

District 4 Design Newsletter



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From the Editor's Desk

By: Howard Webb, P.E., District Design Engineer

It's the season to be jolly.

As challenging as this year has been, with all the additional ARRA projects and very tight schedules, there are a lot of reasons to be "jolly". Some of which are:

- We took on the ARRA challenge and met all of our targets. This will significantly enhance our transportation system when all the construction is complete.
- We met all our production targets for the fiscal year.
- We maintained our staff and kept them busy with challenging work.

Although we should not rest on our laurels, we need to take this time to recharge by reflecting and appreciating the things that matter most...time with family and friends.

I want to take this time to wish you all a very enjoyable holiday season and a happy new year.



- Administrative Staff
- Engineering Support
- CADD
- Consultant Management
- Drainage
- Roadway
- Structures
- Survey
- Traffic Design
- Utilities

District 4 Quarterly Design Newsletter

Editor.....Howard Webb
 Layout.....Amie Marsh
 Submissions By: Matthew Carlock, Richard Creed, Daniel Gonzalez, Josh Salazar, Howard Webb, Briggett Williams

Did you know?

In our January 2008 Newsletter, we provided information regarding 60-day advertisement period for letting construction projects if your projects have the following:

1. Pre-bid meeting
2. Mechanical and/or electrical work on a bridge
 - 2a. Bascule bridgework
3. Complete bridge rehab
4. Add lanes and reconstruction
5. Interchange
- ~~6. Lump Sum~~
7. Letting is greater then \$20 million
8. Complex construction

As you can see, the only change is that Lump Sum projects do NOT require a 60 day advertisement any longer.

SIS / Concept Development Unit

By: Josh Salazar, P.E.

Vision Statement: A balanced transportation system that is safe, efficient, and serves the needs of the community.

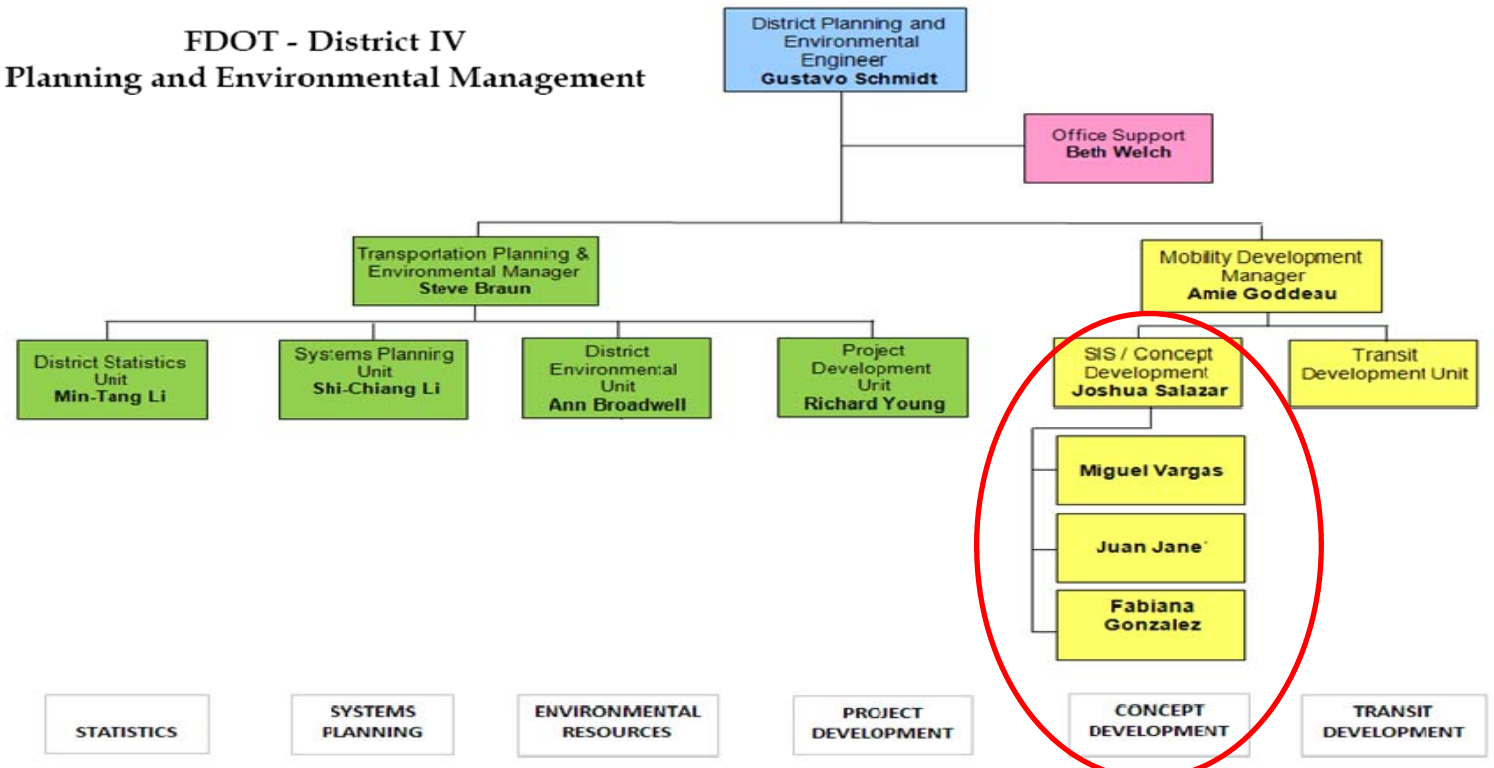
Mission Statement: To develop and facilitate innovative multimodal concepts for implementation.

