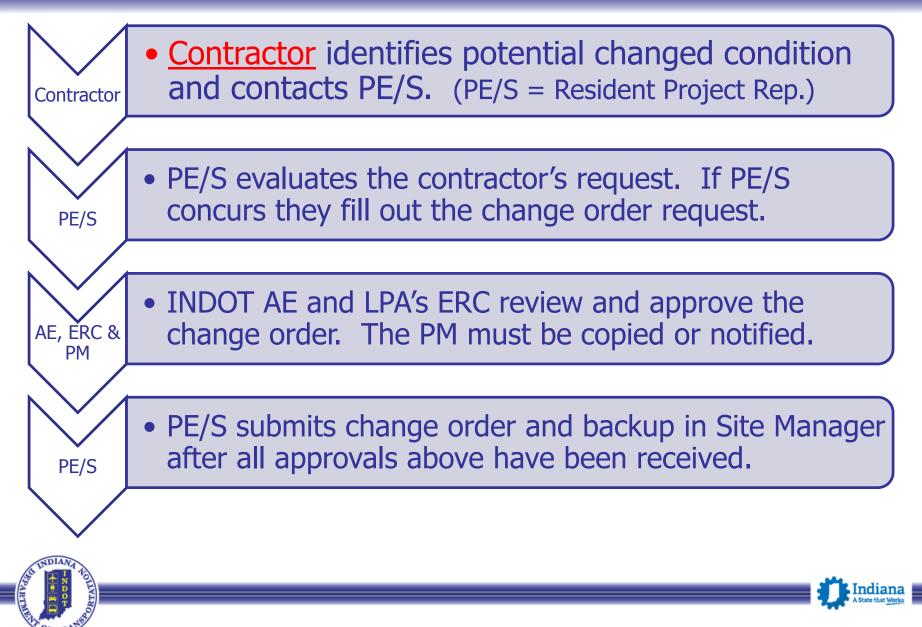
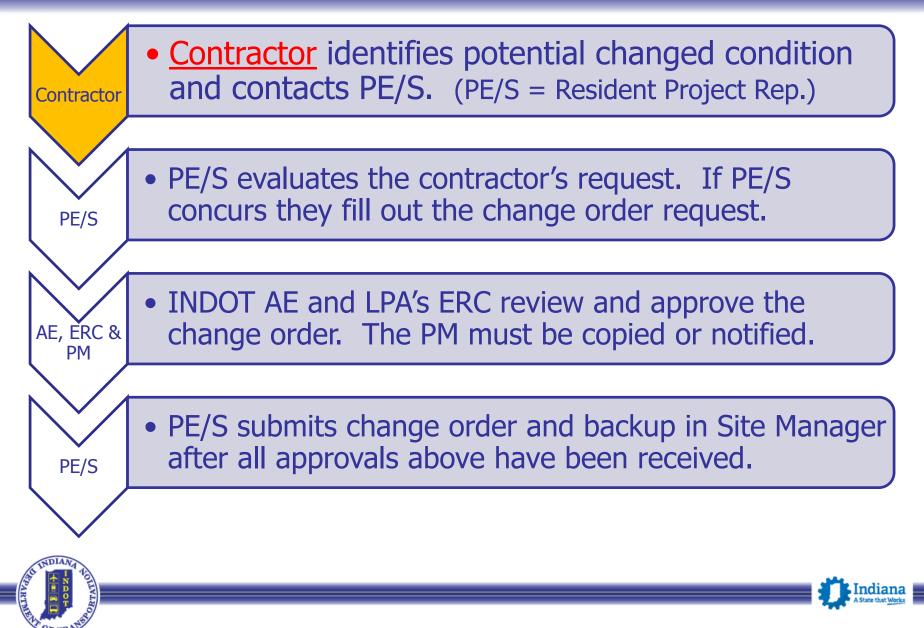
Change Orders

Jim Reilman, MS, P.E. Greenfield District Project Manager, INDOT











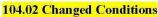
 <u>Contractor</u> identifies potential changed condition (104.02) and submits notice of changed condition in writing to PE/S. (PE/S = Resident Project Rep.) Per 104.02 & 105.16 the contractor shall notify the PE/S prior to beginning work or incurring expenses related to the request





104.02 Changed Conditions

- a) Differing site conditions
- b) Suspensions of work ordered by the Engineer
- c) Significant changes in the character of the work
- d) Pre-established Remedies to Changed Conditions (source: INDOT Standard Specifications)



A changed condition causes the work to substantially differ in kind or nature from the work as required in the original contract. The Department will adjust the contract for changed conditions as described herein. A contract adjustment may revise one or more of the following:

- (a) the work to be performed
- (b) the time required for the work
- (c) the amount of compensation due the Contractor.

Changed conditions that will be considered as reason for a contract adjustment are differing site conditions, suspensions of work ordered by the Engineer, and significant changes in the character of the work. A request by the Contractor for a contract adjustment shall be based on one or more of the changed conditions described herein.

(a) Differing Site Conditions

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice of a changed condition in accordance with 105.16.

No contract adjustment will be allowed under this clause for any effects caused on unchanged work.





620

105.16 Notice of Changed Conditions and Claims

Nothing in this subsection shall be construed as establishing a claim contrary to 610 the terms as set out in 104.02.

(a) Contractual Notice of a Changed Condition

If the Contractor requests a contract adjustment for a changed condition in accordance with 104.02 notification shall be made in writing before the work is begun or expenses relating to the request are incurred.

The written notification of a changed condition shall be submitted to the Engineer and shall include the following minimum information.

