shrinkage. Please address. 1

10/28/2016

The effect of the PT bars has been considered in the finite element model (LUSAS Bridge plus) of the main span. PT bars are defined in the truss diagonal members. The stressing sequence of the PT bars has been checked with the finite element model to ensure the structure is within the allowable limits as the bars in each diagonal are stressed. 1

10/31/2016

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6	RES SE ACCEPTED		Superstructure D Calculations	STRUCTURES
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R.	ti mana (ata) anna a' athana	10/17/2016	1	. "heline and have also
		the main deck and the canopy stresses hat the calculation does not include a ch 10/28/2016		rent load combinations for service III at the end of construction and lor strength conditions. Please provide.
	Ultimate moment checks for th	e deck and canopy will be provided with	the Final submittal.	
		10/31/2016	1	
	Response Accepted & Comme	ent Closed		
lo	Status	Current Holder	Reference	Categories
27	RESPONSE ACCEPTED		Superstructure Design Calculations	STRUCTURES
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	expected. To capture this beha purpose. Conditions to be inve a) Permanent loads and live lo b) Same as a) but live loads ac	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst 11/11/2016	t) and the section appears to b e performed. The same LARS ds). torsional effect for the structur 1	
	expected. To capture this beha purpose. Conditions to be inve a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load sting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each	t) and the section appears to b e performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co	e relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this
	expected. To capture this beha purpose. Conditions to be inve a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez)	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacemen 11/16/2016 dditional calculations performed as resu	t) and the section appears to be performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co to theory LRFD 4.5.3.2) betwee 1 lt of these comments will be re	be relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). Ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear.
40	expected. To capture this beha purpose. Conditions to be inve a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez)	ing laterally (except at the pylon support avior a global stability analysis should be setigated are: ad acting in the main span (factored load sting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacement 11/16/2016	t) and the section appears to t e performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co t theory LRFD 4.5.3.2) betwe 1	be relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear. eviewed. Categories
	expected. To capture this beha purpose. Conditions to be inve- a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez) During the next submittal the a	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacemen 11/16/2016 dditional calculations performed as resu	t) and the section appears to be performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co to theory LRFD 4.5.3.2) betwee 1 lt of these comments will be re	e relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear.
28	expected. To capture this beha purpose. Conditions to be inver a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez) During the next submittal the ar Status	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacemen 11/16/2016 dditional calculations performed as resu	t) and the section appears to be performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co to theory LRFD 4.5.3.2) betwe 1 lt of these comments will be re <b>Reference</b> Superstructure Design	e relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear.
28	expected. To capture this beha purpose. Conditions to be inver a) Permanent loads and live lo- b) Same as a) but live loads ac The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez) During the next submittal the a <b>Status</b> RESPONSE ACCEPTED reated By	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacemen 11/16/2016 dditional calculations performed as resu <b>Current Holder</b>	t) and the section appears to be performed. The same LARS ds). torsional effect for the structur 1 n of the LRFD strength load co to theory LRFD 4.5.3.2) betwe 1 lt of these comments will be re <b>Reference</b> Superstructure Design Calculations	e relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear. eviewed. Categories STRUCTURES
No 28 Ci	expected. To capture this beha purpose. Conditions to be inver- a) Permanent loads and live lo- b) Same as a) but live loads acd The lateral stability of the cano the factored load levels, the inc (On behalf of Saul Perez) During the next submittal the a <b>Status</b> RESPONSE ACCEPTED reated By (On behalf of Saul Perez) Section V, Longitudinal Design effective. As indicated in comm shortening, creep and shrinkag diagonal members in the globa	ing laterally (except at the pylon support avior a global stability analysis should be estigated are: ad acting in the main span (factored load ting on one side of the span, i.e., worst i 11/11/2016 py (top chord) has been verified for each cremental deflections (large displacement 11/16/2016 dditional calculations performed as resu Current Holder Created On 10/17/2016 , Page 840, design of diagonal members ment 1 due to the rigid joints, there will be ge. The calculation shown can be taken il longitudinal model. Please verify. 10/28/2016	t) and the section appears to the performed. The same LARS dis). torsional effect for the structur 1 in of the LRFD strength load cont theory LRFD 4.5.3.2) betwee 1 it of these comments will be researched by the sector of the	e relatively weak in torsion a lateral-torsional buckling mode is A model used for the longitudinal analysis can be utilized for this e (factored loads). ombinations, including both full and one sided live load cases. Even at en the last series of load steps remain linear. eviewed. Categories STRUCTURES

No	Staty		Current Holder	Reference	Categories
29 '	RES	E ACCEPTED		Superstructure De Calculations	STRUCTURES
Cr	eated By	a san a second sa	Created On	Version	Delegate For
IST JAN	Ballondor - Millel.		10/17/2016	1	a half a have the second set of
	Section VI, used. Add	itionally, drawing B-69 s	hows a force of 140k or approximately 10/28/2016	y 60% of GUT at the live end 1	t the eoc. This loss ratio appears high; the long term value should be after anchor set. Please clarify and/or reevaluate as needed.
	The table of	on Sheet B-69 has been	revised for consistency with the calcu	lations.	
			10/31/2016	1	
	Response	Accepted & Comment C	losed		
lo	Status		Current Holder	Reference	Categories
80	RESPONS	SE ACCEPTED		Superstructure Design Calculations	STRUCTURES
Cr	eated By		Created On	Version	Delegate For
g	Within The Bill Barry		10/17/2016	1	
	Frequency information transverse longitudina the longitud the bridge direction w	n for the joints given in Pa frequency of vibration of axes (torsion). This ca dinal vibration of the brid is allowed to vibrate in 3 hich is reported as zero	ages 1201 thru 1208 (Y displacement f the structure and will not consider th n be seen in the output for the freque ge, while the second mode (3.07 Hz) D. The fact that the bridge was const for all reported frequency modes. As	restrained and rotations abo at the flexural vibrations (ver ncy of vibrations given in Pa- corresponds to the vertical v rained to vibrate only in the commented in previous revi	ly in the x-z plane (longitudinal-vertical plane) as indicated in the but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to <i>v</i> ibration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as

the bridge is allowed to vibrate in 3D. The fact that the bridge was constrained to vibrate only in the vertical plane can be seen from the mass participation factor in the Y direction which is reported as zero for all reported frequency modes. As commented in previous revisions, due to the relatively low torsional stiffness of this bridge (as compared to its vertical and horizontal bending stiffness); torsional vibration should also be evaluated. Although this mode is not indicated in the AASHTO Specifications for Pedestrian Bridges Section 6- Vibrations, this particular vibration mode needs to be investigated. The reason being that a common loading case is to have the live load applied only on one side of the bridge (traffic mostly in one direction) which most probably will activate this vibration mode.

Please reevaluate the frequencies using the 3-D model allowing the bridge to freely vibrate in any direction.

11/11/2016

The original restraint condition of the model was done to simplify identifying the frequency of the desired vertical mode shape, knowing that vertical and lateral behaviors are essentially uncoupled. To address this comment, we have re-run the frequency evaluations, with the model free to vibrate in any direction, and confirmed that the vertical and lateral frequencies of the deck meet the requirements of the contract. The analysis includes a great number of mode shapes, including torsional ones. However, the contract does not specify any torsional frequency limits.

Response Accepted & Comment Closed

No	Status	Current Holder	Reference	Categories
31	RESPONSE ACCEPTED		Sheet B-38 and B-40	STRUCTURES
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6121	The second s	10/17/2016	1	

1

1

(On behalf of Saul Perez)

Please verify that there is no conflict between the post-tensioning bar duct and the section reinforcement as shown in Sheet B-40. The 4" or 4.5" distance between the PT bar centroid and the face of the element may not be sufficient when considering the concrete cover, the stirrups, the longitudinal rebar and the OD of the duct, especially at Section F-F in Sheet B-38(2.5"  $\Box$  PT bar).

10/28/2016	
The location of the 2.5" diameter PT bars has been revised.	
10/31/2016	

No	Sta	~	Current Holder	Reference	Categories	
32	RE	SE ACCEPTED		Sheet B-44	STRUCTURES	
1	Created By		Created On	Version	Delegate For	THE SERVICE AND INCOMES
			10/17/2016	1		
		half of Saul Perez)	ation of the tendon PL point EDOT SDC	2016 has a list of mi	nimum tangent lengths in Table 1.11.4-2. The pro	anaged to send to set
	violates	the value given in this tab	ble. Please revise or justify as applicable. 10/28/2016	1		oposed langent length
	Design	was performed in accorda	nce with FDOT SDG January 2015 editio	n (per RFP) which d	pes not specify minimum tangent lengths adjacen	t to anchorages.
			10/31/2016	1		
	Respon	se Accepted & Comment	Closed			
No	Status		Current Holder	Reference	Categories	
33	RESPO	ONSE ACCEPTED		Sheet B-64	STRUCTURES	
1	Created By	Real Street and and	Created On	Version	Delegateration	
			10/17/2016	1	, a, an	
		nalf of Saul Perez) B-B is incomplete (the top	) deck surface and curb are not shown). 10/28/2016	1		
	The line	work for Section B-B has I	been completed.			
			10/31/2016	1		
	Respon	se Accepted & Comment (	Closed			
No	Status		Current Holder	Reference	Categories	
34		INSE ACCEPTED		Sheet B-65	STRUCTURES	
3	Created By		Created On	Version	Delegate For	
k.	Mut and Line		10/17/2016	1		
	The cro	alf of Saul Perez) ss section at the canopy bl er. Please revise according	gly.	lister. The plan view	shows that, at this location, the tendons have alre	eady been deviated to mis
			10/28/2016	1		
	The Cro	ss Section at Canopy Blist				
			10/31/2016	1		
	Respon	se Accepted & Comment (	Closed			
No	Status		Current Holder	Reference	Categories	
35	RESPO	INSE ACCEPTED		Sheet B-66	STRUCTURES	
	Created By		Created On	Version	Delegate For	
	م. خارجي ليد		10/17/2016	1	سومهرمتيهمهموم ، خشت ، پشيمه م . بسيغه	
		alf of Saul Perez) canopy cross section show	vs 4 tendons instead of the 3 tendons sho		n view. Please revise.	
			10/28/2016	1		
	The Typ	ical Cross Section has bee	en revisea. 10/31/2016	1		

Submitta Te	port		$\sim$
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	9/15/2016	Response Due Date:	10/19/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	9/15/2016
Create User Id:	PD601MI	Last Update:	9/15/2016
		Last Update User Id:	PD601MI

434688-1: Foundation Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 9/15/2016 Comments Due Date: 10/6/2016 Days Allowed for Review: 22 Review Meeting: 10/19/2016 10:00 AM to 11:00 AM @ to be schedule if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Section: Phase: 100% Foundation Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book Work Program Construction Budget:

### Threads:

Production Date: DESIGN- BUILD

No	Status	Current Holder	Reference	Categories	
10	RESPONSE ACCEPTED		Geotechnical Report:	STRUCTURES	
C	reated By	Created On	Version	Delegate For	
т	homas Andres	9/26/2016	1	سر «الطوسية». من المالية المالية المراجعة	

The following comment requires a written response: shallow foundation bearing capacity analysis appears to have assumed no influence of groundwater, and no horizontal forces. Both parameters can have a significant effect on the estimated bearing capacity. Please update the calculations and re-size the footings if necessary. 10/18/2016 1

The influence of groundwater was taken into consideration. However, shallow foundation bearing capacity analyses are conservative already as they assume footings bearing on granular soils (not rock) with a soil friction angle of 40 degrees, when in fact the footings will sit on competent natural limestone (which may also be treated as a cohesive mass with a relatively high cohesion value), in which case the resulting bearing capacity would have been even significantly higher. As suggested, we have made a slight revision to the calculations to incorporate the effect of groundwater while keeping the original conservative assumptions the same. The resulting bearing capacity is now more conservative and still much higher than the maximum recommended factored bearing resistance of 14 ksf. The attached revised report incorporated the revised calculations reflecting this consideration. We disagree that the bearing capacity analyses do not consider the effect of horizontal forces. The design loading information was provided by the bridge engineer, including axial, lateral, and applied moments. Hence, all external stability checks were performed for all external loads provided and eccentricity also checked for these loads. No re-sizing of the footings is necessary. 10/27/2016 1

Thomas Andres

o Stat	Current Holder	Reference	Categories
RE SE ACCEPTED		Sheet B-3:	STRUCTURES
Created By	Greated On	Version	Delegate For
Thomas Andres	9/26/2016	1	Rand , She & Alline
of the stay -pipe (inner and	ation only (no response required) due to this l outer). How is the inside of the pipe protecte 60. It is not clear what an Architectural Coati 10/18/2016	ed (primer, etc.)- can it be co	ttal however the General Notes do not address the corrosion protection ated? Recommend a High Performance Painting System on the
Noted.			
Thomas Andres	10/27/2016	1	
Response Accepted & Con	nment Closed		
o Status	Current Holder	Reference	Categories
RESPONSE ACCEPTED		Sheets B-8 and B-11 thru B-17:	STRUCTURES
Created By	Greated On	Version	Delegate For
Thomas Andres	9/26/2016	1	i
This comment requires a w	ritten response: Label Footings (Type 1 thru	Type 8) on Sheets B-11 thru	u B-17 per the naming convention given on B-8.
	10/18/2016	1	
The footing labels on drawi	ng B-11 thru B-17 have been revised to matc	h the labels on drawing B-8.	
Thomas Andres	10/27/2016	1	
Response Accepted & Con	amont Claned		