Who Are We?

The **Strategic Intermodal System and Concept Development Unit** is a new team responsible for the District's SIS Program in coordination with internal FDOT offices and additional external customers including the Metropolitan Planning Organizations (MPOs), local governments and other transportation partners. Specific tasks include the management of the District's SIS Long Range Plan including 20-Year Multi-Modal Needs Assessment Plan, the Highway Cost Feasible Plan, 10-Year SIS work program regarding needs identification, project prioritization, cost estimating, programming, funding and tracking of production schedules and status. This unit is responsible for the preparation and completion of planning studies relative to the SIS, and coordination on issues regarding multi-modal Level of Service, eligibility criteria, data collection, facility designation and annual system updating. The **Concept Development** element of this unit is intended to address multi-modal transportation needs through a collaborative, streamlined process in concert with other internal FDOT offices including the Office of Modal Development, Traffic Operations, Design, and Maintenance relative to capacity, operational and safety deficiencies. This unit develops recommendations regarding implementation plans for priority projects, which include evaluating preliminary engineering geometry, traffic analysis, right-of-way, utilities, cost estimates, environmental screening, funding strategies and time frames.

We will be identifying and prioritizing these needs by reviewing current and completed Planning/PD&E studies and also from further coordination with internal and external partners. The appropriate implementation will depend on the maturity level of the concepts that are developed.

Our team will be available to attend your staff meetings in 2010 and further discuss how we can do business together. We look forward to a great working relationship with the whole Design Office!



Letter Writing


By: Design Administrative Staff (Alverene, Amie, Brigett, Margaret, Monica, Nerisha & Vanessa)

As a public agency, FDOT has guidelines to adhere to when composing letters. The foundation of good business letter etiquette is to 'think before you write'.

Writing a business letter is not simply a matter of expressing your ideas clearly. The way you write a letter and the etiquette you employ may have an impact on the interpretation of the letter. Business letter etiquette is a mean of maximizing your potential by presenting yourself positively. Failure to observe correct business letter etiquette can result in you adopting an inappropriate tone.

Sample letter below:

CHARLIE CRIST
GOVERNOR



Florida Department of Transportation

3400 West Commercial Blvd.
Fort Lauderdale, FL 33309-3421

November 19, 2009

STEPHANIE C. KOPELOUSOS
SECRETARY

The Honorable Barney Rubble, Mayor
November 19, 2009
Page 2

- Install raised crosswalks and ADA ramps at Rock Way and Fly Trap Circle, and add countdown animal timers:**
This project will include ADA upgrades to all intersections including countdown animal timers and high emphasized thermoplastic crosswalks. Raised crosswalks are not allowed on state roads and therefore will not be included in this project.
- Replace trees that were removed along Cobblestone Drive during Cobblestone High School construction:**
As previously stated, a landscape plan is being developed by us in coordination with Bedford's staff. These areas will be considered in the design if the proposed landscaping meets Slate Rock and Gravel's standards.
- Install street lights to MY standards:**
There is existing lighting at the intersections and at the mid-block crossing east of Rock Court near the high school. The lighting along this corridor was analyzed and does not warrant additional lighting.
- Replace span wire traffic signal installations with mast arm meeting earthquake specifications:**
The existing span wire traffic signals were evaluated at all the intersections within the project limits and no deficient signals have been identified, therefore new mast arm signal installations will not be required.

