

Proprietary Products

Karen Byram and Lorraine Moyle

references FHWA Statute 23 CFR 635.411 Florida Statute 337.02 FDOT Procedure 630-050-007



References

https://www.fhwa.dot.gov/construction/cqit/propriet.cfm

U.S. Department of Transportation Federal Highway Administration		About	Programs	Resources	Briefing Room	Contact	Search F
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Construction Program Guide

Patented and Proprietary Products

FHWA policy prohibits contracting agencies from requiring the use of a patented or proprietary material, specification, or process, unless:



References

 https://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?id=68



Certain requirements must be met when sole-sourcing a patented or proprietary product on Federal-aid projects

Required Approvals:



What do we mean when we say a "Proprietary Product"?

• <u>SOLE SOURCE</u>

Precludes Competition in Bidding



Same as Single/Sole Source in Contracts

Single Source:

 Multiple sources of supply are available but, for specific reasons, the good or service must be purchased from a specific manufacturer or supplier.

Sole Source:

- For specific reasons, only one manufacturer, or supplier, is capable of providing a good or service.
- Multiple products are available but they are all made by the same manufacturer.
- Single contractor



Justifications Focus on Reasons

• <u>Single Source</u>:

 Multiple sources of supply are available but, for specific reasons, the good or service should be purchased from a specific manufacturer or supplier.

• <u>Sole Source</u>:

- For specific reasons, only one manufacturer, or supplier, is capable of providing a good or service and it is not possible to obtain competitive bids.
- Multiple products are available but they are all made by the same manufacturer.





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Who Initiates the Request to use a Sole Source?

<u>The person with the knowledge</u> <u>for the justification</u>

- Local Agency personnel or Local Agency Consultant
- Consultant designing the plans



Types of Justifications

1. FDOT Proprietary Product Certification Request

A. Synchronization

Only thing that will work with EXISTING infrastructure (Equipment, Maintenance, Training, etc.)

- B. No Suitable Alternative
 No Existing infrastructure tie-in (completely new)
- 2. Public Interest Finding
 - A. For specific reasons not based on synchronization or no suitable alternative.
 - B. For a broad implementation more than one project (aka Blanket)





FDOT Proprietary Product Approval Limitations

- Sole Source Justifications based on Synchronization or No Suitable Alternative
- Only when State or Federal Funds are being used
- Only for Individual projects
- For a specific time period
- For a specific product/process/contractor



FDOT Recommends to FHWA

- Project of Division Interest
- Public Interest Finding
- Synchronization and No Suitable Alternative Approval is Needed for Statewide, Districtwide, and Local Agency wide use; Spanning multiple projects and/or time (Blanket)
- Everything else



Examples of Sole Source: When a Justification is needed

- 1. Product or process incorporated by name in specification or plan note Not so obvious:
- 2. Plans instruct contractor to select an APL product that fits the design feature but only one exists
 - Example: Crash Cushion selection to meet length of need
- 3. Plans instructs contractor to select a product that is on the APL <u>and</u> that meets the Local Agency's approval but only one exists
 - Example: Traffic Signal equipment
- 4. Modifies a FDOT Specification using a MSP, TSP or Plan Note
 - Example: MSP identifies a specific color of a coating and it is a proprietary color
- 5. Adds an Nationally recognized specification with acceptance values.
 - Example: Sign Sheeting ASTM D4956 Type VII



Justifications

FDOT APPROVALS; Synchronization and No Suitable Alternative



Justifications - Synchronization

- You must explain the specific reasons why you could not allow an alternative.
 - Based on Function, Aesthetics and/or Logistics.
- Must identify the <u>existing infrastructure</u> for the synchronization and why/how it requires the <u>Function, Aesthetics and/or Logistic</u> properties/performance of the product



Justifications – Synchronization cont.