	1		Current Holder	Reference	Categories	
RE	1	SE ACCEPTED		STRUCTURE MAINTENANCE	STRUCTURES	
reated	A star		Created On	Version	Delegate For	
IARIA C	CARA	SA	10/18/2016	1		
B-4	Plans	& Elev. Call for End	ecs are not in AASHTO 17 Edition. d Bridge Deck as done for Begin Bridge le Elevator Tower and Center Line Land	Deck. (These 2 location sho ding Columns to End Bridge a	ld be the control for Geometry). s done for Begin Bridge.	
B-8 Veri Sho	Not c ify sig w Beg	lear what is the cont nicance of tying colu gin Bridge & End Bri	ding "Superstructure" (Typical Superstr trol of geometry, specifically the columr umns to R/W at North End. CL of bearin idge Stations. dations (Type 1 & 7) is larger than Wes	ns supporting the Bridge. Ing for Begin and End Bridge s	nould be the CL column. Not clear Tie CL Columns to Begin/End Bridge. & 6).	
		w Direction of Sta or fy no Bars @ Colum		g reinforcing for Bridge Colun	ns) Apply to the 4 Columns supporting the Bridge Ends.	
B-14	4 Veri	fy using only 1 # 4 @	$\hat{g}$ 24" for walls up to 15' ± high (wall 5 a	t high ends ties 2 #5 bars @	2")	
B-16	6 At vi	ew A-A confusing to	o show 2 different columns bars togethe	er		
B-17	7 Veri	fy sheet Tittle. Seem	ns this is an Elevator Footing			
B-19	9 Som	e Comment as in B-	-14 (1 # 4 @ 24")			
B-20	0 & 21	Missing calling for v	view B-B in plan view 10/18/2016	1		
Drav	wing E	3-2 makes reference	e to AASHTO LRFD Seventh Edition. The	he 17 Edition is not mentioned	in the General Notes.	
B-4:	The	proposed dimension	to the center line of the north elevator	tower has been added.		
B-5:	Note	d.				
he is The	s clea east :	r on how to locate th side column foundati	ne columns/foundations.	de foundations; however, the	t distances given. The Contractor (MCM) has reviewed this drawing and west side foundations are combined footings that support more than one	
B-10	): The	north arrow has bee	en added.			
			l in the straight portion of the stirrups ne ne AASHTO code design requirements.		The column design reflects the rebar layout shown on this drawing. The	
B-14	4: The	design of the wall h	nas been verified.			
B-16	6: Not	ed. The Contractor h	has reviewed this drawing and believes	that the detail is clear enough	for construction.	
B-17	7: This	drawing shows the	Type 8 footing of the north landing. Th	e title of this drawing is appro	priate.	
B-19	9: The	design of the wall h	nas been verified.			
B-20 ARIA C		: View B-B is called	out in View A-A. 10/20/2016	1		
Res	ponse	Accepted & Comme	ent Closed			

Submitte	eport		$\sim$
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE III	Submital Staff Type:	CONSULTANT
Recieved Date:	9/28/2016	Response Due Date:	10/28/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	9/28/2016
Create User Id:	PD601MI	Last Update:	2/14/2017
		Last Update User Id:	PD601MI

434688-1: 90% Superstructure Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 9/28/2016 Comments Due Date: 10/14/2016 Days Allowed for Review: 17 Review Meeting: 10/28/2016 10:00 AM to 11:00 AM @ Will be schedule if needed Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Phase: 90% Superstructure Design Review Meeting will be schedule if needed Design Criteria is FDOT PPM Work Program Construction Budget: \$11,875,092

Threads:

Production Date: DESIGN- BUILD

RES       E.ACCEPTED       STRUCTURES       STRUCTURES         Created On       Version       Delegate.For         MARIA CARASA       10112016       1         B-2 Design Spess: LEPD Spess are not in AASHTO 17 Edition.       B-2 Design Spess: LEPD Spess are not in AASHTO 17 Edition.       B-2 Design Spess: LEPD Spess are not in AASHTO 17 Edition.         B-4 Priors 6 Stev, Call for Edit Origin Deck st and for Gap Edit State Status.       B-5 Sheet Title: Consider adding "Superstructure" (Typical Superstructure" (Typi	Statu	Current Holder	Reference	Categories
WARKA CARASA     101112016     1       B-2 Design Spec: LKFD Spec: a ran ot in ASHTO 17 Edition.     B-4 Design Spec: LKFD Spec: a ran ot in ASHTO 17 Edition.       B-5 Sheet Title: Consider and the Shript Deck as done for Begin Bridge. Deck Market Control Control for Geometry.     At End Bridge: The Center Line Elevator Tower and Center Line Landing Columns is brouked be the control for Geometry.       B-5 Sheet Title: Consider adding "Superstructure" (Typical Superstructure: Cross-Section)     B-8 Net clear what is the control of geometry, specifically the columns supporting the Bridge.       Verify adjiftance of tyme control of Sin or North Arrow     B-10 Show Direction of Sin or North Arrow       B-10 Show Direction of Sin or North Arrow     B-11 Verify using ority 1 # 4 @ 24* for walls up to 15* ± high (wall 5 at high ends, has 2 #5 bars @ 12*)       B-16 At view A-A confusing to show 2 different columns bars together     B-17 Verify sheet Title. Seems this is an Elevator Footing       B-10 Same Comment intended for the Final Foundation submittal?     1       Vers     101112016     1       Yes     Status     Current Holder     Reference       Colument Intended for the Final Foundation submittal?     1       Vers     10112016     1       Yes     Status     Current Holder     Reference       Categories     01112016     1       Include step by step fabrication sequence in the plans and Include a TSP for the construction of the precast manin-span and CIP back span. The TSP should require a modatal	RES E ACCEPTED			STRUCTURES
B-Design Spece: LEPTD Speces are not in AASHTO 17 Edition.         B-4 Pinas & Eew, Calif Cer Tabigia Deck score for Begin Bridge Deck. (These 2 location should be the control for Geometry). At End Bridge: The Center Line Elevator Tower and Center Line Landing Columns to End Bridge as done for Begin Bridge.         B-5 Sheet Title: Consider adding "Superstructure" (Typical Superstructure Cross-Section) S-8 Not clear what is the control of geometry, sectionally the Outman supporting the Bridge. Werly significance of typic olumns to Row Mark North End. CL of bearing for Begin and End Bridge should be the CL column. Tie CL Columns to Begin/End Bridge. Show Werly why the Column Supporting the Bridge. Clear North Arrow B-10 Show Understanding "Superstructure" (Typical Superstructure Cross-Section)         B-10 Show Understanding Superstructure (Typical Superstructure Cross-Section)         B-10 Show Understanding Superstructure" (Typical Superstructure Cross-Section)         B-11 Verify ne Bars @ Column Corners (Not Lowalls done in detailing reinforcing for Bridge Columns) Apply to the 4 Columns supporting the Bridge Ends.         B-10 Show Understandin Superstructure	Created By	Created On	Version	Delegate For
B-4 Plans & Eley. Call for End Bridge Deck is done for Begin Bridge Deck. (These 2 location should be the control for Geometry). At End Bridge. The Center Line Landing Columns to End Bridge as done for Begin Bridge. B-5 Sheet Tittie: Consider adding "Superstructure" (Typical Superstructure Cross-Section) B-4 Not clear what is the control of geometry, specifically the columns supporting the Bridge. Verify significance 1 wing southoms to KW at North End. C. of been and End Bridge should be the CL column. Tie CL Columns to Begin End Bridge. Show Verify wing East Column foundations (Type 1 & 7) is larger than West Column foundations (Type 3 & 6). B-10 Show Direction of Sta or North Arrw B-11 Verify no Bare @ Column Commer. (Not usually done in detailing reinforcing for Bridge Columns) Apply to the 4 Columns supporting the Bridge Ends. B-14 Verify using only 1 # 4 @ 24" for walls up to 15" ± high (wall 5 at high ends, has 2 #5 bars @ 12") B-16 At view A-A confusing to show 2 different columns bars together B-17 Verify sheet Title. Seems this is an Elevator Footing B-19 Same Comment is no H-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B n plan view 10/11/2016 1 1 stris comment intended for the Final Foundation submittar RRA CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WTH General: STRUCTURES reated By Created On Version Dialing For Separation Separation Separation of the precast main-span and CIP back span. The TSP should require a mo detailed step-by-step fabrication sequence in the plans of micules a TSP for the construction of the precast main-span. and CIP back span. The TSP should require a mo detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specially Engineer. The Erection Manual shall function sequence to the Submitted in an Erection Manual submitted by a Specially Engineer. The Erection Manual shall function sequence to the submitted in an Erection Manual submitted by a Special prof south submig	IARIA CARASA	10/11/2016	1	An anna a' ailte an tagachta aine, de chanaistean an sea
B-8 Not clear what is the control of geometry, specifically the columns supporting the Bridge. Verify significance of tying columns to RVM at North End. CL of bearing for Begin and End Bridge should be the CL column. Tie CL Columns to Begin/End Bridge. Show Begin Bridge & End Bridge Stations. Verify why East Column foundations (Type 1 & 7) is larger than West Column foundations (Type 3 & 6). B-10 Show Direction of Sta or North Arrow B-11 Verify no Bas @ Column Corners (Not usually done in detailing reinforcing for Bridge Columns) Apply to the 4 Columns supporting the Bridge Ends. B-14 Verify using only 1 # 4 @ 24" for walls up to 15 ± high (wall 5 at high ends, has 2 #5 bars @ 12") B-16 At view A-A confusing to show 2 different columns bars together B-17 Verify sheet Title. Seems this is an Elevator Fooling B-19 Same Comment as in B-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Poundation submitta? VariA CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WITH General: STRUCTURES Treated By Coreated On Version Dialogate For 10/11/2016 1 Include step by step fabrication sequence in the plana include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo datalet step by-step fabrication sequence to be submitted in an Erection Manual submitted by a Special By Greated On Version Dialogate For Partoversion Partoversion Span et al. Delay the span step below design code include step by step fabrication sequence in the plana and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo datalet step by-step fabrication sequence to be submitted by a Special By Greate For Partoversion PT as trensing and longitudinal lendor stressing sequence with clear delineation of required construction of bath main span and back span stap below design code construction plante a step by-step certion and from stressing	B-4 Plans & Elev. Call for End Brid	ge Deck as done for Begin Bridge		
B-11 Verify no Bare @ Column Corners (Not usually done in detailing reinforcing for Bridge Columns) Apply to the 4 Columns supporting the Bridge Ends. B-14 Verify using only 1 # 4 @ 24" for walls up to 15" ± high (wall 5 at high ends, has 2 #5 bars @ 12") B-16 At view A-A confusing to show 2 different columns bars together B-17 Verify sheet Tittle. Seems this is an Elevator Footing B-19 Same Comment as in B-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Foundation submittal? KAR CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WITH General: STRUCTURES Total By Created On Version Different main span and DCIP back span. The TSP should require a mo dated atep by step fabrication sequence in the plans and/or releasing of falsework, formwork, fermorpart, forms, supports and the like. - Step-by-step fabrication sequence in the plans and/or releasing of falsework, formwork, fermorpart (Werr, Supports and the like. - Sele-by-step fabrication sequence in the spans and other tessing and for releasing of falsework, formwork, fermorpart, towers, supports and the like. - Sele-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer. The Erection Manual shall include the following: - Positioning, use and sequencing of falsework, formwork, formwork, formwork, formwork, tengorat and the like. - Sele-by-step PT bar stressing and longitudinal lendor on tessing as quences with clear delineation of required construction of both main span and back span stay below design code limits. Also include a step-by-step casting and for the selesing of falsework, formwork, formwork, tengorat due the time of stressing. - Positioning, detailed step-by-step restor plan of the SPMT move. 10/2/2/2/16 1 The general fabrication sequence for the construction of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the prec	B-8 Not clear what is the control of Verify significance of tying columns Begin Bridge & End Bridge Stations	geometry, specifically the columns to R/W at North End. CL of bearin s.	s supporting the Bridge. Ig for Begin and End Bridge	
B-16 At view A-A confusing to show 2 different columns bars together B-17 Verify sheet Title. Seems this is an Elevator Footing B-19 Same Comment as in B-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Foundation submittal? VARIA CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WITH General: STRUCTURES metade By Created On Version Delegate For bornas Andres 10/11/2016 1 Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo detailed step-by-step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo detailed step-by step fabrication sequence to be submitted in an Erection Manual submitted by a Specially Engineer. The Erection Manual shall include the following: - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, temporary towers, supports and the like. - Step-by-step PT bar stressing and longit and stressing sequence with clear delineation of required construction of but main span and back span stay below design code limits. Also include a step-by-step rection plan of the Self-Propeiled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support condition of the precast main-span and CIP back span. Include drawings and calculations for the structural based on the support condition of the precast main-span and back span stay below design code limits. Also include a step-by-step erection plan of the Self-Propeiled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support condition of the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The creation m			reinforcing for Bridge Colur	nns) Apply to the 4 Columns supporting the Bridge Ends.
B-17 Verify sheet Tittle. Seems this is an Elevator Footing B-19 Same Comment as in B-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Foundation submittal? IARIA CARASA 12/14/2016 1 Yes <u>Status Current Holder Reference Categories</u> COMMENT AGREED WITH General: STRUCTURES <u>COMMENT AGREED WITH Created On Version Delegate For</u> homas Andres 10/11/2016 1 Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specially Engineer. - Positioning, use and sequencing of faisework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like. - Step-by-step PT bar stressing and longitudinal tendow form stressing sequence with clear delineation or required construction joints. Depict the support conditions of the precast main-span and back span stay below design code limits. Also include a step-by-step casting and form strepsing sequence with clear delineation or required construction joints. Depict the support condition at the near-site casting yard at the time of stressing. - Positioning, detailed step-by-step erection plan of the Self-Propeiled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span during the SPMT move. - 10/28/2016 1 The general fabrication sequence for the construction of the precast main-span and CIP back span has been provided as part of the plans set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers. - The step-by-step rection plan of the SPMT will be provided on a separate submittal by the Contractor's Sp	B-14 Verify using only 1 # 4 @ 24"	for walls up to 15' ± high (wall 5 at	high ends, has 2 #5 bars @	. 12")
B-19 Same Comment as in B-14 (1 # 4 @ 24") B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Foundation submittal? IARIA CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WITH Created On Version Delegator F67 Treated By Created On Version Delegator F67 The general: STRUCTURES Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Speciality Engineer. The Erection Manual shall include the following: - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like. - Step-by-step Tabrication sequence to the submitted in an Erection Manual submitted by a Speciality Engineer. The Erection Manual shall include the following: - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like. - Step-by-step Tb ars tressing and longitudinal tendon stressing sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing. - Positioning, detailed step-by-step erection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span and CIP back span tab been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers. The step-by-step erection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer. 10/28/2016 1 T	B-16 At view A-A confusing to show	v 2 different columns bars together		
B-20 & 21 Missing calling for view B-B in plan view 10/11/2016 1 Is this comment intended for the Final Foundation submittal? IARIA CARASA 12/14/2016 1 Yes Status Current Holder Reference Categories COMMENT AGREED WITH General: STRUCTURES COMMENT AGREED WITH General: STRUCTURES Normas Andres 10/11/2016 1 Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mo datalied step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer. The Erection Manual shall include the following: - Positioning, use and sequencing of faisework, jacking and/or releasing of faisework, formwork, temporary towers, supports and the like. - Step-by-step FD Far stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step erection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span during the SPMT move. 10/28/2016 1 The general fabrication sequence for the construction of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span during the SPMT move. 10/28/2016 1 The general fabrication sequence for the construction of the precast main-span during the SPMT move. 10/28/2016 1 The step-by-step erection plan of the SPIMT will be provided on a separate submittal by the Contractor's Specialty Engineer. 11//2016 1	B-17 Verify sheet Tittle. Seems this	is an Elevator Footing		
10/11/2016       1         Is this comment intended for the Final Foundation submittal?         IARIA CARASA       12/14/2016         Yes         Status       Current Holder       Reference       Categories         COMMENT AGREED WITH       General:       STRUCTURES         reated By       Created On       Version       Delegate For         homas Andres       10/11/2016       1         Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mod detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.         The Erection Manual shall include the following:       - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.         - Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stressee during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the enersite casting yard at the time of stressing.         - Positioning, detailed step-by-step rection plan of the Self-Propelied-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main span and CIP back span fals experimes.         - Positioning, detailed step-by-step	B-19 Same Comment as in B-14 (1	#4@24")		
IARIA CARASA       12/14/2016       1         Yes       Status       Current Holder       Reference       Categories         COMMENT AGREED WITH       General:       STRUCTURES         reated By       Created On       Version       Delegate (For         homas Andres       10/11/2016       1       Include step by step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.       The Erection Manual shall include the following:	B-20 & 21 Missing calling for view I		1	
Yes         Status       Current Holder       Reference       Categories         COMMENT AGREED WITH       General:       STRUCTURES         reated By       Created On       Version       Delegate For         homas Andres       10/11/2016       1         Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a mod detailed step-by-step fabrication sequence to be submitted in an Erection Manual shall include the following:       - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.       - Step-by-step Parstressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step rection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span and CIP back span has been provided as part of the plan set (see Erection Sequence details of the stressing sequence, and location of temporary towers. 	Is this comment intended for the Fi	nal Foundation submittal?		
Status       Current Holder       Reference       Categories         COMMENT AGREED WITH       General:       STRUCTURES         created By       Created On       Version       Delegate/For         homas Andres       10/11/2016       1         Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a modetailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.         The Erection Manual shall include the following:       - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.         - Step-by-step PT bar stressing and longitudinal tendon stressing sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing.         - Positioning, detailed step-by-step erection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence in the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form strippi	IARIA CARASA	12/14/2016	1	
COMMENT AGREED WITH       General:       STRUCTURES         treated By       Created On       Version       Delegate For         homas Andres       10/11/2016       1         Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a modetailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.         - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.         - Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing.         - Positioning, detailed step-by-step rection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence and location of temporary towers.         Include a step-by-step rection plan of the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more det	Yes			
Created By         Created On         Version         Delegate For           homas Andres         10/11/2016         1           Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a modetailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.           The Erection Manual shall include the following:         - Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.           - Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing.           - Positioning, detailed step-by-step erection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence and location of temporary towers.           Introduction of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer.           homas Andres         11/1/2016           Interpretion plan of the SPMT will	Status	Current Holder	Reference	Categories
homas Andres       10/11/2016       1         Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a modetailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer.         The Erection Manual shall include the following:       - Ossitioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like.         - Step-by-step Tb ar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing.         - Positioning, detailed step-by-step rection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers.         The step-by-step rection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer.         homas Andres       11/1/2016       1         The step-by-step erection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer. <tr< td=""><td>COMMENT AGREED WITH</td><td></td><td>General:</td><td>STRUCTURES</td></tr<>	COMMENT AGREED WITH		General:	STRUCTURES
Include step by step fabrication sequence in the plans and include a TSP for the construction of the precast main-span and CIP back span. The TSP should require a model detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer. The Erection Manual shall include the following: Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like. Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing. Positioning, detailed step-by-step rection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span during the SPMT move. 10/28/2016 1 The general fabrication sequence for the construction of the precast main span and CIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers. The step-by-step rection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer. homas Andres 11/1/2016 1 This response is okay provided that the step-by-step information per response to Comment 10 is provided in the final plans. 11/8/2016 1	reated By	Created On	Version	Delegate For
detailed step-by-step fabrication sequence to be submitted in an Erection Manual submitted by a Specialty Engineer. The Erection Manual shall include the following: Positioning, use and sequencing of falsework, jacking and/or releasing of falsework, formwork, temporary towers, supports and the like. Step-by-step PT bar stressing and longitudinal tendon stressing sequence so that stresses during fabrication of both main span and back span stay below design code limits. Also include a step-by-step casting and form stripping sequence with clear delineation of required construction joints. Depict the support condition at the near-site casting yard at the time of stressing. Positioning, detailed step-by-step crection plan of the Self-Propelled-Modular-Transporter (SPMT) move of the precast main-span. Include drawings and calculations for the structural based on the support conditions of the precast main-span and UCIP back span has been provided as part of the plan set (see Erection Sequence drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers. The step-by-step erection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer. 10/12/2016 1 This response is okay provided that the step-by-step information per response to Comment 10 is provided in the final plans. 11/8/2016 1	nomas Andres	10/11/2016	1	
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drawings). The erection manual will provide the mentioned information showing more details of the stressing sequences, support conditions during casting, form stripping sequence, and location of temporary towers. The step-by-step erection plan of the SPMT will be provided on a separate submittal by the Contractor's Specialty Engineer. Thomas Andres 11/1/2016 1 This response is okay provided that the step-by-step information per response to Comment 10 is provided in the final plans. 11/8/2016 1	The general fabrication sequence for		1 nain span and CIP back spa	n has been provided as part of the plan set (see Erection Sequence
This response is okay provided that the step-by-step information per response to Comment 10 is provided in the final plans. 11/8/2016 1	drawings). The erection manual will sequence, and location of temporar The step-by-step erection plan of th	provide the mentioned information y towers. le SPMT will be provided on a sepa	showing more details of the	e stressing sequences, support conditions during casting, form stripping
	homas Andres			
		the step-by-step information per re	esponse to Comment 10 is p	provided in the final plans.
		the step-by-step information per re	esponse to Comment 10 is p 1	provided in the final plans.