Slate Rock and Gravel appreciates your input and looks forward to working with you to complete this very important project. Please contact the project manager, Mr. George Clooney at 954-555-5821 or via email at george.clooney@slaterockandgravel.com, if you should have questions or require additional information.

Sincerely,
Steven Slate
Steven Slate, P.E.
Slate Rock and Gravel
Division 23



Initials of composer: SPS:fk
Initials of signer: SPS:fk
Last initial of typist: SPS:fk

The Honorable Fred Reese, State Senator, District 12
The Honorable Mary Kay, Florida State Representative, District 87
The Honorable Joie Peters, City Commissioner – City of Plantville
Phyllis Quart, City Administrator – City of Eden
Michael Kapland, Assistant City Administrator – City of Candyland
Robert Grace, City Traffic Engineer – City of Twilight

according to rank of individuals; if equal, than alphabetical

FDOT Tracker No.: 12-08153 ← size 8 font

www.dot.state.fl.us

	Don't		Do
	<ul style="list-style-type: none"> • Long sentences • Passive voice • Weak verbs • Needless words • Legal jargon • Numerous defined terms • Abstract words • Unnecessary details • Unreadable design and layout 		<ul style="list-style-type: none"> • FDOT standard letterhead • Plain language • Short sentences • Replace jargon with short, common words • Proofread for accuracy • See admin support for assistance

Standard vs. Custom, What is the Difference When Referring to Mast Arms?

By: Matthew Carlock, E.I. and Daniel Gonzalez, E.I

Mast arms are becoming a common site these days with new signal installation, replacing many span wire assemblies with mast arm assemblies. In the Plans Preparation Manual (PPM) Volume 1 Chapter 7 explains that mast arms must be used within ten (10) miles of the coastline unless there are outstanding circumstances against the use. In District Four mast arms are designed for 150 mph wind speeds. Within the design documents for mast arms, the terms “Custom” and “Special” are used interchangeably. In this article, the term “Custom” will be used.

When the Structures Design Unit receives a mast arm tabulation sheet from the Traffic Design group, they perform a structural review. The mast arms are checked and compared to the Standard Mast Arm Loading Trees, from PPM Volume 1 Chapter 29, considering both wind and dead loads. If the analysis determines that the mast arm meets one of the Standard Loading Trees then the Structures Design Unit can move onto the next step to check the soil parameters. However if the mast arm does not meet one of the Standard Loading Trees, then the arm must be analyzed using the FDOT Mastarm Program developed by Central Office. If after running the program, another standard mast arm satisfies the applied load, then that “Standard” mast arm is selected. Otherwise the mast arm is “Custom”.

If the mast arm was determined to be “Standard” then the soil properties must be checked to determine if they meet the required parameters found in the PPM Volume 1 Chapter 29. A foundation will be considered “Standard” when it meets the required soil parameters. If the parameters are not met then the foundation will be considered “Custom” and designed for the site specific conditions. If the mast arm is determined to be “Custom” then the foundation will always be designed as “Custom”.