Function:

- Define the <u>function</u> of the product, or process, that makes it uniquely capable of functionally synchronizing with the existing infrastructure and why it is different than the alternatives.
- <u>Must</u> include why 1 or 2 alternatives cannot synchronize with the same functionality with the existing infrastructure.
- <u>Must</u> include alternative design options and why they will not work

Aesthetics:

- Define the <u>visual match</u> of the product, or process, that makes it uniquely capable of visually synchronizing with to existing facilities and why it is different than the alternatives.
- <u>Must</u> include why 1 or 2 alternatives will not suffice visually. In this case, why similar will not work.
- <u>Must include how this match was selected</u>





Justifications – Synchronization cont.

Logistics:

- Define the <u>interchangeability</u> of the product, or process, that makes it uniquely capable of logistically synchronizing with the existing infrastructure and
- Identify why it is different than the alternatives.
- Must include why 1 or 2 alternatives cannot synchronize with the same functionality with the existing infrastructure.
- Maintenance, applicable to small municipalities (hardships), limited time periods





No Suitable Alternative Justifications

Definition:

Does not fit into new infrastructure or new designs



No Suitable Alternative Justifications

Definition: Does not fit into new infrastructure or new designs

- Explain the specific reasons why an <u>alternative</u> design or product could not be used.
- Define the specific reasons why the product, or process, <u>was selected</u>.
- Explain <u>all other considerations</u> that led to that selection and why other products, or processes, were not chosen.





Poll Question:

At what percent of the Design phase should you submit the Proprietary Product Certification request?



When to submit Request - ASAP

Should be submitted before 60% Plans

Lack of advance planning that results in limited availability or concerns regarding funding availability or expiration of funds are <u>not</u> acceptable justifications.

In cases where a compelling and unusual urgency exception is cited, you cannot use the FDOT approval: Must have FHWA approval.

Failure to justify the need will negate the entire request.

• The product selection is secondary to the justification of the need.





Failure to get the justification completed can result in a delayed letting!

Start this process as soon as possible. A rejection may require a design change!



Length of Justification Document

Depends on the total cost of the items relative to project:

- If cost is low then a simple justification documentation is acceptable.
 - This may consist of a few paragraphs, each with a few sentences.
- If cost is high, this may be an extensive document.
 - Same for a Public Interest Finding
- Use your judgment.
- Evaluators can ask for more information.





Writing Justifications



Poll Question: Have you written a Proprietary Product Certification or Public Interest Finding Justification?





Basis of the Justifications

Single Source:

 Multiple sources of supply are available but, for specific reasons, the good or service should be purchased from a specific manufacturer or supplier.

Sole Source:

- For specific reasons, only one manufacturer, or supplier, is capable of providing a good or service and it is not possible to obtain competitive bids.
- Multiple products are available but they are all made by the same manufacturer.



Justification Information (recommendation)

Section 1

- Description of the project need for the selected proprietary product
- Executive Summary

Section 2

- Factual and technical supporting evidence for Synchronization, No Suitable Alternative or Unique need
- Use technical terminology no plain language needed

Section 3

- Explanation how the evidence links it to the project need
- Why did you select this product, all the ways the product meet the needs

Section 4

- Factual and technical supporting evidence that no alternatives are available.
- Document your search and review of Alternatives





The processes used to Justify Sole Source are the same processes used to Avoid Using a Sole Source



Consider Alternative Products

- Evaluate several similar products available that could achieve near the same result
- Ignore the cost of any of the alternatives, allow the contractor select when possible
- Hints to conduct the search:
 - Use the APL to identify alternative products and manufacturers
 - Use a computer search and identify major manufacturers in your area





Consider Alternative Systems

- For Current System: is replacement anticipated in the future?
 - Is now a good to change to a new system based on old system anticipated service life?
 - If not, Include when the current system will be re-revaluated for selection and why now is not an appropriate time to change to a new system.
- For New Systems: investigate different systems that could be used,
 - Ignore the cost of any of the alternatives,
 - Let the contractor select when possible



Consider Alternative Designs and Processes

- Consider an alternative design
 - What is the real impact on final results if you allow an alternative design?
- Consider an alternative process(es) that achieves the same result
 - What is the real impact on final results if you allow an alternative process?