-	Stativ	Current Holder	Reference	Categories
8	RES JE ACCEPTED	and a state of the second s	General:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	Provide connection details betweer			
		10/28/2016	1	
		ain span truss and pylon have been	provided on the substructure of	Irawings.
	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment C	losed		
No	Status	Current Holder	Reference	Categories
9	RESPONSE ACCEPTED		Sheets B-38 thru B-45 and B-61, B-63, and B- 65:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	1	
	Add PT bar anchor caps (top and b	oottom) per SDG 1.11.2, Standard In	dex 21802 and Specification 4	162-1.2.a consistent with approved FDOT PT systems and resize
	element as required to fit caps.			
		10/28/2016	1	per Standard Index No. 21802). Caps are not needed at the bottom
	Thomas Andres Response Accepted & Comment C		Deference	Ontonomia
No		Current Holder	Reference	Categories
			Sheets B-37 thru B-40.	STRUCTURES
10			B-42, B-43, and B-69:	
10	Created By	Created On		Delegate For
10	Created By Thomas Andres	10/11/2016	B-42, B-43, and B-69: Version 1	Delegate For
10	Created By Thomas Andres Include step-by-step PT bar stressi code limits. Also include a step-by-	10/11/2016 ng and longitudinal tendon stressing step casting and form stripping sequition at the near-site casting yard at t	B-42, B-43, and B-69: Version 1 sequence so that stresses du uence with clear delineation of he time of stressing. Also check	Delegate For uring fabrication of both main span and back span stay below design f required construction joints. For the main span section (Sheets B-3 ck the temporary condition at the time of transport with a clear
10	Created By Thomas Andres Include step-by-step PT bar stressii code limits. Also include a step-by- thru B-40) depict the support condit delineation of the SPMT support loc The PT bar stressing sequence will showing stresses during stressing of A step-by-step casting and form stri Support conditions for the main spa The temporary support conditions do Thomas Andres	10/11/2016 ng and longitudinal tendon stressing -step casting and form stripping seq tion at the near-site casting yard at t cation on stage 3, Sheet B-108 (can 10/28/2016 I be provided with the Final submitta operations are below the allowable if ipping sequence will be provided wit an during stressing operations will be during transport shown on Sheet B-1 11/1/2016	B-42, B-43, and B-69: Version 1 sequence so that stresses du uence with clear delineation of he time of stressing. Also check tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the li- th the Final submittal. e shown on the Final submittal	Delegate For uring fabrication of both main span and back span stay below design f required construction joints. For the main span section (Sheets B-3 ck the temporary condition at the time of transport with a clear th the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal.
	Created By Thomas Andres Include step-by-step PT bar stressii code limits. Also include a step-by- thru B-40) depict the support condit delineation of the SPMT support loc The PT bar stressing sequence will showing stresses during stressing of A step-by-step casting and form stri Support conditions for the main spa The temporary support conditions d Thomas Andres Response Accepted & Comment Cl	10/11/2016 ng and longitudinal tendon stressing step casting and form stripping sequinon at the near-site casting yard at the cation on stage 3, Sheet B-108 (can 10/28/2016) I be provided with the Final submitta operations are below the allowable it ipping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 losed	B-42, B-43, and B-69: Version 1 y sequence so that stresses du uence with clear delineation of he time of stressing. Also chec tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the I th the Final submittal. a shown on the Final submittal 08 (Stage 3) have been revised 1	Delegate For uring fabrication of both main span and back span stay below design frequired construction joints. For the main span section (Sheets B-3 ck the temporary condition at the time of transport with a clear th the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed.
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No	Created By Thomas Andres Include step-by-step PT bar stressii code limits. Also include a step-by- thru B-40) depict the support condit delineation of the SPMT support loc The PT bar stressing sequence will showing stresses during stressing of A step-by-step casting and form stri Support conditions for the main spa The temporary support conditions d Thomas Andres Response Accepted & Comment Cl Status RESPONSE ACCEPTED Created By	10/11/2016 ng and longitudinal tendon stressing -step casting and form stripping sequition at the near-site casting yard at the cation on stage 3, Sheet B-108 (can 10/28/2016 I be provided with the Final submitta operations are below the allowable II ipping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 losed Current Holder	B-42, B-43, and B-69: Version 1 sequence so that stresses du uence with clear delineation of he time of stressing. Also cher tilever distance) consistent with 1 I. The longitudinal tendon stress imits will be provided with the I th the Final submittal. e shown on the Final submittal 08 (Stage 3) have been revise 1 <b>Reference</b>	Delegate For uring fabrication of both main span and back span stay below design f required construction joints. For the main span section (Sheets B-3 ck the temporary condition at the time of transport with a clear th the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. Categories
<b>No</b> 11	Created By Thomas Andres Include step-by-step PT bar stressii code limits. Also include a step-by- thru B-40) depict the support condit delineation of the SPMT support loc The PT bar stressing sequence will showing stresses during stressing of A step-by-step casting and form stri Support conditions for the main spa The temporary support conditions of Thomas Andres Response Accepted & Comment Cl Status RESPONSE ACCEPTED Created By Thomas Andres Clarify that the PT bars for members	10/11/2016 ng and longitudinal tendon stressing -step casting and form stripping sequination at the near-site casting yard at the cation on stage 3, Sheet B-108 (can 10/28/2016) I be provided with the Final submittal operations are below the allowable life ipping sequence will be provided with an during stressing operations will be during transport shown on Sheet B-1 11/1/2016 Iosed Current Holder 10/11/2016	B-42, B-43, and B-69: Version 1 sequence so that stresses du uence with clear delineation of he time of stressing. Also check tilever distance) consistent with 1 I. The longitudinal tendon stressing imits will be provided with the li- th the Final submittal. a shown on the Final submittal 08 (Stage 3) have been revised 1 Reference Sheet B-37, Note 8: Varsion 1	Delegate For using fabrication of both main span and back span stay below design frequired construction joints. For the main span section (Sheets B-3 ck the temporary condition at the time of transport with a clear th the calculations. ssing sequence is shown on Sheet B-108 (Stage 2). Calculations Final submittal. ed. Categories STRUCTURES Delegate For
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	Stat	Current Holder	Reference	Categories
2	RES E ACCEPTED		Sheets B-48 and	STRUCTURES
	Created By	Created On	Version	Delegate For
-	Thomas Andres	10/11/2016	Ĭ	a a a di a tana , in manananana ito bana di bina ana kata kana di kata ana kata kana di kata kata kata kata kat
			PT tendon anchor as the con	npression zone drags the end web diagonal and pylon (Sheet B-48)
	behind it. This was an earlier com	10/28/2016	1	
	Reinforcement has been added to	the Type III and Type IV Deck Diap	brages to address this come	nent
-	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (			
0	Status	Current Holder	Reference	Categories
3	RESPONSE ACCEPTED		Sheets B-53 (Section	
•			A), B-55 (Section A-A	
	Created By	Created On	Version	Delegate For
5	Thomas Andres	10/11/2016	1	ManaArrow
		nger to be able to resist radial force	in the curved zones of the tr	endons
	Extend the de down stinup legs lo	10/28/2016	1	
	The tie down stirrup legs have bee		I	
-	Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (		1	
		Current Holder	Reference	Cotomorino
0	Status	Current Holder	Reference	Categories
4	DESDONSE ACCEDTED		Chaota D ES.	STRUCTURES
	RESPONSE ACCEPTED	Created On	Sheets B-56:	STRUCTURES
ī	Created By	Created On 10/11/2016	Version	STRUCTURES Delegate For
ī	Created By Thomas Andres	10/11/2016	Version 1	Delegate For
ī	Created By Thomas Andres	10/11/2016	Version 1	
7	Thomas Andres Thomas Andres There is concern of potential crack	10/11/2016	Version 1	Delegate For
ī	There is concern of potential crack earlier comment.	10/11/2016 ting due to tension behind the inner	Version 1 (phase 1 C5) PT tendon anch 1	Delegate For
	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016	Version 1 (phase 1 C5) PT tendon anch 1	Delegate For
	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016	Version 1 (phase 1 C5) PT tendon anch 1 address this comment.	Delegate For
T T	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016	Version 1 (phase 1 C5) PT tendon anch 1 address this comment.	Delegate For
T T	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres Response Accepted & Comment C	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed	Version 1 (phase 1 C5) PT tendon anch 1 address this comment. 1	Delegate For
10 5	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres Response Accepted & Comment C Status	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed	Version 1 (phase 1 C5) PT tendon anch 1 address this comment. 1 <b>Reference</b> Sheets B-60, and B-	Delegate For hor as the compression zone drags the pylon behind it. This was an Categories
1 1 1 1 1	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed Current Holder	Version 1 (phase 1 C5) PT tendon anch 1 address this comment. 1 Reference Sheets B-60, and B- 108, Stage 3:	Delegate For hor as the compression zone drags the pylon behind it. This was an Categories STRUCTURES
lo 5	Created By Chomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Chomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Created By Chomas Andres The support conditions at the near ends through the end diaphragm a	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed Current Holder Created On 10/11/2016 site casting yard and during SPMT at the element lifts off formwork during tion during SPMT transport. Also th	Version 1 (phase 1 C5) PT tendon and 1 address this comment. 1 <b>Reference</b> Sheets B-60, and B- 108, Stage 3: Version 1 transport is critical (P.T. stress to longitudinal/transverse stress	Delegate For hor as the compression zone drags the pylon behind it. This was an Categories STRUCTURES Delegate For
lo 5	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Created By Thomas Andres The support conditions at the near ends through the end diaphragm a (specify distance) of the cross sect	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed Current Holder Created On 10/11/2016 site casting yard and during SPMT at the element lifts off formwork during tion during SPMT transport. Also th	Version 1 (phase 1 C5) PT tendon and 1 address this comment. 1 <b>Reference</b> Sheets B-60, and B- 108, Stage 3: Version 1 transport is critical (P.T. stress to longitudinal/transverse stress	Delegate For hor as the compression zone drags the pylon behind it. This was an Categories STRUCTURES Delegate For essing through SPMT transport). The support needs to be provided at the assing in the near site casting vard. Support needs to stay in the middle
lo 5	Created By Thomas Andres There is concern of potential crack earlier comment. Reinforcement has been added to Thomas Andres Response Accepted & Comment C Status RESPONSE ACCEPTED Created By Thomas Andres The support conditions at the near ends through the end diaphragm a (specify distance) of the cross sect both sheets consistent with the cal	10/11/2016 king due to tension behind the inner 10/28/2016 the Type III Canopy Diaphragm to a 11/1/2016 Closed Current Holder Created On- 10/11/2016 r site casting yard and during SPMT t the element lifts off formwork durir tion during SPMT transport. Also the locality of the second	Version 1 (phase 1 C5) PT tendon and 1 address this comment. 1 <b>Reference</b> Sheets B-60, and B- 108, Stage 3: Version 1 transport is critical (P.T. stress in glongitudinal/transverse stress e main span element needs to 1	Delegate For hor as the compression zone drags the pylon behind it. This was an Categories STRUCTURES Delegate For essing through SPMT transport). The support needs to be provided at the assing in the near site casting vard. Support needs to stay in the middle