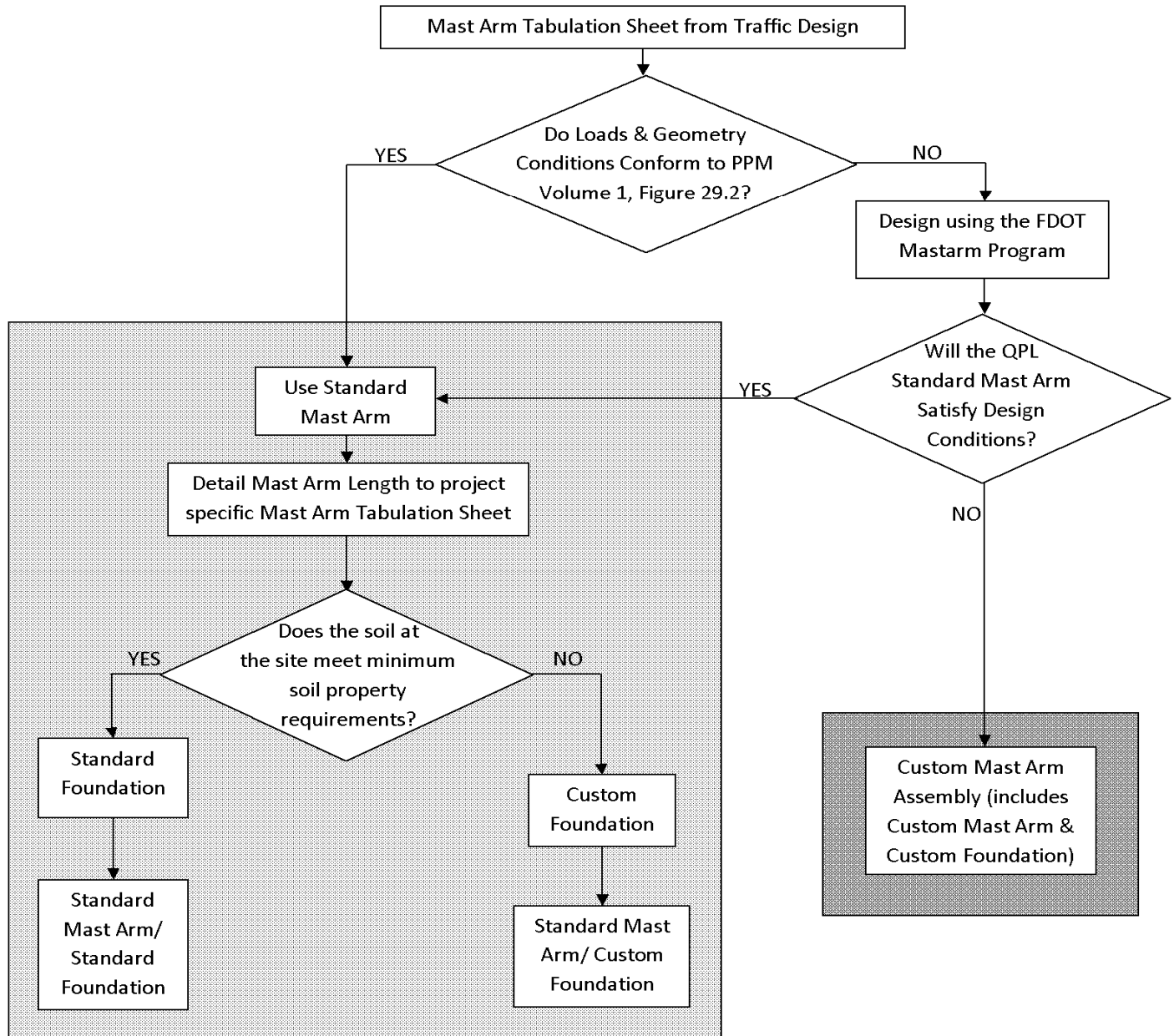
There are a few common misconceptions regarding mast arm assemblies. The first is when mast arms are designed to fit a Standard Loading Tree and the result is an arm length much greater than required leaving an additional unnecessary length. Instead of leaving the excess length the arm should be cut to leave a maximum of 2’ beyond the edge of the last signal or sign. Cutting a mast arm does not warrant it to be considered “Custom”. Another misconception is when a mast arm has been determined as “Standard” the foundation is also “Standard”. This is only true if the soil properties meet the required soil criteria.

In summary, understanding the difference between a “Standard” and “Custom” mast arm is important when specifying mast arm assemblies because it will determine the design effort and choice of pay items. For further questions refer to the following figure: *Mast Arm Flow Chart*.

Please submit any other questions or topics to the Structures Website at: <http://d4sharepoint.dot.state.fl.us/sites/d4transdev/Design/Structures/default.aspx>.

