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 self-cleaning. Also design-in sufficient longitudinal slope of canopy to avoid ponding water.

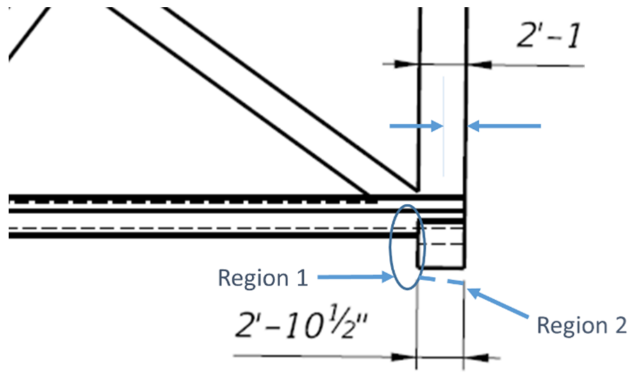
Provide pipe cleanout details during final design and verify that 8 inch diameter pipe is sufficient.

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.

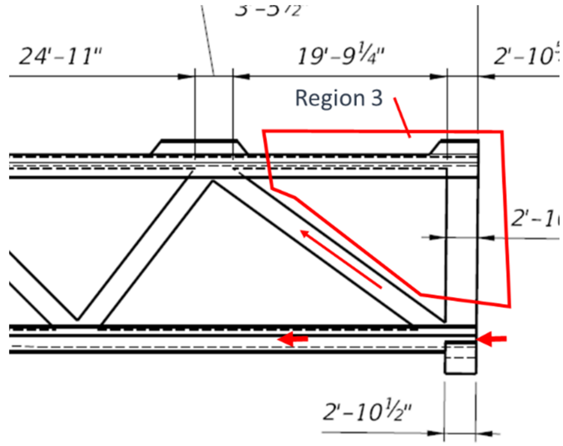
5. Sheet B-5:
    a. Spread footing layouts do not match B-19 thru B-21.
    b. See SDG 3.8 for spread footing requirements.
    c. See SDM, Chapter 11 for foundation layout sheet requirements.
    d. Show critical temporary walls which are required to construct pylon footing alongside SW 8th Street.
    e. Include Roadway Plan Set which includes requirements for traffic control and pavement and striping restoration of SW 8th 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:
    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 in-place 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.

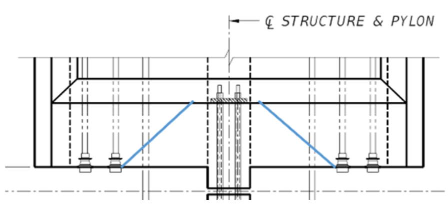
8. Sheets B-9 and B-10:
    a. Care needs to be taken to avoid issues associated with elastic shortening of the elements during stressing of longitudinal tendons. For instance the form has to be designed to be compressible or removable (region 1), and embedded skid plates need to be embedded in such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

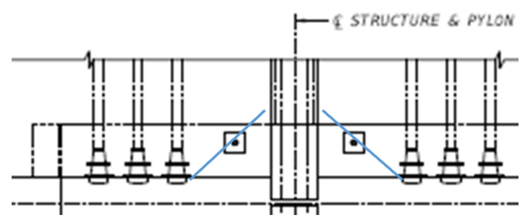


    b. The plans need to clearly show the sequence of all stressing. Maintaining stress limits throughout all intermittent phases to avoid cracking of the members will be extremely tricky and will likely necessitate stressing all web members along with some transverse/longitudinal stressing in increments 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).

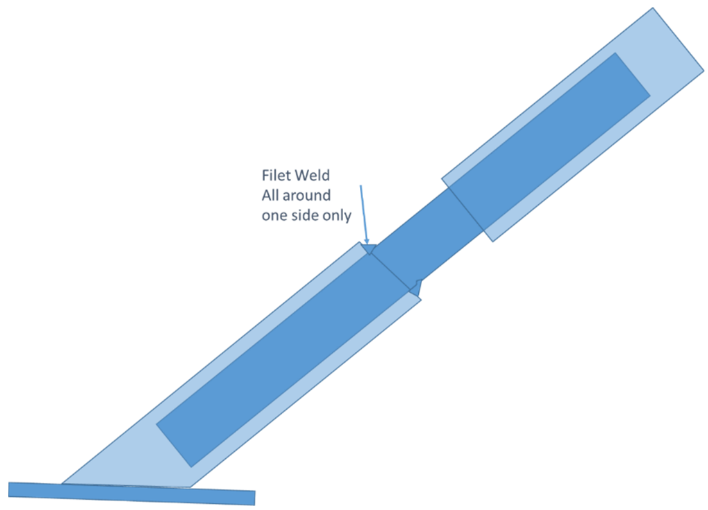




e. The concrete mix design needs to be flowable concrete or SCC to minimize potential for honeycombing of the element especially in areas where the concrete is cast under overlying formed surfaces (such as diagonals).

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.

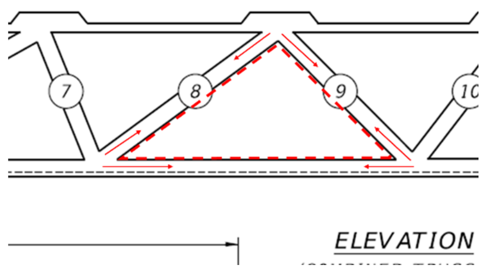
c. The pipes will be a maintenance issue long term. Will they be galvanized and then painted. How will inside of pipe be maintained if it is not galvanized? Pipes will attract live loads, thermal loads, and wind loads. See suggested detail (tight fitting inner slide pipe) below to avoid stressing of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