Real World Examples



Luminaires

First Example

Example 1A Luminaire

The City has identified their approved LED Cobra head is a specific LED lighting fixture.

What has to be included in the Justification?

Start: ID where the requirement initiated:

Scenario A: The Municipality Energy Conservation Officer is requiring that all new light LED fixtures must be used and meet x power saving. What is the limiting factor for Luminaire selection?

The limiting factor is x power saving

Justification must defined how the energy level of x was selected and why the x value cannot be modified to be inclusive of more that one luminaire fixture

Since this is a NEW standard, power value as No Suitable Alternative must be Justified





Luminaires

Second Example



Example 1B Luminaire The City has identified their approved LED Cobra head is a specific LED lighting fixture.

What has to be included in the Justification?

Start: ID where the requirement initiated:

Scenario B: The LED Fixture must be capable of mounting on existing pole spacing.

Key here is that this is **Existing'** infrastructure:

Synchronization

Justification must include

1. How the alternative fixtures were evaluated – lighting studies, etc.

2. **AND** the alternative design concept: why it has to be on existing poles.



Crosswalk Patterned Pavement

First Example



AVAILABLE
Example 2A Crosswalk

The City has requested a specific patterned pavement for the State Highway road improvements through the Downtown district.

What has to be included in the Justification?

Start: ID where the requirement initiated:

Scenario A: The Patterned Pavement must the same as the material already in use for visual continuity.

Key here is that this is **Existing'** infrastructure:

Synchronization - Aesthetics

Justification must define and defend visual continuity – not the product:

1. How the alternative products were evaluated to the visual similarity.

2. AND how far apart are the crosswalks? It is reasonable to assume someone would notice the difference in a slight manufacturer variation?





Crosswalk Patterned Pavement

Second Example



AVAILABLE

Example 2B Crosswalk

The City has requested a specific patterned pavement for the State Highway road improvements through the Downtown district.

What has to be included in the Justification?

Start: ID where the requirement initiated:

Scenario B: This is the first installation of Patterned Pavement on the project.

Key here is that this is **<u>first installation</u>** within the **<u>i</u>nfrastructure**:

No Suitable Alternative is very difficult to Justify in this case. (recommend using a Public Interest Finding)

Justification must define and defend why the selected product is the only choice

1. How the alternative products were evaluated to the selected product (Ex: Historical area with public involvement)

2. AND defend the design. Its it reasonable to assume someone would notice the difference the difference between the closest products?



Public Interest Findings

Same process as before



Public Interest Finding Justification (PIF)

- The justification must be supported by clearly articulated facts and credible, well described research findings and/or operational experience.
- The analysis provided in the request should be based on factual, verifiable data, with assumptions clearly identified.
 - For example: increased durability can offset higher initial costs to the point that the higher cost of a certain sheeting material may be justified if its lifecycle evaluation yields longer service life, less maintenance and the lowest overall cost.
 - Note: Still have to defend benefits of service life and maintenance. Cost is just a supporting benefit.



PIF continued

The request for a PIF should also clearly identify other contractual or performance implications that would result from approval of the request.

• Example: if a specific sheeting product is approved for guide sign legends, then it should be clear whether the manufacturer seeks to impose restrictions on the selection of the background sheeting through the manufacturer warranty.



PIF Example: Traffic Marking Tape

• Your approval is requested to renew the Public Interest Finding of May 27, 2017 for the exclusive use of XXXXXX Series P Tape for future projects where ASDOT intends to use a high durability highly retro-reflective tape product. We suggest that this approval be for a period of five years, to coordinate with the maximum time frame for contracts awarded through our State procurement process. Since the prior approval we have diligently pursued testing other products and our findings are that no other product similar to this on the market lasts more than two years (See Attachment). Our commitment is to continue to test new products when they are made available and will add those options to our specification if and when and they prove to be as durable as the XXXXXX material.



PIF cont.