- 1. A statement that the submittal is notification of a changed condition.
- 2. The date the circumstances believed to have caused the changed condition were discovered and an explanation of how and by whom the changed condition was discovered.
- 3. A detailed and specific statement describing the nature and circumstances of the changed condition.
- 4. A statement of the estimated effect of the changed condition on the controlling operation and the cost and contract time of the project.

630 If written notification of a changed condition is not given and the Engineer is not afforded the opportunity to remedy the changed condition, then no request for a contract adjustment will be considered. Notification of a changed condition and the estimate of the cost of the change shall not be construed as validation of a changed condition. If the Engineer determines that a contract adjustment is due, payment will be made as provided for herein.

No contract adjustment will be made for work performed or for expenses incurred prior to the date of notification of a changed condition. The Contractor shall diligently prosecute the work unaffected by the changed condition to the maximum



105.16

Changed

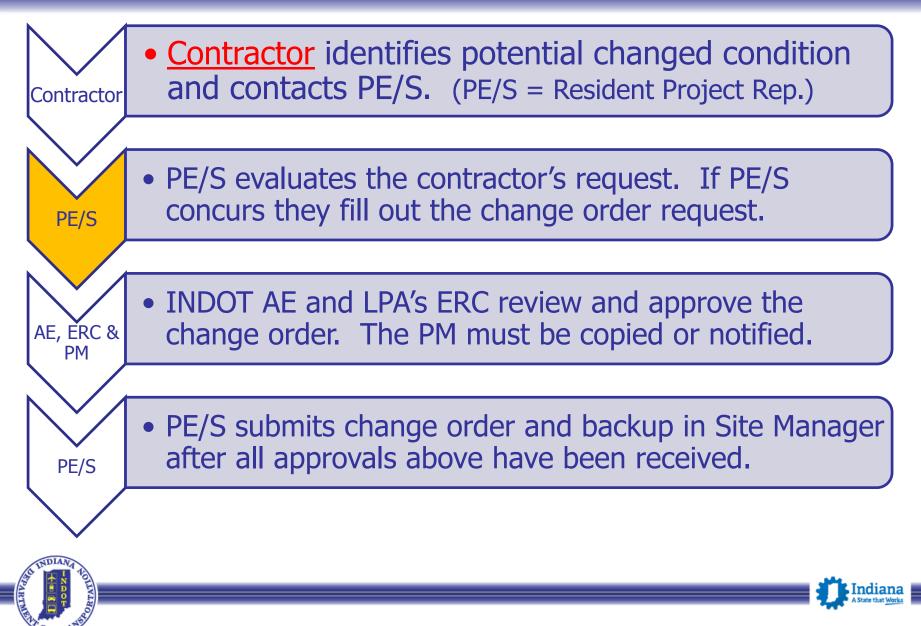
(source: INDOT

Conditions

Standard Specifications)

640 extent possible.







• PE/S evaluates the contractor's request. If PE/S concurs they fill out the change order request.





Changed Condition

The PE/S <u>must</u> review the potential changed condition by evaluating the circumstances against the following:

- 1) Entitlement
- 2) Impact
- 3) Cost

(Section 104.02(d) Pre-established Remedies to Changed Conditions)



Changed Condition - Entitlement

1) Entitlement:

Is the Contractor contractually entitled to monetary or time adjustments for performance of the disputed work?







If there is no contractual entitlement, it is not necessary to evaluate the impact or cost aspects of the disputed work.





Changed Condition – Impact & Cost

2) Impact:

Did the event that necessitated the disputed work impact the Contractor's controlling operation or critical path?

3) Cost:

What is the magnitude of additional costs and time incurred by the Contractor due to performance of the disputed work?





Example: Contractor did not believe that the contract bid documents adequately informed them that the existing paint on the bridge contained hazardous materials. (Differing Site Condition) Thus, per 104.02, they submitted written notice informing the owner of the presence of a changed condition.





December 20, 2011

Example of a changed condition letter received from a contractor:

Attention: Mr. Randy Project Manager Reference: INDOT B

Additional Work-Mill Scale & Lead Discovery

Dear Mr.

Per the results from **Constant of the spent** sandblast abrasive, it is evident that the existing coatings being removed contain lead. We have also found evidence that the entire area which we are cleaning exhibits mill scale. The contract documents did not specify that this structure had existing lead based paint and/or primer on the areas being cleaned.

During the bid process in the Q and A form, INDOT answered that this structure was previously cleaned to a SSPPC-SP6 commercial sandblast in 1983. Based upon this information Painting & Maintenance Co., Inc. was lead to believe that no mill scale and lead based paints were present at the time this project was bid. INDOT specifies the type of existing primer (zinc or lead) on bid painting projects and includes in the contract documents the adjusted payment methods for the discovery of lead and mill scale on a project. INDOT did not specify the existing paint/primer type in the contract bidding documents and stated that this structure was previously cleaned to SSPC-SP6 and therefore no mill scale and lead based primer/paint should have been evident for this project.

Based upon these new findings please be advised that Painting & Maintenance Co., Inc. will be claiming per the Standard Specification Section 619.18.3.b.2 "the amount of 70% of the sum of the clean steel bridge item and paint steel bridge item for that bridge".

Therefore based on the standard specification method for the determination of the extra costs due, the following shows the method to be utilized to determine the extra costs due to painting & Maintenance Co., Inc.



Please issue an additional change order in the amount of \$476,000.00 for this additional work for the project.

for

Indiana

If you have any questions or comments, please contact me at any further discussion.