Standard vs. Custom, What is the Difference When Referring to Mast Arms? (Continued)

Mast Arm Flow Chart



Legend:

- Standard Mast Arm Pay Item
- Custom Mast Arm Pay Item

RRR Process Reminders and Updates

By: Richard Creed, P.E., Roadway Design Engineer

The Resurfacing, restoration and Rehabilitation (RRR) process was revised in August 2005 to help focus RRR projects on safety (verified crash history) and pavement stability issues. This process change brought about the establishment of the District 4 RRR Guidelines and the RRR FAQs. (Increasing our acronym jargon as well.) Four plus years later and we continue to fine tune the process based on a variety of issues and concerns raised by PMs. (Please keep those questions coming!) To help clarify and document the RRR Guidelines questions, a FAQs document was created and attached to the RRR guidelines document. (Both documents are posted on the Knowledge Based web site within the Transportation Development webpage.) This document continues to evolve as project specific situations more clearly define the funding and design criteria associated with the RRR program. With this in mind, I have included the latest updates, modifications and revisions to the RRR process. All of these changes will be incorporated into the RRR FAQs for future reference.

First things first, numerous times, questions come up about the location of the RRR guidelines and the FAQs on the Transportation Development web page? (Go to Design home page: <http://d4sharepoint.dot.state.fl.us/sites/d4transdev/default.aspx> => Click on Knowledge Base=> search RRR => click on "RRR guidelines", go to attachments.)

Pictures sometime help in this area....therefore....

District Four Transportation Development Division

Home Design Modal Development Planning & Environmental Mgmt Program Management Right Of Way

View All Site Content

Project Search

Search Criteria:
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 Item Segment: []
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 Project Status: [v]
 PSR Projects Only: [v]
 Search

GIS Services
ProjectSuite
Business Plan
Knowledge Base

D4 Shared Documents
 Discussions
 People and Groups
 Applications

Please direct any questions or comments to miro.poss@dot.state.fl.us.

Infonet

District One District Two District Three District Four District Five District Six District Seven Turnpike

You're here → Transportation Development Division Transportation Operations Division Transportation Support Division

Announcements
Welcome to the site! 10/31/2008 9:52 AM
 by Poss, Miro
 The District Four Transportation Development Division's intranet site implements the concept of do-it-yourself content management. Please contact your Office's representative for more information.

2009 Division Meeting Presentations

Lockdown Plans

Featured Links
 URL
 FedTech Bulletins
 SharePoint Video Tutorials

State & Federal Legislators

Type	Item
[i]	Broward County
[i]	Indian River County
[i]	Martin County
[i]	Palm Beach County
[i]	St. Lucie County

Next....

RRR Process Reminders and Updates (Continued)

District Four Transportation Development Division > Knowledge Base

Welcome Creed, Miro

This Site RRR

Search RRR here!

Who can post here? Anyone in the KB Contributors group
 What can I post here? How to, User Guides, General Info, Forms, Checklists, FAQ's
 How does my item become approved and visible to others? One of the Knowledge Base approvers must approve it. Until this list is complete, Miro Poss will approve the articles.
 Once an article is approved, who can see it? Anyone with access to the D4 site.
 What happens when an article expires? Nothing. It's just a reminder for all to help keep things current. The field is optional.
 Once an article exists in the Knowledge Base, management permissions can be customized so that the original poster, any single individual, or anyone in a designated group can have full control, or no control. Please contact Miro Poss for this.
 How do I search for an article? Use the search bar in the upper right hand corner of your screen or sort with the column headings. You can also click the "Article Library" title link to take you to the full view version. From there you can select "No Folder View". This allows you to search all items at once alphabetically.