	Statu	Current Holder	Reference	Categories
6	RE: JE ACCEPTED		Sheets B-65, B-6 B-67:	STRUCTURES
C	Created By	Created On	Version	Delegate For
Ĩ	Thomas Andres	10/11/2016	1	and a shirth the second whit are denoted as an all all was by the sum
	Check the canopy design where the	he longitudinal tendons are deviated i	in plan view resulted in tran	sverse bending of the canopy, due to PT eccentricity.
		10/28/2016	1	
		longitudinal tendons has been taking	into account in the design of	f the canopy. Additional calculations will be provided with the Final
T	submittal. Thomas Andres	11/1/2016	1	
	Response Accepted & Comment (		1	
0	Status	Current Holder	Deference	
7	RESPONSE ACCEPTED	Current Holder	Sheet B-69:	
				STRUCTURES
52	Created By	Created On	Version	Delegate For
	Thomas Andres	10/11/2016	T And Deples Archar	
	deck and canopy. Note: Type 3 is	for segmental match-cast joint. 10/28/2016	end). Replace Anchorage I	Protection Type 3 to Type 2 for longitudinal multi-strand tendons in the
Т	Type 3 Anchorage Protection has Thomas Andres	been revised to Type 2 Anchorage P 11/1/2016		J. Zinc Clad III HS) for additional protection.
	Response Accepted & Comment (	Closed		
	Status	Current Holder	Reference	Categories
0	O MINO			
	RESPONSE ACCEPTED		Sheet B-70:	STRUCTURES
3		Created On	Sheet B-70: Version	STRUCTURES Delegate For
8	RESPONSE ACCEPTED Created By Thomas Andres	10/11/2016		
	RESPONSE ACCEPTED Created By Thomas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fi movement for jacking? Suggest th c. How is inner surface of pipe pro d. We have long-term concerns w the outer pipes. Sheet B-70: The s	10/11/2016 astened to the pylon. Show detail. I hat head of bolt be oriented outward w otected against corrosion? ifth cracking of the pipe at the welds. stay pipe numbering system here is d ars the pipe sagging and truss deform	Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener ifferent from sheet B-109.	Delegate For
8	RESPONSE ACCEPTED Created By Thomas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fin movement for jacking? Suggest th c. How is inner surface of pipe prod d. We have long-term concerns withe outer pipes. Sheet B-70: The se e. Pipe support geometry: it appear f. Specify the 16" stay pipe ASTM a. The camber diagrams will be pi	10/11/2016 astened to the pylon. Show detail. I hat head of bolt be oriented outward to betected against corrosion? ifth cracking of the pipe at the welds. stay pipe numbering system here is d ars the pipe sagging and truss deform spec. 11/11/2016 rovided with the erection manual.	Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener ifferent from sheet B-109. nation have not been include 1	Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for ad in the Angle Top and Angle Bottom of the steel pipe.
ō	RESPONSE ACCEPTED Created By Thomas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are fin movement for jacking? Suggest th c. How is inner surface of pipe prod d. We have long-term concerns withe outer pipes. Sheet B-70: The side e. Pipe support geometry: it appead f. Specify the 16" stay pipe ASTM a. The camber diagrams will be pipe. b. Additional details will be provided at pipe.	10/11/2016 astened to the pylon. Show detail. If hat head of bolt be oriented outward we bected against corrosion? with cracking of the pipe at the welds. stay pipe numbering system here is d ars the pipe sagging and truss deform spec. 11/11/2016 rovided with the erection manual. ed to show how the bolts are fastene- the bottom of each pipe in order to define the bottom of each pipe in order to define	Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener ifferent from sheet B-109. nation have not been include 1 d to the pylon on the final su rain any water due to conde	Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for ad in the Angle Top and Angle Bottom of the steel pipe.
8 7 T	RESPONSE ACCEPTED Created By Thomas Andres a. Provide pipe camber diagrams. b. It is unclear how the bolts are find movement for jacking? Suggest th c. How is inner surface of pipe pro- d. We have long-term concerns withe outer pipes. Sheet B-70: The side is a second	10/11/2016	Version 1 f the nut is oriented outward with imbedded coupler inner Consider an inner stiffener ifferent from sheet B-109. nation have not been include 1 d to the pylon on the final su rain any water due to conder when compared to the co re not based upon needed for rs and the access holes. Inside by the Designer. The stay objee shape. The sagging of	Delegate For I how is simply removing the nut sufficient for allowing the necessary shank, nut and plate washer. with a weld access hole to strengthen pipe/plate connection especially for ad in the Angle Top and Angle Bottom of the steel pipe. Jubmittal. Insation. This will reduce the possibility of corrosion at the bottom of the ross section area. The cross section areas were selected to provide orce resistance (strength). While the Department's suggested detail would stallation of the stiffeners and the repair of the access holes would create pipe numbering on Sheet B-109 has been revised. the pipe will be eliminated with the camber of the pipe and the effect of th

10	Statu		Current Holder	Reference	Categories
9	RES	SE ACCEPTED		Sheet B-103:	STRUCTURES
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Ĩ	Thomas Andr	res	10/11/2016	1	
	b. Detail	1: The side and top elas	heet B-70 for unbolting pipe supports. stomeric cover for the steel plates, sho sions between the top surface of the e 10/28/2016	w 1/8" thick. FDOT Standard and bent and underneath of the 1	Index No.20510 required ¼" thick. In elevation view End Bent 1 and e superstructure.
7		side elastomeric cover fo	een added to Sheet B-103. r the steel plates has been revised to 11/1/2016	1/4". The top elastomeric cove	er provided for the steel plates is 3/8". The gap dimensions have been
		se Accepted & Comment		•	
0	Status		Current Holder	Reference	Categories
5		INSE ACCEPTED		Sheet B-104, Stage 4, Step 3:	STRUCTURES
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Ť	homas Andr	res	10/11/2016	1	1927 de la internet.
	b. Camb c. Local a. FIGG force bet	has evaluated the back tween the back span can	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr	1 nat the falsework is a very flexi	ude: ble system in order to get an upper bound value for the design tensio esist construction loads. Please refer to pg. 477-478 of Pylon
Т	b. Camb c. Local force bet Substruc b. The n addition,	er (rotational) stresses d I stresses (shear lag) at in C has evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr lations.	1 hat the falsework is a very flexi hection has been designed to r . According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tension esist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code.
Т	b. Camb c. Local force bet Substruc b. The r addition, c. Additi Thomas Andr	er (rotational) stresses d I stresses (shear lag) at in C has evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr lations. post-tensioning have been evaluated id compressive stresses due to the lor been provided between the interface o 11/1/2016	1 hat the falsework is a very flexi hection has been designed to r . According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tension esist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code.
	b. Camb c. Local force bet Substruc b. The r addition, c. Additi Thomas Andr	ber (rotational) stresses d I stresses (shear lag) at in G has evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b res	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr lations. post-tensioning have been evaluated id compressive stresses due to the lor been provided between the interface o 11/1/2016	1 hat the falsework is a very flexi hection has been designed to r . According to our model the n ngitudinal P.T. are within the al	ble system in order to get an upper bound value for the design tension esist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code.
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<b>o</b>	b. Camb c. Local a. FIGG force bet Substruc b. The r- addition, c. Additi Thomas Andre Respons Status	er (rotational) stresses d I stresses (shear lag) at in 6 has evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b res se Accepted & Comment	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr lations. post-tensioning have been evaluated d compressive stresses due to the lor been provided between the interface o 11/1/2016 Closed	1 hat the falsework is a very flexi nection has been designed to r . According to our model the n ngitudinal P.T. are within the al f the diaphragm and the pylon 1 <b>Reference</b>	ble system in order to get an upper bound value for the design tensic esist construction loads. Please refer to pg. 477-478 of Pylon maximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code.
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o 1	b. Camb c. Local a. FIGG force bet Substruc b. The r addition, c. Additi Thomas Andr Respons Status COMME Created By MARIA CARA	er (rotational) stresses d I stresses (shear lag) at in Chas evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b res se Accepted & Comment ENT AGREED WITH	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming th topy element and the pylon. The conr lations. post-tensioning have been evaluated d compressive stresses due to the lor been provided between the interface of 11/1/2016 Closed Current Holder Created On 10/12/2016	1 hat the falsework is a very flexi hection has been designed to r . According to our model the n igitudinal P.T. are within the al f the diaphragm and the pylon 1 <b>Reference</b> Structure Maintenance Version	ble system in order to get an upper bound value for the design tensic esist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code. Categories STRUCTURES
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0 1 N	b. Camb c. Local a. FIGG force bet Substruc b. The r- addition, c. Additi Thomas Andre Respons <b>Status</b> COMME <b>reated By</b> MARIA CARA No Comm	er (rotational) stresses d I stresses (shear lag) at in Chas evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b res se Accepted & Comment ENT AGREED WITH ASA ment for the 90% Supers	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming the hopy element and the pylon. The conrection ations. post-tensioning have been evaluated to compressive stresses due to the lor been provided between the interface of 11/1/2016 Closed Current Holder Created On 10/12/2016 structure Design	1 hat the falsework is a very flexi tection has been designed to r According to our model the n igitudinal P.T. are within the al f the diaphragm and the pylon 1 <b>Reference</b> Structure Maintenance Version 1	ble system in order to get an upper bound value for the design tensic esist construction loads. Please refer to pg. 477-478 of Pylon naximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code. Categories STRUCTURES
lo 1	b. Camb c. Local a. FIGG force bet Substruc b. The r addition, c. Additi 'homas Andr Respons <b>Status</b> COMME <b>Status</b> No Commer <b>Status</b>	er (rotational) stresses d I stresses (shear lag) at in Chas evaluated the back tween the back span can cture Final Design Calcul rotational stresses due to , the maximum tensile an ional reinforcement has b res se Accepted & Comment ENT AGREED WITH ASA ment for the 90% Supers	lue to longitudinal P.T. nner anchor as the compression zone 10/28/2016 span to pylon connection assuming the topy element and the pylon. The conrection post-tensioning have been evaluated d compressive stresses due to the lor post-tensioning have been evaluated d compressive stresses due to the lor post-tensioning have been evaluated d compressive stresses due to the lor post-tensioning have been evaluated d compressive stresses due to the lor post-tensioning have been evaluated d compressive stresses due to the lor 11/1/2016 Closed Current Holder Created On 10/12/2016 structure Design 10/28/2016	1         nat the falsework is a very flexi         nection has been designed to r         According to our model the n         ngitudinal P.T. are within the al         f the diaphragm and the pylon         1         Reference         Structure Maintenance         Version         1         1	ble system in order to get an upper bound value for the design tension esist construction loads. Please refer to pg. 477-478 of Pylon maximum camber rotation at the pylon is less than 0.0008 rad. In lowable limits by the AASHTO code. Categories STRUCTURES Delegate For
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Superstructure Longitudinal Model (Larsa Model): The effect of the longitudinal post-tensioning on the main deck and the canopy has been correctly incorporated into the structural model. However the effect of the PT bars on the truss diagonal members has not been considered. Since the truss connections are rigid connections, a portion of the PT force will be transferred to adjacent elements as axial forces, moments and shears, i.e., the PT will not be 100% effective and will also be subject to losses due to creep and shrinkage. Please address.