Test Results of High Durability Highly Retro-reflective Tape Products

Since July of 2004 the Any State Department of Transportation (ASDOT) has used the area of Interstate 10 between 7th Avenue and 7th Street as a test deck for different high durability high retro-reflective products. This area of I-10 was selected for the test area because of high traffic volumes, weaving movements and the frequent closures for maintenance activities, which allows for retro-reflective data collection.

The products tested include Company X; XXX-400, Company Y; YYY-900, Company Z; ZZZ-43 and two different HAL9000 products – Series P and Series P1 The Delta LTL-X Retro Meter was used to randomly test each product for retro-reflective during each planned maintenance road closure. The results are outlined in the table below:

Product	XXX-400			YYY 90			ZZZ 43			HAL9000 P			HAL9000 P1		
Date	High	Median	Low	High	Median	Low	High	Median	Low	High	Median	Low	High	Median	Low
Jul-04	724	590	501	886	706	442	664	551	420	755	614	437	873	809	627
Nov-04	853	539	331	321	264	126	390	334	277	781	600	419	862	702	576
Mar-05	409	332	201	228	195	167	444	304	174	938	836	718	768	649	489
Jun-05	329	223	82	148	114	40	274	191	113	781	600	419	862	702	576
Dec-05	288	171	104	133	96	48	240	143	59	606	459	163	543	471	274
Apr-06	256	163	46	129	102	41	250	141	55	630	493	276	584	512	311
Jul-06	409	118	55	110	68	23	147	90	29	531	361	149	475	380	146
Oct-06	197	83	43	104	79	48	142	99	36	485	324	102	419	335	159



PIF cont.

Include additional benefits

- The original installation of the XXXXX Series P tape has lasted for over nine years in both the tunnel and on the I-10 Westbound to I-47 Southbound Ramp.
- With our maintenance budgets' being limited more and more, the use this product has reduced the striping maintenance in the above described applications.
- Quantitative analysis and field use shows that XXXX Series P Tape has special visibility enhancing features that should enable drivers opportunities to see better at night



PIF cont.

Don't hide the negatives.

• The XXXX Series P Tape is more expensive than 90 mil thermoplastic pavement marking material. However, the XXXXX Series P Tape does provide unique features and performance characteristics that should help mitigate the frequent maintenance of existing striping in areas with high traffic volumes.

Explain how you looked for other products.

- Market research indicates that XXXX has no competition in this product category.
- Note: should include date and parameters of search



New is not Better, Extra Features are not Better

An experimental request is better than a Proprietary Product Certification.



Contact Information

Karen Byram Karen.byram@dot.state.fl.us 850-414-4353

Lorraine Moyle

Lorraine.moyle@dot.state.fl.us

850-414-



Example 3 Controller

Scenario: Installing a New Signalized Intersection on the State System within a Maintaining Agency Jurisdiction

The City has identified a specific Traffic Signal Controller must be used





671 Traffic Controllers Product Type – Controller – NEMA TS2 Type 1

Econolite, Controller - NEMA TS2 Type 1

Supplier: Econolite

- Model Number: ASC/3-1000
- APL Certification Number: 671-016-007

McCain, Controller - NEMA TS2 Type 1

Supplier: McCain, Inc.

- Model Number: XATC eX Type 1
- APL Certification Number: 671-016-011
- · Comment: Note: Evaluated firmware version 1.3.0.4057 with Flashing Yellow Arrow Operation

Peek Traffic , Controller - NEMA TS2 Type 1

Supplier: Peek Traffic Corp.

- Model Number: 3000 TS2-1
- APL Certification Number: 671-016-001
- Comment: (PEEK)

Peek Traffic , Controller - NEMA TS2 Type 1

Supplier: Peek Traffic Corp.

- Model Number: 3000E
- APL Certification Number: 671-016-004
- · Comment: Note: Re-evaluated new firmware 3.7.3 build 420 with Flashing Yellow Arrow Operation

Peek Traffic , Controller - NEMA TS2 Type 1

Supplier: Peek Traffic Corp.