Very Truly Yours,

Painting & Maintenance Company, Inc.



Continued

CLEANING AND PAINTING BRIDGE STEEL

Only the tie girder and bridge steel affected by the work on this contract shall be cleaned and painted in accordance with 619. The interior and exterior of the existing box-shaped tie girder shall be cleaned and primed before attaching the new web splice plate. The existing structural steel coating system contains hazardous materials. Each coat of the structural steel paint system shall be applied within the manufacturer's temperature limits and may need to be applied when the bridge is open to traffic. Prior to applying the prime coat, the surface shall be blast-cleaned in accordance with SSPC-SP6/NACE No. 3. If this work is performed when the bridge is open to traffic, all costs with maintaining traffic and working within the Department's Interstate Lane Closure Policy shall be included in the cost of the 619 pay items.

The color of the top coat shall be Federal Standard 595, color number 15450. Due to the average daily temperatures during the time of year when this work will be done, the Contractor shall use one of the approved structural steel painting systems on the Department's approved list that will allow painting in lower temperatures. The same structural steel paint system shall be used by each painting contractor. Paint systems not already on the Department's approved list will not be considered. Auxiliary heating systems or industrial dehumidification systems may be used in order to progress work unless not allowed by the paint system's manufacturer.

A time extension will not be considered for the Contractor's failure to select an approved structural steel paint system with an appropriate temperature range for the anticipated conditions or failure to artificially modify the containment to create a work environment conducive to painting.

In addition to the above, the Standard Specifications are revised as follows:

SECTION 619, BEGIN LINE 316, DELETE AND INSERT AS FOLLOWS:

On existing bridges when abrasive blast cleaning is used, clean, dry, uniformly graded steel grit or a recyclable steel grit, in accordance with SSPC AB 3 or SSPC AB 2, shall be used. The steel grit used shall produce an angular profile that is free of oil, soluble salts, and other similar substances which can contaminate the blasted surface. The recycling equipment shall be capable of separating the blasting abrasive from the paint debris.

The surface profile of cleaned new steel surfaces and cleaned existing steel surfaces shall not be less than $\frac{1.51}{1.51}$ mil ($\frac{3825}{\mu}$ µm) and not greater than $\frac{3.53}{3.53}$ mil ($\frac{8975}{\mu}$ µm).

Indiana

Unique Provision from the Contract Information Book for this contract:



Thus, since the paint condition (hazardous materials) was included in a unique provision in the contract documents prebid, there was no entitlement and thus no need to evaluate impact or cost.

The claim was denied on this basis.







Change Order – Explanation

- The PE/S (RPR) is highly encouraged to include:
 - Entitlement
 - Impact
 - Cost

in the change order explanation section.





Change Order – Explanation

The Change Order Explanation should be:

- Concise
- Easy for someone unfamiliar with the situation but reasonably familiar with construction to understand.
- A good test: If someone without a technical background can understand it, then it is likely a sufficient explanation.





Change Order – Explanation Ex:

IMPACT: On September 15, 2014, the contractor started removing existing sidewalks for the installation of new ADA Ramps on Site #2. It was brought to my attention, by the contractor, that the cross slopes of the asphalt at the ramps were greater than the 2% required by INDOT. The project drawings do not indicate repairing or patching of asphalt at the new ramps. The designer, was called by the project engineer/supervisor, and the problem with the cross slopes was discussed. He stated that a solution was sent to INDOT for approval. The solution for the cross slopes was to have a waiver at each ramp. The entrance drive to the parking lot at the Community Center, between the new concrete ramps installed by the contractor, did not meet the 2% cross slope requirements per INDOT Standards. I called the INDOT Area Engineer and explained the problem with the cross slopes. A meeting was scheduled, by the project engineer/supervisor, with the LPA, the City; the INDOT Area Engineer; the designer for September 18, 2014.

ENTITLEMENT: A meeting occurred on September 18, 2014 on-site to discuss the issue of the cross slopes. Those in attendance; the Mayor, street superintendent from the City, the INDOT Area Engineer, the project engineer/supervisor, and the designer. INDOT stated that the best solution would be to mill the existing asphalt and install new asphalt wedges at the ramps where the cross slopes do not meet INDOT standards. INDOT stated the entrance to the parking lot at the Community Center (Line B), the asphalt between the two new ramps should be milled and new asphalt installed to meet the cross slope requirements, per INDOT standards. The City and INDOT verbally agreed to bring the cross slopes to INDOT standards. On September 25, 2014, the project engineer/supervisor received an email from the designer. The email contained an attached drawing indicating how the entrance was to be constructed. The contractor installed the asphalt cross slope per that drawing. This change order is for the asphalt that was installed at the entrance and for additional asphalt wedges at sidewalk ramps, where the cross slopes were brought to INDOT standards. The following areas are to be brought to INDOT Standards for cross slopes;

Line B CL, Station 20+50 to Station 21+15, LT

Line B CL, Station 22+65 to Station 22+75, RT

HS Road CL, Station 11+90 to Station 12+00, RT

Other areas as determined after the new ADA Ramps are installed.

COST/TIME: The pricing submitted by the contractor was reviewed. It was calculated and found to be within the recommended price range per the CY2014 English Unit Price Summary, as provided by INDOT.





Change Order – Explanation

Remember, how you word the explanation in the change order determines how your message is received.