Type	Item	Article Type	Created	Posted By	Modified	Maintained By	Expires	Approval Status
	Design		7/1/2008 4:47 PM	Poss, Miro	7/1/2008 4:52 PM			Approved
	Program Management		8/20/2008 10:18 AM	Poss, Miro	8/27/2008 5:02 PM			Approved
	Traffic Operations		10/30/2008 2:44 PM	Poss, Miro	2/17/2009 11:11 AM			Approved
	Planning and Environmental		11/6/2008 9:53 AM	Poss, Miro	11/6/2008 10:01 AM			Approved
	Right of Way		11/26/2008 11:30 AM	Poss, Miro	11/26/2008 11:30 AM			Approved
	Modal Development		11/26/2008 11:47 AM	Poss, Miro	11/26/2008 11:47 AM			Approved
	2009 IRE Submittal Dates and Kickoff Presentation	General Info	8/7/2008 8:34 AM	Poss, Miro	4/7/2009 3:16 PM	Miller, Stacy	4/1/2010	Approved
	Plans Processing: Phase 52 (Construction) vs Phase 72 (Maintenance)	General Info	4/28/2009 8:34 AM	Miller, Stacy	4/28/2009 8:59 AM	Miller, Stacy		Approved
	Consultant VPN Access to ProjectSuite	How To	7/2/2008 10:04 AM	Poss, Miro	2/2/2009 1:00 PM			Approved
	Public Records Request	How To	7/22/2008 10:59 AM	Witzthorn, Leslie	12/18/2008 11:37 AM	Snyder, Kathleen		Approved

Next...

District Four Transportation Development Division > Knowledge Base

Welcome Creed, Richard

This Site RRR

Click here!

Search for items containing: RRR

Results 1-10 of 15. Your search took 0.22 seconds.
 Results by Relevance | View by Modified Date

IRE Guideline (RRR)
 ... only be funded by RRR dollars if verified accident data and/or located at specialized intersections. ... Part of the new RRR process is the creation of an initial scope history based on "concept report" de ... IRE Guideline (RRR)
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=195> - Poss, Miro - 4/30/2009

RRR guidelines
 Design Process Designated bike lanes on rural State Roadway Date created: 10-25-06 There has been a change in the shoulder designation for bike use in District 4. Effective immediately, District 4 ...
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=84> - rd452w - 11/23/2009

Safety Review Process
 Lighting justification reports will NOT be done as part of the Design RRR process. ... of the EOR in the RRR Design process. ... framework of the RRR process.
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=132> - rd452w - 8/7/2008

Driveway Closure Form
 RRR, Add Lanes) This is to advise you of the Department of Transportation's decision to remove on ...
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=181> - rd913w - 8/3/2009

Ride Only Process
 ... process for the RRR "ride only" projects will be similar to the creation of the standard RRR Concept. ... Consultant should request the help of FOOT resources as needed by contacting RRR program manager. ... the duration for a RRR project, but I don't know what the official expectation is from FOOT.
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=83> - rd452w - 7/22/2008

Phase Review Process
 ... options: (RRR template) 1) Inserting the Final Constructability review in place of the constructab ...
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=78> - Florida Department of Transportation - 3/15/2009

P3 Activity Glossary
 CE-II Activity DF for RRR, ACC, Bridge, Calendar, Ids, Drainage, Milestones, Terms, Abbrev.
<http://d4transportation.dot.state.fl.us/sites/94transdev/K2/Lists/Article%20Library/DispForm.aspx?ID=313> - Poss, Miro - 11/4/2008

Attachments at the bottom of the RRR guidelines document!

RRR Process Reminders and Updates (Continued)

Now, some recent RRR Report changes/reminders: (Effective immediately.)