10/28/2016

The effect of the PT bars has been considered in the finite element model (LUSAS Bridge plus) of the main span. PT bars are defined in the truss diagonal members. The stressing sequence of the PT bars has been checked with the finite element model to ensure the structure is within the allowable limits as the bars in each diagonal are stressed. 1

1

10/31/2016

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6	RE SE ACCEPTED		Superstructure D Calculations	STRUCTURES	
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		10/17/2016	1	anna - Million shirisadhiradhaanaa ar ay	
	(On behalf of Saul Perez) Section V, Longitudinal Design: th term effects. Note, however, that	he main deck and the canopy stresse the calculation does not include a ch 10/28/2016	s have been checked for differ eck of these elements under s 1	ent load combinations for trength conditions. Please	service III at the end of construction and long e provide.
	Ultimate moment checks for the d	eck and canopy will be provided with	the Final submittal.		
		10/31/2016	1		
	Response Accepted & Comment	Closed			
0	Status	Current Holder	Reference	Categories	Real transfer of the second
,	RESPONSE ACCEPTED		Superstructure Design Calculations	STRUCTURES	
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t. de		10/17/2016	1	A AND	
	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load	or a global stability analysis should b	t) and the section appears to b e performed. The same LARS ds).	A model used for the long	n a lateral-torsional buckling mode is jitudinal analysis can be utilized for this
	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load b) Same as a) but live loads acting The lateral stability of the canopy the factored load levels, the increm	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016	t) and the section appears to b e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both	itudinal analysis can be utilized for this n full and one sided live load cases. Even at
	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load b) Same as a) but live loads acting The lateral stability of the canopy the factored load levels, the increment (On behalf of Saul Perez)	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016 (top chord) has been verified for eac nental deflections (large displacement 11/16/2016	t) and the section appears to be e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co nt theory LRFD 4.5.3.2) betwee 1	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both en the last series of load s	itudinal analysis can be utilized for this n full and one sided live load cases. Even at
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	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load a b) Same as a) but live loads acting The lateral stability of the canopy the factored load levels, the increment (On behalf of Saul Perez) During the next submittal the additional stability of the additional stability of the factored load levels and levels are submitted by the stability of the additional stability of the stab	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016 (top chord) has been verified for eac nental deflections (large displacemen 11/16/2016 tional calculations performed as resu	t) and the section appears to be e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co at theory LRFD 4.5.3.2) betwee 1 It of these comments will be re	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both en the last series of load s viewed. Categories	itudinal analysis can be utilized for this n full and one sided live load cases. Even at
В	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load a b) Same as a) but live loads acting The lateral stability of the canopy of the factored load levels, the increment (On behalf of Saul Perez) During the next submittal the addit Status	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016 (top chord) has been verified for eac nental deflections (large displacemen 11/16/2016 tional calculations performed as resu	t) and the section appears to be e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co to the theory LRFD 4.5.3.2) between 1 It of these comments will be re <b>Reference</b> Superstructure Design	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both en the last series of load s viewed. Categories STRUCTURES	itudinal analysis can be utilized for this n full and one sided live load cases. Even at
В	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load is b) Same as a) but live loads acting The lateral stability of the canopy is the factored load levels, the increment (On behalf of Saul Perez) During the next submittal the additi Status RESPONSE ACCEPTED	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016 (top chord) has been verified for eac mental deflections (large displacemen 11/16/2016 tional calculations performed as resu <b>Current Holder</b>	t) and the section appears to be e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co to the the transformed to the structure 1 lt of these comments will be re <b>Reference</b> Superstructure Design Calculations	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both en the last series of load s viewed. Categories STRUCTURES	n full and one sided live load cases. Even at the steps remain linear.
lo 8 Cre	expected. To capture this behavior purpose. Conditions to be investig a) Permanent loads and live load is b) Same as a) but live loads acting The lateral stability of the canopy is the factored load levels, the increr (On behalf of Saul Perez) During the next submittal the addit <b>Status</b> RESPONSE ACCEPTED ated By (On behalf of Saul Perez) Section V, Longitudinal Design, Pa effective. As indicated in comment shortening, creep and shrinkage. diagonal members in the global load	or a global stability analysis should b gated are: acting in the main span (factored loa g on one side of the span, i.e., worst 11/11/2016 (top chord) has been verified for eac nental deflections (large displacemen 11/16/2016 tional calculations performed as resu Current Holder Created On 10/17/2016 age 840, design of diagonal member t 1 due to the rigid joints, there will b The calculation shown can be taken ngitudinal model. Please verify. 10/28/2016	t) and the section appears to be e performed. The same LARS ds). torsional effect for the structure 1 n of the LRFD strength load co at theory LRFD 4.5.3.2) between 1 It of these comments will be re <b>Reference</b> Superstructure Design Calculations <b>Version</b> 1 s for service conditions: Note t e a transfer of forces to contig as a preliminary design and th 1	e relatively weak in torsion A model used for the long e (factored loads). mbinations, including both en the last series of load s viewed. <b>Categories</b> STRUCTURES <b>Delegate For</b> hat the assumption is that uous elements and there view should be checked by	n full and one sided live load cases. Even at the steps remain linear.

Response Accepted & Comment Closed

\* \*

)	Stat		Current Holder	Reference	Categories
1" "	RE	SE ACCEPTED		Superstructure L Calculations	STRUCTURES
Cre	eated By		Created On	Version	Delegate For
Sec	Li , mer det «.		10/17/2016	1	and and a second sec
	Section \	alf of Saul Perez) /I, transverse Design, F dditionally, drawing B-69	Page 1120: The PT loss ratio used is 0 9 shows a force of 140k or approximate 10/28/2016	67 based on LARSA results a bly 60% of GUT at the live end 1	t the eoc. This loss ratio appears high; the long term value should be after anchor set. Please clarify and/or reevaluate as needed.
	The table	e on Sheet B-69 has be	en revised for consistency with the cal	culations.	
			10/31/2016	1	
	Respons	e Accepted & Commen	t Closed		
)	Status		Current Holder	Reference	Categories
	RESPOR	NSE ACCEPTED		Superstructure Design Calculations	STRUCTURES
-	eated By		Created On	Version	Delegate For
Gre					
Gre	(On beha Frequenc informatio transvers longitudir	on for the joints given in se frequency of vibration nal axes (torsion). This	n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ	nt restrained and rotations abo that the flexural vibrations (ver ency of vibrations given in Pa	tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to
Gre	(On beha Frequence informative transverse longitudir the longit the bridge direction compared Pedestria applied o	cy Model, Page 1196: It on for the joints given in se frequency of vibratior nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and hori: an Bridges Section 6- Vi only on one side of the b	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con ro for all reported frequency modes. A zontal bending stiffness); torsional vibr	been constrained to move onl nt restrained and rotations about that the flexural vibrations (ver ency of vibrations given in Par c) corresponds to the vertical vi- strained to vibrate only in the s commented in previous revi- ation should also be evaluated. Th needs to be investigated. Th hich most probably will activat	but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to <i>i</i> bration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as d. Although this mode is not indicated in the AASHTO Specifications for e reason being that a common loading case is to have the live load te this vibration mode.
Gre	(On beha Frequenci informatio transvers longitudir the longit the bridge direction compared Pedestria applied o Please re The origin essentiall and latera contract o	cy Model, Page 1196: It on for the joints given in se frequency of vibration nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and horiz an Bridges Section 6- V inly on one side of the b sevaluate the frequencies nal restraint condition or ly uncoupled. To addres al frequencies of the de does not specify any tor	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con- tro for all reported frequency modes. A zontal bending stiffness); torsional vibr fibrations, this particular vibration mode oridge (traffic mostly in one direction) w es using the 3-D model allowing the bri- 11/11/2016 if the model was done to simplify identi ss this comment, we have re-run the fir isck meet the requirements of the contrar rsional frequency limits. 11/16/2016	been constrained to move on In restrained and rotations abo- that the flexural vibrations (ver- very of vibrations given in Pa- corresponds to the vertical v- strained to vibrate only in the scommented in previous revi- ation should also be evaluated needs to be investigated. The hich most probably will activative dge to freely vibrate in any dir 1 fying the frequency of the desi- equency evaluations, with the	but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to <i>i</i> bration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as d. Although this mode is not indicated in the AASHTO Specifications for e reason being that a common loading case is to have the live load te this vibration mode.
Gre	(On beha Frequenci informatio transvers longitudir the longit the bridge direction compared Pedestria applied o Please re The origin essentiall and latera contract o	cy Model, Page 1196: It on for the joints given in se frequency of vibration nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and horiz an Bridges Section 6- V inly on one side of the b sevaluate the frequencies nal restraint condition or ly uncoupled. To addres al frequencies of the de	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con- tro for all reported frequency modes. A zontal bending stiffness); torsional vibr fibrations, this particular vibration mode oridge (traffic mostly in one direction) w es using the 3-D model allowing the bri- 11/11/2016 if the model was done to simplify identi ss this comment, we have re-run the fir isck meet the requirements of the contrar rsional frequency limits. 11/16/2016	been constrained to move onl nt restrained and rotations about that the flexural vibrations (ver ency of vibrations given in Par c) corresponds to the vertical strained to vibrate only in the s commented in previous revi- ation should also be evaluated needs to be investigated. The hich most probably will activat dge to freely vibrate in any dir 1 fying the frequency of the desi equency evaluations, with the ict. The analysis includes a gro	but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to <i>i</i> /bration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as d. Although this mode is not indicated in the AASHTO Specifications for e reason being that a common loading case is to have the live load te this vibration mode.
	(On beha Frequenci informatio transvers longitudir the longit the bridge direction compared Pedestria applied o Please re The origin essentiall and latera contract o	cy Model, Page 1196: It on for the joints given in se frequency of vibration nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and horiz an Bridges Section 6- V inly on one side of the b sevaluate the frequencies nal restraint condition or ly uncoupled. To addres al frequencies of the de does not specify any tor	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con- tro for all reported frequency modes. A zontal bending stiffness); torsional vibr fibrations, this particular vibration mode oridge (traffic mostly in one direction) w es using the 3-D model allowing the bri- 11/11/2016 if the model was done to simplify identi ss this comment, we have re-run the fir isck meet the requirements of the contrar rsional frequency limits. 11/16/2016	been constrained to move onl nt restrained and rotations about that the flexural vibrations (ver ency of vibrations given in Par c) corresponds to the vertical strained to vibrate only in the s commented in previous revi- ation should also be evaluated needs to be investigated. The hich most probably will activat dge to freely vibrate in any dir 1 fying the frequency of the desi equency evaluations, with the ict. The analysis includes a gro	but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to <i>i</i> /bration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as d. Although this mode is not indicated in the AASHTO Specifications for e reason being that a common loading case is to have the live load te this vibration mode.
Gre	(On beha Frequence informatic transverse longitudir the longit the bridge direction compared Pedestria applied o Please re The origin essentiall and latera contract o Response Status	cy Model, Page 1196: It on for the joints given in se frequency of vibration nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and horiz an Bridges Section 6- V inly on one side of the b sevaluate the frequencies nal restraint condition or ly uncoupled. To addres al frequencies of the de does not specify any tor	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ- oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con ero for all reported frequency modes. A zontal bending stiffness); torsional vibr librations, this particular vibration mode oridge (traffic mostly in one direction) w es using the 3-D model allowing the bri 11/11/2016 if the model was done to simplify identi ss this comment, we have re-run the fr ick meet the requirements of the contra rsional frequency limits. 11/16/2016 tt Closed	been constrained to move on nt restrained and rotations abo- that the flexural vibrations (ver- lency of vibrations given in Par- c) corresponds to the vertical vi- strained to vibrate only in the scommented in previous revi- tation should also be evaluated. needs to be investigated. Th hich most probably will activate idge to freely vibrate in any dir 1 fying the frequency of the desi- equency evaluations, with the ict. The analysis includes a group 1	but the x-z axes restrained). In this regard, the model will not provide the tical) may be strongly coupled with the rotational vibration about the ges 1219 & 1220. The reported first frequency of 2Hz corresponds to vibration. Notice that, most probably, this frequency will be smaller once vertical plane can be seen from the mass participation factor in the Y sions, due to the relatively low torsional stiffness of this bridge (as 3. Although this mode is not indicated in the AASHTO Specifications for e reason being that a common loading case is to have the live load te this vibration mode. The vertical mode shape, knowing that vertical and lateral behaviors are model free to vibrate in any direction, and confirmed that the vertical eat number of mode shapes, including torsional ones. However, the
	(On beha Frequence informatic transverse longitudir the longit the bridge direction compared Pedestria applied o Please re The origin essentiall and latera contract o Response Status	cy Model, Page 1196: It on for the joints given in se frequency of vibratior nal axes (torsion). This tudinal vibration of the b e is allowed to vibrate in which is reported as ze d to its vertical and hori: an Bridges Section 6- Vi inly on one side of the b sevaluate the frequencies nal restraint condition or ly uncoupled. To addres al frequencies of the de does not specify any tor e Accepted & Comment	t appears that the 3D-Larsa model has n Pages 1201 thru 1208 (Y displaceme n of the structure and will not consider can be seen in the output for the frequ- oridge, while the second mode (3.07 Hz n 3D. The fact that the bridge was con ero for all reported frequency modes. A zontal bending stiffness); torsional vibr librations, this particular vibration mode oridge (traffic mostly in one direction) w es using the 3-D model allowing the bri 11/11/2016 if the model was done to simplify identi ss this comment, we have re-run the fr ick meet the requirements of the contra rsional frequency limits. 11/16/2016 tt Closed	been constrained to move on Int restrained and rotations abo- that the flexural vibrations (ver- lency of vibrations given in Par- c) corresponds to the vertical vi- strained to vibrate only in the scommented in previous revi- tation should also be evaluated meeds to be investigated. The hich most probably will activated idge to freely vibrate in any dir 1 fying the frequency of the desi- equency evaluations, with the act. The analysis includes a group 1 <b>Reference</b>	Categories