Changed Condition – Dispute





- If the contractor disagrees with:
 - any portion of the PE/Ss determination of the submitted changed condition, or
 - the PE/Ss remedy to the changed condition

and the contractor decides to further pursue compensation,

the contractor must submit written notice of intent to file

a claim, in accordance with Section 105.16(b). of the Standard



Changed Condition- Dispute

105.16(b) gives the contractor a time limit.

15 calendar days in which to submit written notice to

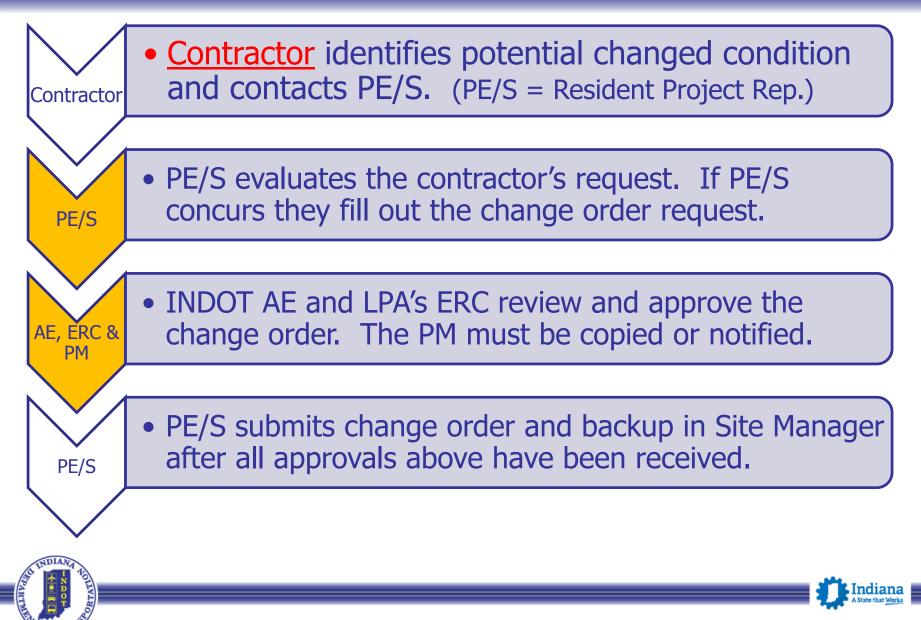


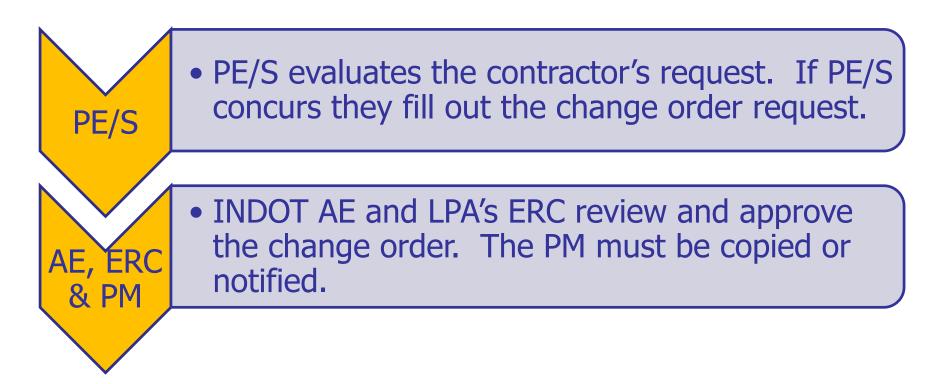


 This is so that costs and time associated with the perceived changed condition can be tracked in real time.













Change Order

- All stakeholders need to be involved during the development of a change order
 PE/S, ERC, AE, PM, & MPO (if applicable)
- Funding needs to be discussed <u>prior</u> to change order approval (even if an advice of change is not being requested at the time of the change order).





Change Order

- If the project is within an MPO, the MPO needs to be involved to ensure that funding is available or can be made available.
- Otherwise the LPA may incur 100% of the cost of the change, even though it is eligible for federal-aid participation.





Change Order Funding

LPA Guidance Document 12-3.04

"Because the allocation of federal funds for each project is limited, change orders and claim costs may exceed the federal allocation. In this case, the LPA will be responsible for providing 100% of any additional funding required. Certain types of extra work may not be eligible for federal funding even if there are unused federal funds left on the project."





Leftover Funds Policy

- 12-3.05 "The federal funds allocated to a project are intended to accomplish the original scope of the project <u>as</u> designed."
- If the project bid prices are lower than the engineer's estimate, those "extra" federal-aid funds revert back to the local program (rural) or MPO and should not be considered available for use by this LPA on this LPA's project.





Local rural bridge project.







- Engineer's Estimate: \$1,475,000.00
- Low responsible bidder: \$1,217,816.00
- The difference or \$257,184 is returned to the local program (as this was a rural project) for use on other rural projects within the rural program.





Meanwhile the LPA mistakenly thought this extra \$257,184 was "theirs" because they were initially awarded an amount equal to the Engineer's Estimate.

The LPA decided they wanted to change the maintenance of traffic scheme from total closure to phased traffic. And that they could use this \$257,184 to pay the additional costs for this change.





Conclusion: The change would be allowed.

- However, it would not be eligible for federal-aid funding participation.
- The cost of the change would be funded 100% by the LPA.





Participating vs. Non-participating

- <u>All</u> change orders need to be identified as either:
 - participating (eligible for federal-aid funds) or
 - non-participating (not eligible)
- View <u>Construction Memo 12-03</u> for frequent federal non-participating items
 - Betterments
 - Utility and R/W delay claims
 - Adjustment of private facilities





Betterments – Example:

- LPA owns 18" sanitary sewer line that needs to be relocated as part of the project.
- After the project is let, the LPA has always had desire to increase capacity for the sewer line to 36" for future development and requests that the new 18" sewer not be installed but rather a 36" sewer be installed.
- The 18" line is considered to be the appropriate size for the service area.