- Model Number: ATC-1000
- APL Certification Number: 671-016-009

Siemens Traffic Solutions, Controller - NEMA TS2 Type 1

Supplier: Brown Traffic Products, Inc. (formally Siemens and Eagle)

- Model Number: EPAC M-51
- APL Certification Number: 671-016-006
- Comment: (EAGLE)

Trafficware Group, Controller - NEMA TS2 Type 1

Supplier: Trafficware Group, Inc.

- Model Number: 980-A2100
- APL Certification Number: 671-016-005
- Comment: Note: Re-evaluated new firmware v81.4a with Flashing Yellow Arrow Operation

Trafficware Group, Controller - NEMA TS2 Type 1

Supplier: Trafficware Group, Inc.

- Model Number: 980 ATC Type 1
- APL Certification Number: 671-016-008
- Comment: Note: Evaluated firmware version 78.1a Build 2627 with Flashing Yellow Arrow Operation

Trafficware Group, Controller - NEMA TS2 Type 1

Supplier: Trafficware Group, Inc.

- · Model Number: ATC Type 1
- APL Certification Number: 671-016-010
- Comment: Note: Evaluated firmware version 78.6B Build 3060 with Flashing Yellow Arrow Operation



If Not using an APL product, Permit is required

The Proprietary Product process does not replace any other requirements, permits, etc.



Justification Information Example Format

- Description of the project need for the proprietary product
- Executive Summary

Section 2

 Factual and technical supporting evidence for Synchronization, No Suitable Alternative or Unique need

Section 3

- Explanation how the evidence links it to the project need
- How does the product meet the needs

Section 4

- Factual and technical supporting evidence that no alternatives are available.
- Document your review of Alternatives



Section 1: Description of the Project Need for the proprietary product

- Serves the purpose of an Executive Summary
- Provides the reviewing and approving official with a better understanding of the scope, magnitude and complexity of the requirement.
- If part of the selection criteria, include the estimated cost of the procurement and total funding profile for all the years that it will be used.
- Cite the authority that is creating limitations



Summary Statement - Minimum

The requirement is to provide (*product name*), at (*location*).

This will allow the office of (*requesting agency name*)

to accomplish (agency primary mission objective).



Summary Statement - Better

The requirement is to provide *three Manufacturer x*, *Controllers - NEMA TS2 Type 1* Assemblies, APL #671-016-00X, at 56th and 3rd in City of Pleasantville.

This will allow the City's Traffic Signal Maintenance Operations Office to accomplish timing changes, routine maintenance and repairs to the equipment in a cost effective and timely manner in accordance with the Maintaining Agency Agreement with the Florida Department of Transportation.



Summary Statement – Much Better

At the end of construction, maintenance and operations of the equipment will be turned over to City of Pleasantville. The City of Pleasantville has an integrated system that allows information and alarms from traffic controllers to send messages to the control room and allows for tracking of performance measures. Under the Maintaining Agency Agreement, the City must be capable of responding on-site within an agreed upon timeframe when a signal malfunctions to repair or replace.

The city has only trained its maintenance employees in the installation and repair of the Best Manufacturer controller. The training requirements for each type of controller are extensive and the City does not have the resources to train existing personnel in another system not to add additional personnel. Additionally, extra controllers and components must be in inventory to allow the City to respond when a signal malfunctions to repair or replace it. The increase in budget required to maintain two different traffic controllers including training , personnel and inventory space would increase the Maintenance budget by 43%. There are no plans by the City to do this in the next 3-5 years.