(On behalf of Saul Perez) Please verify that there is no conflict between the post-tensioning bar duct and the section reinforcement as shown in Sheet B-40. The 4" or 4.5" distance between the PT bar centroid and the face of the element may not be sufficient when considering the concrete cover, the stirrups, the longitudinal rebar and the OD of the duct, especially at Section F-F in Sheet B-38(2.5"  $\Box$  PT bar). 10/28/2016 1

1

The location of the 2.5" diameter PT bars has been revised.

10/31/2016

No	Stat	Current Holder	Reference	Categories
2′	RE SE ACCEPTED		Sheet B-44	STRUCTURES
C	Created By	Created On	Version	Delegate For
		10/17/2016	1	· · · · · · · · · · · · · · · · · · ·
	(On behalf of Saul Perez) Section A-A: Please verify the lo violates the value given in this ta	cation of the tendon PI point. FDOT SDG- ble. Please revise or justify as applicable. 10/28/2016	-2016 has a list of mi 1	nimum tangent lengths in Table 1.11.4-2. The proposed tangent length
	Design was performed in accord	ance with FDOT SDG January 2015 editic	n (per RFP) which d	oes not specify minimum tangent lengths adjacent to anchorages.
		10/31/2016	1	
	Response Accepted & Comment	t Closed		
10	Status	Current Holder	Reference	Categories
3	RESPONSE ACCEPTED		Sheet B-64	STRUCTURES
C	reated By	Çreated Qn	Version	Delegate/For
1254	New (F) (COMPANY IN THE STATE OF T	10/17/2016	1	an Bull warman in the second
	(On behalf of Saul Perez) Section B-B is incomplete (the to	p deck surface and curb are not shown). 10/28/2016	1	
	The linework for Section B-B has	been completed.		
		10/31/2016	1	
	Response Accepted & Comment	Closed		
0	Status	Current Holder	Reference	Categories
4	RESPONSE ACCEPTED		Sheet B-65	STRUCTURES
C	reated By	Created On	Version	Delegate For
		10/17/2016	1	ann an
	(On behalf of Saul Perez) The cross section at the canopy the blister. Please revise accordi	blister shows tendons in conflict with the b ngly.	lister. The plan view	shows that, at this location, the tendons have already been deviated to mi
		10/28/2016	1	
	The Cross Section at Canopy Bli			
		10/31/2016	1	
	Response Accepted & Comment	Closed		
lo	Status	Current Holder	Reference	Categories
5	RESPONSE ACCEPTED		Sheet B-66	STRUCTURES
C	reated By	Created On	Version	Delegate For
		10/17/2016	1	
	On behalf of Saul Perez) Typical canopy cross section sho	ws 4 tendons instead of the 3 tendons sho 10/28/2016	own in the partial plan	n view. Please revise.
	The Typical Cross Section has be			
		10/31/2016	1	

Submitte	port		$\cap$
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	10/17/2016	Response Due Date:	11/14/2016
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	10/17/2016
Create User Id:	PD601MI	Last Update:	10/17/2016
		Last Update User Id:	PD601MI

434688-1: Structural Pylon & Landing Structures Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 10/17/2016 Comments Due Date: 10/28/2016 Days Allowed for Review: 12 Review Meeting: 11/14/2016 10:00 AM to 11:00 AM @ To be schedule if required Field Meeting: Plans Format: Electronic Comments: External Project Manager: Erika N. Hango, P.E. E-mail: Phone #: Section: Phase: 100% Structural Pylon & landing structures Design Review Meeting will be schedule if needed Design Criteria is Florida Green Book, Bridge: FDOT Work Program Construction Budget: \$12,041,779 Production Date: DESIGN- BUILD

# Threads:

No	Status	Current Holder	Reference	Categories
12	RESPONSE ACCEPTED		Sheets B-24, Cross Section and Section A- A:	STRUCTURES
C	reated By	Created On	Version	Delegate For
	homas Andres	10/28/2016	1	
	The scale of the sections make it clarify intent.	difficult to understand detailer's intent.	Also showing all bars instead	d of first and last grouping of the bars would help reduce congestion and
		11/14/2016	1	
	New details were previously deve	loped using a bigger scale. The Contra	ctor has reviewed this drawi	ng and believes that these details are clear for construction.
Т	homas Andres	12/6/2016	1	

The details on Sheet B-24 violate the requirements of Structures Detailing Manual Sections 2.8 and 2.9.

No		Stati		Current Holder	Reference	Categories	
13		RES	EACCEPTED		Sheets B-24 and L	STRUCTURES	A
	Sec.	ated By		Greated On	Version	Delegate For	
	Tho	mas Andro		10/28/2016	1		
		The pour	ing sequence of the pylo	on column and CIP backspan and lim	its of the various construction jo	ints is unclear.	
				11/14/2016	1		
			ing sequence is shown on e details are clear for con		omitted with the 90% Superstrue	ture plans. The Contractor has reviewed these drawings	and believ
	Tho	mas Andre		12/6/2016	1		
		We still fe	eel that plans are not as	clear as they should be.			
No		Status		Current Holder	Reference	Categories	
14			NSE ACCEPTED		Sheet B-24, Section A- A and Detail 1:	STRUCTURES	
	Crea	ated By		Created On	Version	Delegate For	COLUMN
	100 L	mas Andro	es	10/28/2016	1	Carage and Angel A	and the second second
		Clarify or	the precast mainspan s	side of Section View that the Pylon B	ase / Precast Mainspan interfac	e is to be grouted.	
		2		11/14/2016	1	-	
		A note ha	as been added to clarify	the interface to be grouted.			
	Tho	mas Andre	-	12/6/2016	1		
			e Accepted & Comment	Closed			
lo	-	Status		Current Holder	Reference	Categories	
5			NSE ACCEPTED	ourient noidel	Sheets B-24, Detail1,	STRUCTURES	
0		RESPO	NSE ACCEPTED		and Sheet B-25, Section E	SINGUIDALO	
	Crea	ated By		Created On	Version	Delegate For	Ale Harden
	Tho	mas Andro	es	10/28/2016	1		
					ble the pipe either-side of pour?	The structural plans need to be detailed accordingly and	sections
		need to a	accommodate the pipe jo	oints. 11/14/2016	1		
		Voe this	is the intent. The concr		ed to accommodate the PVC on	upling (<5" radius). Additional details are provided on the	
			ucture plans.				
	Tho	mas Andre		12/6/2016	1		
		Respons	e Accepted & Comment	Closed			
lo	-	Status		Current Holder	Reference	Categories	2
6		RESPO	NSE ACCEPTED		Sheet B-25:	STRUCTURES	
	Crea	ated By		Created On	Version	Delegate For	
	Tho	mas Andre	es	10/28/2016	1		
		Include a	Note 8 which states that	t the annulus between the 11P06 ba	rs and the 4" I.D. reinforcement	sleeve is to be grouted prior to concreting.	
				11/14/2016	1		
		The sugg	jested note has been ad	ded.			
	Thor	mas Andre		12/6/2016	1		
			e Accepted & Comment	Closed			
			·				

0	Staty	Current Holder	Reference	Categories
7	* RES JE ACCEPTED		Sheet B-26, Secti C:	STRUCTURES
C	reated By	Created On	Version	Delegate For
Ť	homas Andres	10/28/2016	1	e en inderna en tradicionaria della sent
	Show the 11P06 bars.			
		11/14/2016	1	
	The 11P06 bars are shown on Sh	neet B-26 as hollow circles. The 11P	06 bars are cast with the inte	ermediate pylon and splice with the 11P01 bars in the upper pylon.
Т	homas Andres	12/6/2016	1	
	Okay. Call-out the IIP06 hollow t	pars in Section C-C.		
0	Status	Current Holder	Reference	Categories
)	RESPONSE ACCEPTED		339-341	STRUCTURES
		Created On	Version	Delegate For
C	reated By	Created Off	ACIOIOII	Delogatomot
C	Calculations Pylon Substructure I The designer has used an in-hou	10/28/2016 Design: se program for designing the columns	1 s for biaxial flexo-compressio	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical
C	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva	10/28/2016 Design: se program for designing the columns t). The reviewer performed an indepe tion that the PT bar was replaced by tive side. I.e., when using the true st	1 s for biaxial flexo-compressio endent calculation using the p an equivalent mild reinforcing ress-strain curve of the PT b	
Ċ	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva this value. It seems that in order design. The FIGG proprietary software ha excellent results. The reported C/	10/28/2016 Design: ise program for designing the columns d). The reviewer performed an indeper tion that the PT bar was replaced by a tive side. I.e., when using the true st to avoid being borderline in this desig 11/14/2016 as the capability of combining the mild	1 s for biaxial flexo-compression endent calculation using the p an equivalent mild reinforcing ress-strain curve of the PT b pn the PT bar diameter can b 1 d reinforcement with post-ten I combination III, which include	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical program SP column and a C/D ratio of 0.97 was obtained. Although the g bar with the same ultimate force as the PT bar (i.e.,Aeq = Asp x Fpu/Fy ar, the force on these bars will approach Asp x Fpu but will be smaller that be bumped up to the next PT bar size. Please take a second look at this insioning bars. FIGG's software has been used in many projects with
C	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva this value. It seems that in order design. The FIGG proprietary software ha excellent results. The reported C/	10/28/2016 Design: ise program for designing the columns d). The reviewer performed an indepe tion that the PT bar was replaced by a tive side. I.e., when using the true sti to avoid being borderline in this desig 11/14/2016 as the capability of combining the mild (D ratio of 1.05 is for the strength load ylon design meets the code requirement	1 s for biaxial flexo-compression endent calculation using the p an equivalent mild reinforcing ress-strain curve of the PT b pn the PT bar diameter can b 1 d reinforcement with post-ten I combination III, which include	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical program SP column and a C/D ratio of 0.97 was obtained. Although the g bar with the same ultimate force as the PT bar (i.e.,Aeq = Asp x Fpu/Fy ar, the force on these bars will approach Asp x Fpu but will be smaller that be bumped up to the next PT bar size. Please take a second look at this
	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva this value. It seems that in order design. The FIGG proprietary software ha excellent results. The reported C/ the upper pylon. Therefore, the pr	10/28/2016 Design: ise program for designing the columns d). The reviewer performed an indepe tion that the PT bar was replaced by a tive side. I.e., when using the true sti to avoid being borderline in this desig 11/14/2016 as the capability of combining the mild (D ratio of 1.05 is for the strength load ylon design meets the code requirement	1 s for biaxial flexo-compression endent calculation using the p an equivalent mild reinforcing ress-strain curve of the PT b pn the PT bar diameter can b 1 d reinforcement with post-ten I combination III, which include	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical program SP column and a C/D ratio of 0.97 was obtained. Although the g bar with the same ultimate force as the PT bar (i.e.,Aeq = Asp x Fpu/Fy ar, the force on these bars will approach Asp x Fpu but will be smaller that be bumped up to the next PT bar size. Please take a second look at this insioning bars. FIGG's software has been used in many projects with
0	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva this value. It seems that in order design. The FIGG proprietary software ha excellent results. The reported C/ the upper pylon. Therefore, the pr No further comment	10/28/2016 Design: ise program for designing the columns it). The reviewer performed an indepe- tion that the PT bar was replaced by a tive side. I.e., when using the true str to avoid being borderline in this design 11/14/2016 as the capability of combining the mild (D ratio of 1.05 is for the strength load ylon design meets the code requirement 1/9/2017	1 s for biaxial flexo-compression an equivalent mild reinforcing ress-strain curve of the PT b gn the PT bar diameter can b 1 d reinforcement with post-ten l combination III, which inclue ents. 1	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical program SP column and a C/D ratio of 0.97 was obtained. Although the g bar with the same ultimate force as the PT bar (i.e.,Aeq = Asp x Fpu/Fy ar, the force on these bars will approach Asp x Fpu but will be smaller that be bumped up to the next PT bar size. Please take a second look at this insioning bars. FIGG's software has been used in many projects with des 150 mph wind speed with an equivalent design pressure of 91 psf on
0	Calculations Pylon Substructure I The designer has used an in-hou section (a C/D of 1.05 is obtained analysis performed has the limita the results seems to be conserva this value. It seems that in order design. The FIGG proprietary software ha excellent results. The reported C/ the upper pylon. Therefore, the py No further comment Status	10/28/2016 Design: ise program for designing the columns it). The reviewer performed an indepe- tion that the PT bar was replaced by a tive side. I.e., when using the true str to avoid being borderline in this design 11/14/2016 as the capability of combining the mild (D ratio of 1.05 is for the strength load ylon design meets the code requirement 1/9/2017	1 s for biaxial flexo-compression an equivalent mild reinforcing ress-strain curve of the PT b on the PT bar diameter can b 1 d reinforcement with post-ten I combination III, which include ents. 1 <b>Reference</b>	on. The section at Upper Pylon Base - Top of Lower Pylon is the critical program SP column and a C/D ratio of 0.97 was obtained. Although the g bar with the same ultimate force as the PT bar (i.e.,Aeq = Asp x Fpu/Fy ear, the force on these bars will approach Asp x Fpu but will be smaller that be bumped up to the next PT bar size. Please take a second look at this insioning bars. FIGG's software has been used in many projects with des 150 mph wind speed with an equivalent design pressure of 91 psf on <b>Categories</b>