Betterments – Conclusion:

- The additional cost over replacement-in-kind is borne 100% by the owner of the facility being adjusted and the cost is considered non-participating from a federal-aid standpoint.
 - Difference in material costs from 18" to 36" pipe.
 - Additional backfill material costs above what was needed for the 18" sewer.





Utility and R/W delay claims

- <u>Desirably</u> all utilities are relocated prior to letting or very soon thereafter (before construction commences).
- INDOT will not allow an LPA project to be let with Right-of-Way exceptions.







Utility and R/W delay claims

- Utilities not fully relocated prior to letting = letting with utility exception.
- This brings <u>**RISK</u></u> to the project!!</u>**
 - if utility relocation takes longer than the time shown in the contract, any claim presented by the contractor to recover costs incurred due to delays caused by the utility not being relocated within the timeframe in the contract is the responsibility of the LPA to reimburse with 100% local funds.
 - Costs arising from utility delays are not eligible for federal-aid funding participation.





Change Order Coding

- Errors & Omissions
- Scope Changes
- Changed Conditions
- Failed Materials
- Incentive/Disincentive
- Standards/Specifications Change
- Final Quantity Adjustment



* Reference Construction Memo 07-28, 14-05, and 14-13



Reason Code: Errors & Omissions

 Effective 11/5/14, all PE/S's will be required to record errors and omissions change orders as being either recoverable or non-recoverable. (From Construction Memo 14-13)

- Recoverable: The designer may be responsible for extra costs involved on the project. (Additional information is available in Construction Memorandum 14-13.)
- Non-recoverable: The designer is not responsible for extra costs.





Reason Code: Errors & Omissions

 If it is believed that the reason for the change order is errors & omissions, the designer <u>must</u> be immediately contacted.



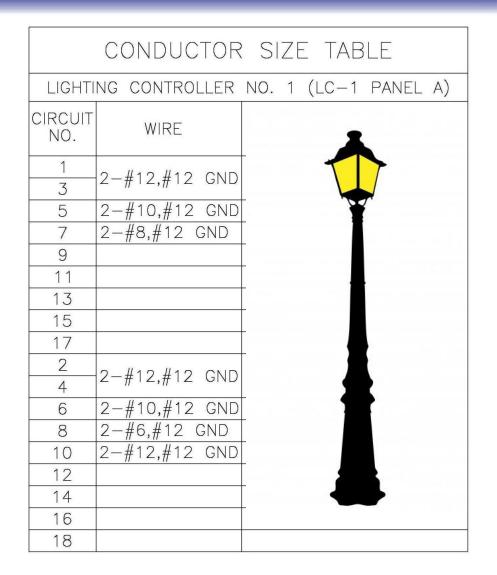
This is so the designer may begin working on a solution and give the designer an opportunity to minimize the additional cost of the solution.





 Example of an Errors & Omissions change order that is considered recoverable.

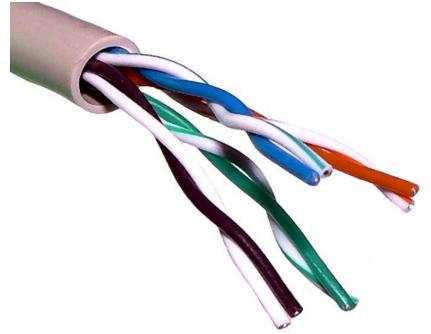
> Original design had two lighting control cabinets to run a set of street lights. The corresponding wiring was included in the design.







During final design, one of the lighting control cabinets was deleted. However, the wiring was not updated.



- Thus the wiring bid upon by the contractor was not adequate to handle the additional load and needed to be up-sized.
- The #12 and #10 wire was deleted from the contract (for a credit of \$10,000). New #6 and #8 wire was added (at a cost of \$27,000).
- Thus the net increase in cost to the contract is \$17,000.



The price provided by the contractor for the wire was as follows:

- \$1.70 per foot for #6 wire.
- \$1.60 per foot for #8 wire.

And the quantity needed was:

- 13,000 linear feet #6 wire
- 3,060 linear feet #8 wire

The average bid price for these items is:

- \$1.49 per foot for #6 wire
- \$1.27 per foot for #8 wire





The total wire price difference is: \$3,739.80

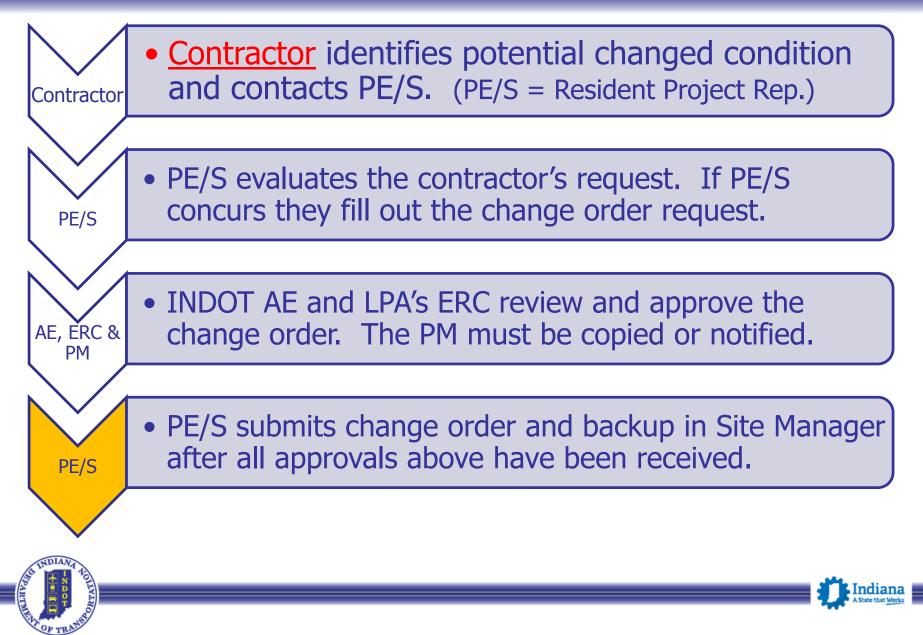
13,000	\$1.70	\$22,100.00	\$1.49	\$19,370.00
3,060	\$1.60	\$4,896.00	\$1.27	\$3,886.20
		\$26,996.00		\$23,256.20
Additio	nal Cost o	considered reco	overable:	\$3,739.80

 It is up to the LPA to decide if they wish to pursue the designer for reimbursement. Keep in mind that from a federal-aid standpoint, the \$3,739.80 is considered non-participating.





Change Order Process



Change Order Process

• PE/S submits change order and backup in Site Manager after all approvals above have been received.

****If** after looking at the remaining funds available on the contract, the PE/S believes that additional funds are needed, the PE/S then requests additional funds once the change order has been approved in Site Manager.



PE/S

Additional Funding Request

- Additional funds for a contract are obtained by the PE/S completing an Advice of Change request.
- An Advice of Change request should only be submitted when:
 - Approximately 75%-85% of the original project funding has been expended.
 - If the change order involves a nonparticipating item and a non-participating purchase order does not exist on the project.





Additional Funding Request

COST CHANGE REQUEST FORM

Advice of Change (AC) or Supplemental Purchase Order (PO) For INDOT Contracts

Sample form that the PE/S completes and submits to the respective District Construction Office.

Attn: District Construction Admin

e-mail:

Instructions for Use: Electronically fill out this form to request additional funding to cover extra work for your project. Request shall be limited to one PCN # per form. Print the completed form for your records by clicking on the "Print Form" button. Submit the form by e-mailing to Lou Ann Lake with INDOT Construction.

Amount of Request:	** Category #
Reason for Cost Change (Char	nge Orders #'s, Final Payment , etc)
*** Cost Change Funding Spl	it: (Must Select Only One)
	· · · · · · · · · · · · · · · · · · ·
100 % LPA (Non-Partici)	pating) 100% State (Non-Participating)
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100 % LPA (Non-Partici)	pating) 100% State (Non-Participating) *** All Z-item requests (Non-Participating) MUST have



Prime Contractor:		 		
PE/S Name:		 		
E-Mail Address:	 	 		
			- 1	A State that Work

	Department of Transportatio ge Order and Time Extensio		o.: 004 Page: 1
Contract Information District:GREENFIELD DISTRICT	Contract No.: R - 12345 AE:Carrow, Thomas(INACTIVE)	Letting Date:10/09/2013 PE/S:, John Doe	Status:Pending
Change Order Information Date Generated: 00/00/0000 Reason Code: CHANGED COND, Co Description: repair sink hole at muffler	-	EWA: Y or Force Acct: N	1
Original Contract Amount Current Change Order Amount Total Previous Approved Changes Total Change To-Date Modified Contract Amount	\$ 2,247,500.00 \$ 2,290.62 \$ 13,625.88 \$ 15,916.50 \$ 2,263,416.50	Percent: 0.606 % Percent: 0.708 %	
Time Extension Information Date Initiated 00/00/0000	Date Completed 00/00/0000		
Original Contract Time	SS Completion Date 00/00/0 SP Date 00/00/0000 (SS = Standard Specification	0000 or SS Calendar/Work Da or SP Days n, SP = Special Provision)	ays O
Time Element Description: Current Time Extension	SS Days 0 SP Days 0	SP Days Value \$ 0.00	
Previous Time Approved	SS Days by AE: DCI	E:SCE:DDCM	Л:
	SS Days	SP Days Value \$	
Revised Contract Time	SS Completion Date 00/00/0 SS Date 00/00/0000	0000 or SS Calendar/Work Da or SP Days 0	ays 0





Contract No:R = 12345	Change Order No.: 004
	Department of Transportation Page: 2 ge Order and Time Extension Summary
	-
Review and Approval Information Required Approval Authority (\$ per Change Order) (Days per Contract)	AE: Yes DCE: SCE: * DDCM: * (- LE \$ 250K-) (- LE \$ 750K -) (LE \$ 2 M) (GT \$ 2 M) (50 SS days) (100 SS days) (200 SS Days) (GT 200 SS days)
√erbal Approval Required?	Y / N If Y, by Aj WortkoetterDate Issued 4/24/15
Total Change To-Date>5%?	Y / N If Y , Copy to Program Budget Manager
Scope/Design Recommendation Required?	Y / N If Y, Referred to Project Manager(PM)
300-	Date to PM Date Returned
Approval Authority Concurs with PM?	Y / N If Y, Concurrence by Pate
	If N,Resolution: Approved Disapproved
	Resolved byDate
_PA Signatures Required?	Y / N If Y, Date to LPA 4/27/15 Date Returned
-HWA Signatures Required?	Y / N If Y, Date to FHWA Date Returned
Field Engineer Recommendation (Re	quired for SCE or DDCM Approval)
Field Engineer	Date <u>4/24/15</u>
Comments: No additional time ne	eded for this added change order <
	й