- Context Sensitive Solution (CSS) changes: CSS discussion should be part of all RRR reports. (Standard language from the Knowledge Based site included.) CSS discussion should include subtopics such as; aesthetics, cultural, community meetings and commitments, landscaping, CAP, bike/ped/transit discussions, etc.. This would be a brief synopsis of each topic as appropriate with the details provided throughout the report. (Look at this as an executive summary for CSS.) Although it may be somewhat redundant, it will help to promote and define CSS as an overall project effort.)
- Executive Summary: Executive summary should be part of each RRR report. This would be a brief description of the main activities of the project.
- Community awareness plan (CAP): This is a “living” document updated when appropriate throughout the design process and submitted with each phase submittal. [This document shall include brief local agency meeting minutes and commitments.](#) If meetings with local agency took place but no commitments to date, then that should be stated.
- ADA issues: RRR report should detail ADA issues and work to be done. Generic statements such as, “*all ADA ramps will be investigated and brought up to standard*”, does not adequately address and define this work effort. [All existing ramps must be physically verified to meet ALL ADA slope criteria.](#) Discussion about this investigation should be part of the RRR report.
- Sidewalk/Bike issues.
 - Project managers should by default assume the scope includes adding sidewalks and bike lanes on every project where it is missing and sufficient R/W exists. Further investigation and analysis including cost may result in a decision not to construct either one or both, however, if that is the case, this investigative effort would be part of the variance justification now required for projects which do not include bike or Pedestrian features.
- RRR funding question:
 - If existing "themed" median areas are to be reconstructed for operational or safety reasons, the "themed" area would be replaced “in kind” using RRR funding. (By “themed”, I mean decorative features including pavers, landscaping etc.)
 - Upgrades to or replacement of existing features as well as maintenance type issues such as cracked sidewalks, exotic tree removal, tree trimming, pipe desilting, etc are not funded by RRR program. However, “recurring” maintenance issues which require repeated fixes by the Operations Center due to location specific issues would be part of the RRR funding if a cost effective solution can be found. If in doubt, ask..
 - I wanted to reiterate something Scott Peterson enthusiastically wrote about concerning bike/ped features within FDOT projects, “*....The RRR or reconstruction funding guidelines generally cover these types of improvements. However, if you see a need for an improvement you feel is not an approved use of funds – talk about it with Richard, Morteza or Howard. Maybe there is a policy that needs to change.*” I completely agree, project specific engineering judgment by the PM is always needed to ensure we meet the operational and safety concerns of the FDOT as well as enhance the scenic, aesthetic and mobility needs of the community.
- I will create a RRR report template to better define the report format for consistency of information for Designers and reviewers. This template will be posted on the KB for reference in by the first of the year.

RRR Process Reminders and Updates (Continued)

Additional Design issues:

- Pull boxes: Designers should locate pull boxes away from sidewalk areas, ramps, etc if at all possible, potentially reducing long term maintenance issues with ADA compliance. Also, pull box spacing should follow signal coordination guidelines from the KB unless existing conditions warrants otherwise.
- Sidewalk cross slope: Proposed sidewalk cross slope shall be a maximum of 2%. To ensure this is met in the field, [recommend plans details identify 1.5% for sidewalk cross slope as a standard practice on all typicals.](#)
- Signal Back plates: See PPM Volume 1, Chapter 7, Section 7.4.17
 - Backplates Here is the design memo on PPM updates beginning Jan 1, 2009 and implementation: <http://www.dot.state.fl.us/rddesign/updates/files/RDB09-01.pdf>
 - IMPLEMENTATION:
These changes are effective on all applicable projects beginning design on or after January 1, 2009 and on all projects still in the design phase where implementation will not adversely impact production schedules. [\(Any project prior to Constructability Phase review should implement this policy.\)](#)
- Broward MPO: Reminder for FDOT “designers or project managers”; [please include or at least advise Broward MPO staff](#), if you will be meeting with any of the Broward County Officials. Please e-mail Greg Stuart (the MPO Executive Director) @ gstuart@broward.org.

I would like to encourage project managers and designers to continue to question and comment about our project and plans processes. As Scott alluded to above, each of us can make an impact if we only ask the questions necessary to begin the dialogue for change. Only through this continual exchange of ideas can we cost effectively meet the current and future safety, mobility and enhancement needs our local communities expect and deserve.

Design's Quarterly Award Winners

Employee of the Quarter:
Leslie Wetherell



I think her contributions to design during her time here are incalculable.

Team of the Quarter:
Section 1



In addition to their normal work load which includes supporting 3 projects under construction and numerous projects under design, they volunteered to take on 3 additional stimulus projects and have successfully maintained each accelerated schedule. All of this was accomplished while several team members volunteered to help other areas in the District (Kenzot to LAP (Stimulus) and Tom Turberville to I-595). Also, Tom Feddish has been diligently providing timely, effective review comments for the numerous stimulus LAP projects being submitted to their section for review. Without the entire section working together, these accomplishments would not have been possible.

Design's People's Choice Award Winners

Best Candy Jar:
Betsy Jeffers



Healthiest Eater:
Scott Peterson



Most Talkative:
Ken Olson



Most Polite:
Ellen Daniel