The Main Span Truss end vertical post is housed within the pylon section. The calculation shows that this precast element has been assumed to act in conjunction with the cast in place portion of the pylon.

A) Sections B-B thru D-D shows that there are transverse rebars sticking out of the precast section and overlapping with the 5P02 bars. The reviewer has been unable to find the sizes and distribution of these rebars. Note that in the superstructure 90% submittal (see Sheet B-40, Section D-D) these bars are also not present. Please revise. B) In order to create a mechanical bonding between the precast vertical post and the CIP pylon, it is recommended that the surfaces of the precast portion embedded into the pylon should be roughened. 1

#### 11/14/2016

a.) Agree. The size and distribution of these bars have been added to the Final Superstructure plans.

b.) Agree. A note has been added to specify the surface to be roughened. 1

1/9/2017

No further comment

No		Staty -		Current Holder	Reference	-	Categories	5.1252
-21	•	RES	3E ACCEPTED		General		STRUCTURES	
	Crea	ted By	10 10 10 10 PM	Created On	Version	RAFIE	Delegate For	
				10/28/2016	1		an ann an Suidhean an Suidean Suidean Suidean	
		global sta submittal indicated	bility analysis of the s is from the point of vio above, then no chang	ts in the review of the 90% superstructure the tructure and the other is related to the freque ew of the reviewer not complete. If the desig ges to the substructure is needed. On the oth canopy for lateral displacements. In this hyp 11/21/2016	ency of vibration of iner shows that the hand there is	of the str ne structu the poss	ucture. The analysis presented ire "as is" complies with the sta ibility that the structure may ne	d for these items in the indicated bility and frequency requirements ted to be stiffen laterally, for example by

The lateral stability of the canopy (top chord) has been verified and the vertical and lateral frequencies of the deck meet the requirements of the contract. Therefore, no changes to the substructure are needed. Please see responses to Comments #27 & 30 on the 90% Superstructure submittal. 1/9/2017 1

Submitte Tep	ort		
Financial Project:	434688-1-58-01	Submital Type:	PLANS
Submittal Phase:	PHASE IV	Submital Staff Type:	CONSULTANT
Recieved Date:	2/14/2017	Response Due Date:	3/23/2017
Grace Period:	0	District:	SIXTH
Status:	CLOSED	Create Date:	2/14/2017
Create User Id:	PD601MI	Last Update:	6/13/2017
		Last Update User Id:	KNKSARA

434688-1: 100% Superstructure Design for FIU UNIVERSITY CITY PROSPERITY PROJ. ALONG SW 109 AVE & SR 90/SW 8 ST

Group: PRELIMINARY ENGINEERING Phase Review Type: LAP Project Status: Submitted Phase Initiation Date: 2/14/2017 Comments Due Date: 3/7/2017 Days Allowed for Review: 22 Review Meeting: 3/23/2017 10:00 AM to 11:00 AM @ To be schedule if required Plans Format: Electronic Comments: External Project Manager: Manuel Feliciano, P.E. E-mail: Phone #: Phase: 100% Superstructure Design Review Meeting will be schedule if needed Design Criteria is FDOT PPM Work Program Construction Budget: \$11,875,092 Production Date: DESIGN- BUILD

## Threads:

Inre	aus.			
No	Status	Current Holder	Reference	Categories
3	RESPONSE ACCEPTED		B-39, B-40, B-43 a 69:	and B- STRUCTURES
	eated By	Created On	Version	Delegate For
	iomas Andres	2/20/2017	1	
	Corrosion protection is not in complia	ance with Design Index 21802.		
	This comment requires a written resp	oonse. 3/30/2017	1	
Th	end anchors will be cast within the p corrosion protection as the exposure omas Andres	recast section with no block out. levels and the risk of corrosion a 4/3/2017	The dead end anchor will I	tion Type 9 per Standard Index No. 21802) as shown on Sheet B-69. Dead be coated with a galvanizing compound (e.g. Zinc Clad III HS) for additional c.
	Response Accepted & Comment Clo	osed		

12137077 #1270

1	Stat	-	Current Holder	Reference	Categories
	RESI	E ACCEPTED		B-39, B-40, and B-	STRUCTURES
Cre	ated By		Created On	Version	Delegate For
The	mas Andr	es	2/20/2017	1	
			pans (deck elevations and camber iditions and forming design, camber		e to require shop drawing for forming details including a step-by-step d on forming stiffness, etc.
	This corr	ment requires a written re	sponse. 3/30/2017	1	
		es e Accepted & Comment C	***	1 Defember	
0	Status		Current Holder	Reference	Categories
	RESPO	NSE ACCEPTED		B-38 and B-109 Stage 2, Step 2:	STRUCTURES
Cre	ated By	Manager of South	Created On	Version	Delegate For
	mas Andr	es	2/20/2017	1	N , Million Review References ALL ALL OF OPENING THE PROVIDENT - Index Provide Review Land Review Development

iii. There is a concern with cracking in adjacent members prior to longitudinal PT that are not PT'ed. See sketches below:

This comment requires a written response.

3/30/2017

a. Sheet B-109, Stage 2, Steps 1.A through 1.C give the casting sequence of the main span superstructure elements. Labels have also been added to the cross section to further clarify.

b.i. The diagonals are members with PT bars while the vertical members are reinforced concrete members. A note has been added to Sheet B-109, Stage 2 to further clarify.

1

1

b-ii. A more detailed stressing sequence has been provided on Sheet B-109 (Stage 2) for clarification. This sequence has been added to the RFC Submittal plan sheet. b-iii. The effect of the PT bars has been considered in the finite element model analysis (LUSAS Bridge plus) of the main span. PT bars are defined in the truss diagonal members. The stressing sequence of all PT has been checked with the finite element model to ensure the structure is within the allowable limits as each member is stressed.

Thomas Andres

4/3/2017

	Sta*	Current Holder	Reference	Categories
6	RES SE ACCEPTED		B-42, B-109 Stag Step 5:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	2/20/2017	1	ուսերիավեները անտարու չմանու լորտ տար ավել, հաղցեւություն անդանը է չեռնուս է ու ա
	post-tensioned. The temporary s i. Clarify what order to stress me	stress check needs to account for the	rigidity of the joints. Int members. Consider stress	members that are not yet stressed or adjacent members that are not ing members in the order from the most-vertical to the least-vertical. See sketches below:
	This comment requires a written	response. 3/30/2017	1	
	structure is within the allowable i ii. The stressing sequence of the	imits as the bars in each diagonal are e longitudinal PT has been checked to	stressed. ensure the structure is within	The stressing sequence of the PT bars has been checked to ensure the the allowable limits as each tendon is stressed.
	Thomas Andres	to Sheets B-109 (Stage 4) and B-110 4/3/2017	(Stage 5).	
	Response Accepted & Comment			
No	Status	Current Holder	Reference	Categories
7	RESPONSE ACCEPTED		B54 thru B-59:	STRUCTURES
	Created By	Created On	Version	Delegate For
	Thomas Andres	2/20/2017	1	
	There is a concern that without tr	ransverse PT of the canopy end diaph	aragms that cracking will devel	op during longitudinal PT stressing. The concern is that the web will get
	There is a concern that without tr dragged behind the compression This comment requires a written	zone. See sketch below.	aragms that cracking will devel	op during longitudinal PT stressing. The concern is that the web will get
	dragged behind the compression This comment requires a written The concrete tensile stress was provided at the face of the Type Thomas Andres	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017	1 addition, 6-#8 bars are provid	op during longitudinal PT stressing. The concern is that the web will get led at the face of the Type II canopy diaphragm and 3-#8 bars are
	dragged behind the compression This comment requires a written The concrete tensile stress was of provided at the face of the Type I	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed	1 n addition, 6-#8 bars are provid rut and tie analysis. 1	led at the face of the Type II canopy diaphragm and 3-#8 bars are
	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment Status	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017	1 addition, 6-#8 bars are provid	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories
No	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type Thomas Andres Response Accepted & Comment	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed	1 n addition, 6-#8 bars are provid rut and tie analysis. 1	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES
No	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment Status	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed Current Holder Created On	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B-	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories
No	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment Status RESPONSE ACCEPTED	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed <b>Current Holder</b>	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A:	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES
No	dragged behind the compression This comment requires a written The concrete tensile stress was of provided at the face of the Type I Thomas Andres Response Accepted & Comment Status RESPONSE ACCEPTED Created By Thomas Andres	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed Current Holder Created On	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A; Version 1	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES
No	dragged behind the compression This comment requires a written The concrete tensile stress was of provided at the face of the Type I Thomas Andres Response Accepted & Comment Status RESPONSE ACCEPTED Created By Thomas Andres	n zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 t Closed Current Holder Created On 2/20/2017 be long enough to resist the radial ter	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A; Version 1	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES
<b>No</b> 8	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment <b>Status</b> RESPONSE ACCEPTED <b>Created By</b> Thomas Andres The 5S03 bars do not appear to I This comment requires a written The 5S03 bars cannot be extend tie into the reinforcement mat at	a zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 closed Current Holder Created On 2/20/2017 be long enough to resist the radial ter response. 4/4/2017 led down per the provided sketch bec the bottom of the canopy with a 90 de	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A; B- 59, Section A-A; <b>Version</b> 1 ndon force. 1 ause the vertical member doe	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES
<b>No</b> 8	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment <b>Status</b> RESPONSE ACCEPTED <b>Created By</b> Thomas Andres The 5S03 bars do not appear to I This comment requires a written The 5S03 bars cannot be extend	a zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 closed Current Holder Created On 2/20/2017 be long enough to resist the radial ter response. 4/4/2017 led down per the provided sketch bec the bottom of the canopy with a 90 de	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A; B- 59, Section A-A; <b>Version</b> 1 ndon force. 1 ause the vertical member doe	led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES Delegate For
<b>No</b> 8	dragged behind the compression This comment requires a written The concrete tensile stress was o provided at the face of the Type I Thomas Andres Response Accepted & Comment <b>Status</b> RESPONSE ACCEPTED <b>Created By</b> Thomas Andres The 5S03 bars do not appear to I This comment requires a written The 5S03 bars cannot be extend tie into the reinforcement mat at a of the diaphragm for the RFC sub	a zone. See sketch below. response. 3/30/2017 checked and is less than 3sqrt(f'c). Ir III canopy diaphragm based on our st 4/3/2017 closed Current Holder Created On 2/20/2017 be long enough to resist the radial ter response. 4/4/2017 led down per the provided sketch bec the bottom of the canopy with a 90 de bmittal. 4/11/2017	1 n addition, 6-#8 bars are provid rut and tie analysis. 1 <b>Reference</b> B-57, Section A-A; B- 59, Section A-A; B- 59, Section A-A; <b>Version</b> 1 ndon force. 1 ause the vertical member doe	Led at the face of the Type II canopy diaphragm and 3-#8 bars are Categories STRUCTURES Delegate For