Contract No:R ~ 123 Change Order No:004		INDIANA artment of Transp	ortation	Dat	e:04/23/2015 Page: 3	
Contract: Project: Change Order Nbr: Change Order Description: Reason Code:	R - 12345 0000000 004 repair sink hole at n		uted	tar fan en an trich de anten an an anten		
CLN PCN PLN 0110 COCCCC 0110 60 Item Description: WALL Supplemental Description1: CONC Supplemental Description2: TO RE	05-04742 LS CRETE WALL POURED P	Jnit Price CO Qty 2,290.620 1.00 ER THE DIRECTION OF	Comment 00 C	Amount Cha Amount:\$	nge 2,290.62	
			Total Value	o for Change Order 00	4 = \$ 2,290.62	
Whereas, the Standard Specifica General or Standard Change Order 16' of footer installed at muffler sh Sink hole was located at sta. 19-4 ove this job. looking back at daily r change order was created using th added to this contract for the work Change Order Explanation for S	or Explanation 3 left and ended at Sta. 15 eports and past conversit me and materials the attac completed in this change pecific Line Item	crete footer was poured at 9+59 left. This work was c ons with Tom Carrow I am thed files show milestones order.	the direction of area e ompleted and per the o in agreement with mil s costs for this addition	ngineer Tom Carrow I lirection of Tom Carro sstone pricing for the v al work. No additonal i	o fix sink hole. w before I took vork. This	
It is the intent of the parties that thi Notification and consent to this cha	-		or the work describe a	bove.	If there	is a time
Contractor: Date: NOTE: Other required State and F	****	*****		ystem.	 extension with the mention 	,





Contract No:R ~ 12345 Change Order No:004	INDIANA Department of Transportation	Date:04/23/2 Pag	2015 ge: 4
71.54 / 191.52 / 191.52 / 191.41 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 191.52 / 1		*****	- MARAN MENJARASA
	APPROVED FOR LOCAL PUBLIC A	GENCY	
(SIGNATURE)	(TITLE)	(DATE)	
(SIGNATURE)	(TITLE)	(DATE)	_
*********	LPA Approval si	gnature(s) here!	
	· · ·		
PE/S			
PE/S			
	APPROVED FOR INDIANA DEPARTMENT OF		
		TRANSPORATION	na soar stedingen storaar g





- PE/S <u>must</u> attach <u>all</u> required backup documentation in the header of SiteManager, including how pricing and additional time was determined to be reasonable.
- (See Construction Memo 14-05 and section 2.19 of the General Instructions for Field Employees available on INDOT's website for more detailed information.)







Utility Coordination

Mike Hoy, P.E. Utility Coordinator, INDOT

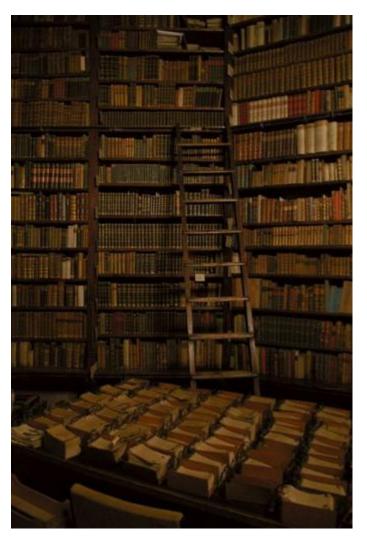




Utility Coordination

I'm with the Government.....and

I'm here to help!



Courtesy - pinterest.com





IMPORTANT...IMPORTANT...IMPORTANT

- Good UC is an integral part of your successful project delivery
- Should not be an after thought or something construction will figure out
- UC does not end at Letting the real work is just getting started
- Good proactive UC services
 - Pays for itself
 - Reduce utility related problems during construction such as delays and change orders





UC – New Paradigm

Proactive engagement with Utilities as a business partner

- Not new anymore out since 2013
- Establish "EVERYONE KNOWS WHERE EVERYONE GOES"
- Must be INDOT certified as a Utility Coordinator to interact with Utilities

UC services today <u>will cost more</u> than services in the past – PAYS FOR ITSELF





Utility Involvement?

Why establish all utility involvement as early as possible?

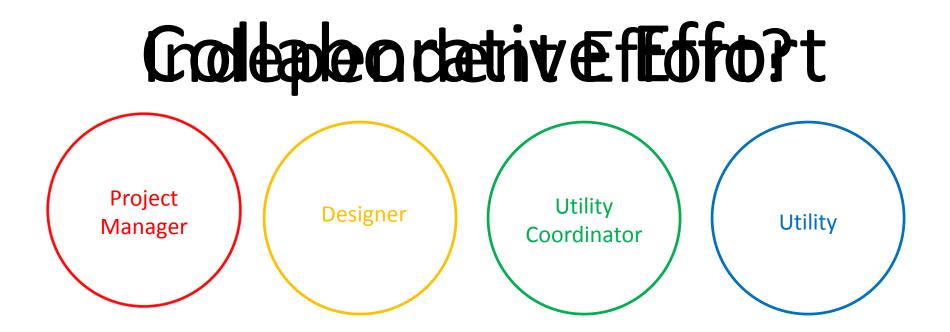
- Direct impact to your project schedule and budget
- Reimbursables property interest, tax records
- Determine complexity and relocation
 - Time to acquire materials
 - Construction time to relocate
 - Cost to relocate