Section 2: Factual and technical supporting evidence for Synchronization, No Suitable Alternative or Unique need

A description of how the requirement (not product) will benefit the public

- Identify all the specialized features required for synchronization, or the unique features
- Refer to Section 1, Explain the selection of the basis of the justification
 - Ability to respond within a specific time Synchronization, function
 - Employee training Synchronization, logistics
 - Timing changes Synchronization, function
 - Inventory and inventory space Synchronization, logistics
 - Budget Synchronization, logistics
 - Total system age and service life expectancy Synchronization, function



Statements are NOT enough

- Each statement must be justified
- Attach supporting documentation
- Rule of thumb: plan a page or more for each justification reason



Section 2: Factual and technical supporting evidence for Synchronization, No Suitable Alternative or Unique need

Common Justifications include

- Technical characteristics ex: this equipment must be supportable by City of Pleasantville.
- Explanations of the system- ex: At the end of construction, the maintenance and operations of the equipment will be turned over to City of Pleasantville.
- What unique needs are being addressed that result in no equally suitable alternate, e.g., high percentage of older population?
- Are there identified safety locations or critical decision points that would justify a higher standard of retroreflectivity?
- Local APL equivalents (APL) require technical justification of the specifications that created the APL



Section 3: How does the selected product meet the needs

- Ability to respond within a specific time
- Employee training
- Timing changes
- Inventory and inventory space
- Budget
- Total system age and service life expectancy
- Other



Section 4: Evaluation of other product and/or designs

- This is the description of the search for alternatives, and why they were not selected
- Include descriptions/drawings of the evaluation of alternative/potential products, and a description of why these products/Designs/Processes cannot meet the needs.
- This where you could add an estimate of additional costs incurred as a result of this proprietary product requirement. This can only be supporting evidence. It cannot be the primary reason.

This section is the primary reason that justifications are questioned



Section 4. Factual and Technical Evidence that No Alterative Exists (Reasonable)

- This should be written with the understanding that it is based on technical or engineering. Plain language is not required and should not be used.
- Activities should include as many options as possible
 - Examples:
 - APL
 - Market search
 - Alternative technical solutions (ex: using an adapter)
 - Cost/Benefit Analysis
- This should be an <u>explanation</u> of each activity, not a list. (rule of thumb: one page per activity)
- Include dates of search activities, dates of data used how old is the data?



Example Part 4

Alternative Features:

- Other APL products do not have the necessary software interface
 - Ex: On 1/1/2018 a search for alternative products using the FDOT APL was conducted. Product A and Product B, have compatible software but these devices are not supported by the City maintenance office training and inventory. (needs to be expanded)
- Products C and D could be used, but using products from a different manufacturer voids the system warranty.
 - Identify section of warranty that states this and attach a copy of the warranty to prove statement and expand.



Justification, Section 4: Include Search for Alternative and other supporting facts

Alternative solutions:

- There are no other supported devices or software on the Market that would substitute the requested product
 - Review of all APL products was conducted on 1/1/2018. Alternate Physical devices are not available on the APL. The Software is provided by the manufacturer and is hardwired into the system. Manufacturer cannot alter program to perform the function. Of the existing APL approved products, no manufacturer offers a compatible program.
- Note: these are only introductory sentences a Justification must expand on this with detail and supporting documentation.



Section 5: Any other information/Appendix (Optional)

- Add anything else that may be pertinent to the to justification
- Make this your Appendix area for adding the additional documents
 - System Warranty, Maintenance Agreement, Research Reports referenced, etc.



Assumptions should be identified

- Direct safety benefits measured in terms of crashes are often not quantifiable. Thus, alternative metrics, such as increased legibility distance and improved driver acquisition times, may be used to support a determination that no suitable alternate exists.
- Research results providing similar findings in support of a specific request may be used.

This type of justification critical in a Public Interest Finding



All Statements Must be Supported

- Our city needs extra protection because of the number of hurricanes hitting the area
 - Only defends the need for extra protection, not the device
- We have our own APL List for product selection -
 - If similar to FDOT APL : Need to explain basis of testing that is different from APL Spec. Include factual/data based documentation to support the reason for requirements.
 - If no FDOT APL equivalent: Explain basis of testing criteria. Include factual/data based documentation to support the reason for requirements.
- Our contracts require products to meet (insert) requirement
 - Explain basis of contract requirement. Include factual/data based documentation to support the reason for requirement.