No	Stat		Current Holder	Reference	Categories
9	RES	EACCEPTED		B-70, Detail A:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas Andr		2/20/2017	1	
	Suggest	that 2 1⁄2" grout pad be ad	ided to facilitate in-up.		
	This corr	nment requires a written re	esponse. 3/30/2017	1	
	A 1" thic	k grout pad will be added	to the bearing plates at the end of th	e pipes near the pylon (Detai	I A).
	Thomas Andr		4/3/2017	1	
	Respons	se Accepted & Comment (	Closed		
No	Status		Current Holder	Reference	Categories
10	RESPO	NSE ACCEPTED		B-109:	STRUCTURES
	Created By		Created On	Version	Delegate For
	Thomas Andr	res	2/20/2017	1	المتعادية المعالية المعادية ا
	stresses	in the span (e.g. Stress	Fendons D1 thru D4, Stress C2 and 0	C3, Stress D5 and D6).	essing canopy tendons. Sequence stressing to reduce temporary temporary temporary hauling boundary conditions.
	This com	nment requires a written re	esponse. 3/30/2017	1	
	a The or	rection manual will provide		noo A proposed stressing of	equence has been provided on Sheet B-109. Stage 2 in the RFC
	submitta b. The de	I. esign calculations are con	sistent with the current location of th	e SPMT supports shown on S	Sheet B-109. The span was checked to ensure stresses are within the centerline of the transporters have been added to Sheet B-109, Stage 3.
	Thomas Andro	es	4/3/2017	1	
	Respons	e Accepted & Comment (	Closed		
No	Status		Current Holder	Reference	Categories
11	RESPO	NSE ACCEPTED		B-109 and B-110: Stage 4, Step 3, and Stage 5, St	STRUCTURES
	Created By	AR FORM IN URSE	Created On	Version	Delegate For
	Thomas Andre	es	2/20/2017	1	
		eps are not clear. It is not al details to clarify intent.	t clear from the Substructure Pylon d	etails the limits of intermediat	te pylon region to be cast and closure pour region to be cast. Add
	This com	nment requires a written re	esponse. 3/30/2017	1	
	deck, dia	igonals, and canopy. Proj igonals, and canopy will b	s in place, the pylon intermediate sec posed construction joint lines have b	een labeled on Sheet B-24A I	will be cast with construction joints that will connect with the back span to define the limits of the intermediate pylon region. Next, the back span nnect the deck and canopy sections.
	Respons	e Accepted & Comment C	Closed		
No	Status		Current Holder	Reference	Categories
27	RESPO	NSE ACCEPTED			STRUCTURES
	Created By		Created On	Version	Delegate For
			3/7/2017	1	
	On sheet	B-70, anchor bolts are sp	becified as ASTM F1554 Grade 104	with ASTM A563 nuts and wa	shers. Does this meet requirements of Specification (Section 460)?
			3/30/2017	1	
	The spec	ifications shown on B-70	are in accordance with FDOT Standa	ard Specifications Section 646	6-2.3.
	To clarify	, the specified grade on S	heet B-70 is Grade 105. 4/3/2017	1	
	Reenone	e Accepted & Comment C			
	response	e noocpied a comment o	10000		

	Star	Current Holder	Reference	
3	REL E ACCEPTED			STRUCTURES
C	reated By	Created On	Version	Delegate For
		3/7/2017	1	
	Is 2-1/2" thick grout on canopy b	lister on B-70 to be "non-shrinkage"?	Needs to meet any FDOT	Specification? Not specified.
		3/30/2017	1	
	The grout will not be "non-shrink been added to Sheet B-70.	age." The grout will be composed of a	a similar concrete mix as o	of the superstructure to match the appearance of the concrete. A note has
		4/21/2017	1	
		compressive strength tend to have hi		the area and the loads it will be subjected to (cracking may cause bolts to be more susceptible to cracking. Non-shrinkage grout will help avoid future
		5/23/2017	1	
	Non-shrinkage grout will be spec			
		5/30/2017	1	
*** = 7	No further comments. Thanks.			entral definition and and and and and and and and and an
<b>o</b> 9	Status RESPONSE ACCEPTED	Current Holder	Reference	Categories STRUCTURES
		Created On	Version	Delegate For
	reated By	3/7/2017	1	
	On sheet B-70 anchor bolts are areas where this may not be pos	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2 3/30/2017	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1	or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
S.	On sheet B-70 anchor bolts are areas where this may not be pos	3/7/2017 specified with a length of 30". Is the ir sible due to maximum thickness of 2	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1	or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
	On sheet B-70 anchor bolts are areas where this may not be pos	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2 3/30/2017	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1	or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
	On sheet B-70 anchor bolts are areas where this may not be pos	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2" 3/30/2017 " in total length. An embedment leng 4/3/2017	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1	or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
ht a	On sheet B-70 anchor bolts are a areas where this may not be pos The intent is for the bolt to be 30	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2" 3/30/2017 " in total length. An embedment leng 4/3/2017	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1	or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
0	On sheet B-70 anchor bolts are a areas where this may not be posed of the intent is for the bolt to be 30 Response Accepted & Comment	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2" 3/30/2017 " in total length. An embedment leng 4/3/2017 t Closed	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1 th of 21" was used in the o 1	" or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify.
аса 0	On sheet B-70 anchor bolts are a areas where this may not be posed of the bolt to be 30 Response Accepted & Comment Status COMMENT RESOLVED	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2" 3/30/2017 " in total length. An embedment leng 4/3/2017 t Closed	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1 th of 21" was used in the o 1 <b>Reference</b>	" or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify. calculations. Categories
аса 0	On sheet B-70 anchor bolts are a areas where this may not be posed of the intent is for the bolt to be 30 Response Accepted & Comment Status	3/7/2017 specified with a length of 30". Is the ir ssible due to maximum thickness of 2" 3/30/2017 " in total length. An embedment leng 4/3/2017 t Closed Current Holder	1 ntent for the bolts to be 30 7-7/8" on blister area. (see 1 th of 21" was used in the o 1 <b>Reference</b> Calculations	" or have an embedment of 30". If embedment of 30" is required, there may be Section A-A on B-71). Clarify. calculations. <b>Categories</b> STRUCTURES

A) The temporary hinges were introduced in order to reduce the bending moments in the vertical member furthest from the pylon.
 B) The vertical member located near the pylon does not require temporary hinges since the moment due to the canopy self-weight is significantly less than the moment of the other end.

C) The temporary hinges were considered in the structural model. See pages 524 and 525 of the Superstructure Calculation binder under the Slave/Master Activity sections. Alfredo Reyna 6/13/2017 1

We take no exception to their responses Regards, Saul Perez, P.E.

stability of puckling m oads show Please see lo Reyna We take n Regards, Saul Pere <b>Status</b>	f the canopy. Being the canop node may be of concern. The ws apparently not notably diffe e attached calculations related no exception to their responses	y unrestrained from moving la consultant responded that the erences. The approach is reas 5/23/2017 d to this comment. 6/13/2017	erally (except at the pylor response of the system L	STRUCTURES Delegate For cating that global stability analysis needed to be performed a support) and being the section relatively weak in torsion a using a linear analysis and using a large displacement theor ulations have not been included. Please provide. Categories STRUCTURES	a lateral-torsional
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stability of puckling m oads show Please see o Reyna Ne take n Regards, Saul Pere <b>Status</b> COMMEN	f the canopy. Being the canop node may be of concern. The ws apparently not notably diffe e attached calculations related no exception to their responses ez, P.E.	y unrestrained from moving la consultant responded that the rences. The approach is reas 5/23/2017 d to this comment. 6/13/2017 Current Holder	reponse of the system L onable; however, the calc 1 1 <b>Reference</b>	n support) and being the section relatively weak in torsion a Ising a linear analysis and using a large displacement theor ulations have not been included. Please provide.	a lateral-torsional
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Iz which o	correspond to lateral cumulativ ure, but these modes may corr es and instead has only consid	ve mass participation factor in espond to a lateral and rotatio lered the third mode of vibratic ral frequency requirements of and comfort issues and believ 5/23/2017	the lateral direction of 14. hal movement of the main n with f= 1.98 Hz and a ci AASHTO (f>1.5Hz). The so that a second look to the 1 percentage was not signi	9% and 36.1% respectively. The report does not show the span near the begin of the bridge. The designer has ignor imulative mass participation factor of 73.3 %. This third fre reviewer has concerns that the neglected first two lateral vi is possible effects of these neglected modes is warranted. ficant. The first two modes correspond to lateral movement	modal shape of red these equency has bee ibration modes t of the pylon. As
-	z which le structi equencie	z which correspond to lateral cumulativ e structure, but these modes may corr equencies and instead has only consid ported and compared against the later ay potentially generate local vibration	z which correspond to lateral cumulative mass participation factor in the structure, but these modes may correspond to a lateral and rotation equencies and instead has only considered the third mode of vibratio aported and compared against the lateral frequency requirements of A hay potentially generate local vibration and comfort issues and believe 5/23/2017 he first and second modes were ignored since the mass participation articipation and vertical frequencies of the device the first and second modes were ignored since the mass participation and vertical frequencies of the device the first and second modes were ignored since the mass participation articles of the device the frequencies of the device the first and second modes were ignored since the mass participation articles of the device the frequencies of the device the frequencies of the device the the second modes were ignored since the mass participation articles of the device the frequencies of the device the the second modes were ignored since the mass participation articles of the device the first and second modes were ignored since the mass participation articles of the device the first and second modes were ignored since the mass participation articles of the device the first and second modes were ignored since the mass participation articles of the device the first and second modes were ignored since the mass participation articles of the device the device the mass participation articles of the device	z which correspond to lateral cumulative mass participation factor in the lateral direction of 14. the structure, but these modes may correspond to a lateral and rotational movement of the main equencies and instead has only considered the third mode of vibration with f= 1.98 Hz and a cu- ported and compared against the lateral frequency requirements of AASHTO (f>1.5Hz). The hay potentially generate local vibration and comfort issues and believes that a second look to the 5/23/2017 1 the first and second modes were ignored since the mass participation percentage was not significant.	he first and second modes were ignored since the mass participation percentage was not significant. The first two modes correspond to lateral movement er RFP documents, only the lateral and vertical frequencies of the deck are required to meet the natural frequency criteria. Therefore, the first significant r

Regards, Saul Perez, P.E.

	Current Holder	Reference	Categories
CO. TRESOLVED		Sheet B-39	STRUCTURES
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	3/17/2017	1	
			duct data sheet for this coupler shows this to be a thick walled tube of 14 6 inch space. Please reevaluate the type of coupler to be used.
We have found that the p	roposed coupler length can be installed withi	n the provided 16 inch sp	ace.
	5/2/2017	1	
Please provide how the c	oupler is to be installed and accommodate th	e construction sequence.	
	5/23/2017	1	
The couplers will be insta	lled following the manufacturer's recommend	lations and will be placed	in the structure as described in the attached document.
Alfredo Reyna	6/13/2017	1	
We take no exception to t Regards, Saul Perez, P.E.	heir responses		
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			duct data sheet for this coupler shows this to be a thick walled tube of 14 6 inch space. Please reevaluate the type of coupler to be used.
We have found that the p	roposed coupler length can be installed withi	n the provided 16 inch sp	ace.
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Please provide how the c	oupler is to be installed and accommodate th	e construction sequence.	
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	5/23/2017	1	
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The couplers will be instal Alfredo Reyna	lled following the manufacturer's recommend 6/13/2017	1 lations and will be placed 1	in the structure as described in the attached document.
The couplers will be instal Alfredo Reyna We take no exception to t	lled following the manufacturer's recommend 6/13/2017	1 lations and will be placed 1	in the structure as described in the attached document.



February 10, 2017

FIU / Florida International University Facilities Construction Services Facilities Management 11555 S.W. 17<sup>th</sup> Street CSC 251 Miami, FL 33199

Attn: Alberto Delgado

Reference:	Independent Peer Review Category 2 Structures			
	University City Prosperity Project			
	Financial Project ID: 434688-1-58-01			
	Federal Aid Number:			
	Contract Number: BT-904			

Submittal: 100% Bridge Superstructure Plans Submittal No. 3 Bridge Number(s): N/A

Dear Mr. Delgado,

Pursuant to the requirements of the Contract Documents, Louis Berger hereby certifies that an independent peer review of the above-referenced submittal has been conducted in accordance with Chapter 26 of the Plans Preparation Manual and all other governing regulations. Component plans that were included in the peer review are as follows:

100% Bridge Superstructure Plans

Outstanding / Unresolved Comments and Issues:

All comments have been resolved.

#### **Certification Statement:**

I certify that the component plans listed in this letter have been verified by independent review, that all review comments have been adequately resolved, and that the plans are in compliance with Department and FHWA requirements presented in the Contract Documents.

Please do not hesitate to contact me if you have any questions.

Name of Independent Review Firm	Louis I	Berger
Name of Independent Reviewer	Ayman A. Shama, Ph.D., P.E.	
Name of Independent Reviewer	Associate Vice President / Director of Seismic Engineering	
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Forida Professional Engineer Lic. No.		
STATE OF	Signature:	/
SEAR SORIDA	-	Ayman A. Shama, Ph.D., P.E.
MAL F	Date:	February 10, 2017

PHOTOS TAKED THE MORNING OF THE CALASPE BY ALFREDD REYNA, D6 LAP COORDINATOR

