FHWA – Indiana Division

NARRATIVE FOR PSE CHECKLIST

Design Quality

1. 23 CFR 630B NRS 12-09-1991; Contract Plans. Contract plans show the details that are necessary to construct a specific project and should be tailored to provide all information necessary to accomplish the work in an orderly manner.
    a. Title Sheet. The title sheet should show in a convenient arrangement:
    b. title,
    c. scales used for the plans,
    d. a location sketch with sufficient identifying information so that the project may be easily located on a county or State map,
    e. project length,
    f. current standards being used

2. Self explanatory (Verify that the design speed is appropriate and the posted speed is less than or equal to the design speed.) Speeds should be shown on the title sheet.

3. Design Speed is one of the 13 controlling criteria; however exceptions are not given for design speed. Design speed is a critical element in establishing the standards used to design a project. The chosen design speed should be consistent with the intended use of the facility. Interstates and freeways have the highest design speeds, while local roads and collectors should be designed for much lower speeds due to frequent access breaks. Design speeds should be consistent with the Indiana Design Manual or AASHTO Greenbook.

4. 23 CFR 630B NRS 12-09-1991; Typical Sections. Typical cross sections of the improvement should be placed on the sheet immediately following the index sheet, except that on combined roadway and bridge projects the cross section for the bridges may be shown with other bridge design information.
    a. Typical cross sections should be included in plans for all projects including those for bridges only, and those where abbreviated plans are to be used.
    b. All functional elements should be shown to a convenient scale including:
        i. all different slopes of cut and fill,
        ii. the width of the roadbed and median,
        iii. the shape of the finished surface and shoulders,
        iv. curb and gutter if part of the design,
        v. all integral parts of the surfacing and shoulders including, as appropriate, subbase, base course, and surface course,
        vi. limiting locations where each typical cross section is to be used,
        vii. ultimate typical cross section for stage construction project,
        viii. thickness for each element of the surfacing system,
            1. Where variations in surfacing or base thickness are proposed because of differing soil conditions or other reasons, such variations should be in tabular form, including station limits for each thickness.
            2. In instances in subparagraph a above, the typical section need show only that varying thicknesses are to be employed.

ix. relation between either proposed or ultimate status and a control survey line and profile gradeline, and

x. lateral location of profile gradeline (grade point).

5. 23 CFR 626.7; Verify that the approved pavement design and the typical cross-sections are consistent. The Pavement Design Engineer, Office of Pavement Engineering, has the responsibility for the pavement design of all Central Office developed projects and District developed projects with 5000 AADT and 500 ADTT (truck) Class 5 or greater. For District developed projects with less than 5000 AADT and 500 ADTT, the District pavement designer, development engineer or head design engineer will determine pavement type and structure. See Chapter 52 of the INDOT Design Manual (IDM) for more details on pavement and underdrain design and procedures for submitting a request for a pavement design. Discuss all pavement design questions with the Pavement and Materials Engineer. The approved pavement design must be in ERMS.

6. To facilitate drainage, it is recommended that no more than 2 lanes slope in the same direction. The two lanes adjacent to the crown should be pitched at the normal minimum slope and on each successive pair of lanes or portion thereof outward, the rate may be increased by 0.5% - 1%.

7. Verify that the plans contain necessary drainage items. i.e.: culverts, pipe extensions, inlets, manholes, riprap, etc. Review the flow of water through the project to insure a positive outlet for drainage.

8. Medians are highly desirable on arterials carrying 4 or more lanes of traffic. They serve to separate opposing traffic, provide a recovery area for out of control vehicles, provide a stopping area in case of emergencies, provide storage for snow, and diminish headlight glare. Medians within urban and suburban areas can provide a pedestrian refuge area. Review the plans, project setting and facility type to confirm that the median width selected is appropriate. If required, is the median width adequate? If no, has a design exception been approved? Where a Design Exception (DE) has been approved for reduced median width, answer yes on the form.

9. Foreslopes and backslopes must be designed to accommodate the required clear zone or provide shielding devices. Verify that the clear zone established meets design standards and that the clear zone distance is comprised of either a recoverable slope or when a combination of recoverable and non-recoverable slopes are used that a clear run-out area is provided. Foreslopes that are 1V:4 H are generally recoverable, those between 1V:3H and 1V:4H are non-recoverable. Slopes steeper than 1V:3H cannot occur within the clear zone without shielding.

10. Sharp horizontal curves should not be introduced at or near the top of a pronounced crest vertical curve as the driver may not perceive the horizontal change in alignment. Sharp horizontal curves should not be introduced near the bottom of a steep grade approaching or near the low point of a sag vertical curve because the view of the road ahead is foreshortened and the curve may have an undesirable distorted appearance. Review the plans to assure that the horizontal and vertical alignments work together to provide a safe permanent design.