Desirable to include all this in initial project application





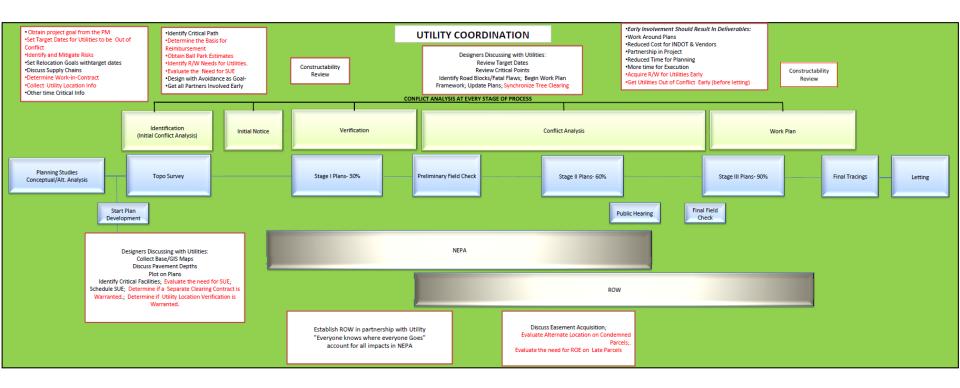
Utility Coordination Process







Utility Coordination Process







105 IAC 13

- Established business rules for engagement with the Utilities
- Minimum timeframes shown
- No room for flexibility, innovation, and changes
- Build your project schedules to allow everyone to be successful
- Flow chart provided today
 - For LPA projects, replace "INDOT" with "LPA"





UC – Professional Services

UC should not be the 1st item to cut or reduce in a proposal

What to look for in a resume or proposal

- Specific projects with complicated utility involvement
- Contact info for Construction PE/PS, Project Manager, ERC on previous projects
- Proposal should be site specific
 - Number of utilities involved, anticipated agreements
 - Estimate for Master Utility Plan and Gantt Chart
 - Hours for required coordination during construction





UC – Professional Services

Red flags for UC professional services proposal

- 81 responsible items list with hours shown for each number of utilities involved (IDM 104)
- 167 items shown from the UC checklist





Utility Coordination

Design Memo – Project Design and Utility Summary

- Hold Designers accountable to make reasonable efforts to design around utilities
- Design and Utility Summary Table
 - Tool and roadmap
 - Decision matrix to make informed conclusions & successfully complete your project delivery
- Proactive engagement start prior to getting to PFC (Preliminary Field Check)





Utility Coordination Utility Certification – Letting with Exceptions – COMMON REQUIREMENT

- Why still seeing problems from Work Plans to RSP 107, constructability, & time set issues
- Definition if utility relocations are not complete by RFC, then Letting with Exceptions will be required
 - Secondary review and signature
 - 2-5 day review after all information is submitted

SHOULD BE NO EXTRA UC WORK!

Instructions on INDOT's Utility Coordination
Standard Documents website



Utility Related Claims

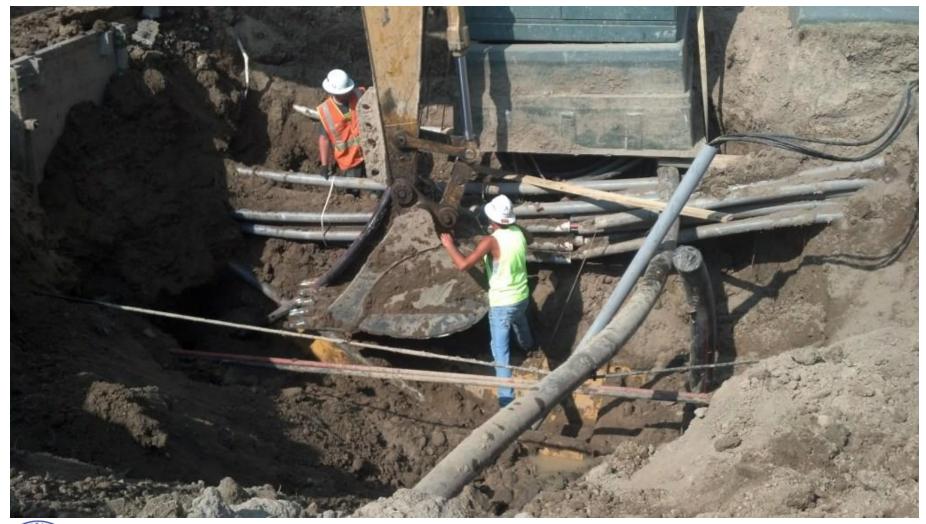
We are gaining FHWA confidence

- Due diligence is being taken to coordinate utilities prior to Letting
- FHWA is NOW willing to participate in utility related claims
 - If the cause is an unforeseen or unknown condition
 - LPA/UC can prove that every effort of coordination to avoid the incident took place
- Utilities not following the schedule outlined in the work plan will NOT qualify for FHWA participation





Utility Coordination Examples







Just a line on the Plans!!!!







\$\$\$ and over a year of impact!







SMALL STRUCTURE REHAB







SUMMARY

- Good UC is an integral part of your successful project delivery
- Should not be an after thought or something construction will figure out
- Good proactive UC services
 - Pays for itself
 - Reduce utility related problems during construction such as delays and change orders



Utility Coordination Contacts

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Utility Coordination

Questions?



www.alamy.com - CTMPA5