11. Review plans to determine if obstructions are outside of the horizontal sight distance impact area.

12. Self explanatory. Right of way limits should delineate all permanent and temporary right of way to construct and maintain the facility.

13. Verify that the construction limits and all work are within the ROW. Per IDM 45-6.02, a minimum 6' – 15' from the top or bottom of a cut or fill slope should be provided along each roadway for maintenance equipment. Construction limits may at some point locations touch the ROW line, but are not consistently closer than 1-5' to the ROW.

14. 23 CFR 625.3(f) The 13 controlling criteria are denoted as Level One criteria in Indiana. For Full OS

projects, FHWA must approve design exception requests to any of these thirteen criteria. For all other projects, the State must approve Level One Design Exception requests. Verify that Level One checklists have been submitted for the project and that the checklist was reviewed and approved by INDOT.

Level One controlling design criteria are those highway design elements which are judged to be the most critical indicators of a highway's safety and its overall serviceability. The following design elements have been identified as Level One design criteria: design speed; lane width; shoulder width; bridge width; structural capacity; horizontal alignment; superelevation transition lengths; stopping sight distance; grades; cross-slope; superelevation; vertical clearance; accessibility requirements for disabled individuals; and bridge rail safety performance criteria. Level Two are design criteria which are judged to be important indicators of a highway's safety and serviceability but are not considered as critical as the Level One criteria. When INDOT's criteria for Level Two are not met, the designer will document in the project file that the criteria have not been met and provide a brief rationale for not meeting the Level Two criteria. Review the PSE package Level One Design Exception Checklists and plan typical sections and P&P sheets for missed for appropriate design exception documentation.

15. Verify that run-out area is provided behind guardrail that slopes steeper than 1V:3H are shielded, and that appropriate end treatments are used in conjunction with guardrail and barrier wall. Spot check that any non-yielding devices or structures within the clear zone are appropriately shielded. Where guardrail is used in conjunction with curb, the face of the guardrail should be flush with the face of the curb or extend in front of the curb 1"-2".

16. Self-explanatory. If the answer is no, then discuss why in the comments section at the end of the form.

17. Access control within the area of influence of ramp terminals is critical for safe operations. Typically, access should not be within 100 to 300 feet of a ramp terminal to preserve the operations of the interchange. If not, has documentation been approved by FHWA for interstate interchanges?

18. 23 CFR 655.603(d)(2) & 23 CFR 635.309 (n): Verify that the signs to be placed conform to the MUTCD. Signs must not contain promotional material regarding such matters as identification of public officials, contractors, organizational affiliations and related logos or symbols.

19. Self-explanatory. Spot check the permanent traffic control plan to look for sign clutter at intersections. If intersection appears cluttered, provide comment.

20. Verify that permanent pavement markings are included in the plans and estimate. Do the permanent markings look reasonable?

21. 23 CFR 630.1012(c) Transportation Management Plans (TMP) are required as part of the PSE submittal process. TMPs are must be developed in accordance with 23 CFR 630.1010 for significant projects. TMPs for significant projects include three elements:
    a. a temporary traffic control plan (TTC), also known as MOT plan,
    b. public information component, and
    c. transportation operations analysis, including transit where appropriate.

    Significant projects are defined as those projects which cause sustained work zone impacts greater than considered tolerable. All interstate system projects within the boundaries of a designated Transportation Management Area (TMA) and that occupy a location for more than 3 days are considered significant. The Indiana TMAs are NIRPC, South Bend/Elkhart, Fort Wayne, Indianapolis, Evansville, OKE (Cincinnati), and Louisville. Other projects may be designated by the State as significant. The State definition and identification of a significant project is located in the INDOT Work Zone Safety and Mobility Policy, pages 3-5. The policy is available at http://www.in.gov/dot/div/contracts/standards/INDOT_Work_Zone_Safety_Mobility_Policy_web.pdf

For projects that are not designated as significant, the State must complete the following:

a. Develop a TMP. For projects not deemed significant, the TMP consists of the temporary traffic control/MOT plan.
b. Develop a temporary traffic control/MOT plan that describes how traffic will navigate safely through or around the project area.
c. Confirm the inclusion of the temporary traffic control/MOT plan on the plans and in the contract provisions.

22. Self explanatory; lane widths on interstates should retain 12' width wherever possible and in no instance be less than 11'. Lane widths less than 9' should not be used through construction zones. Where a Design Exception (DE) has been approved for reduced lane widths, answer yes on the form.

23. Review the MOT and see if drainage has been included and is adequate.

24. The construction design speed should not exceed the speed limit posted during construction. It is recommended that the construction design speed be no more than 10 mph less than the normally posted speed of the facility. If a lower construction speed is chosen, verify that an official action has been completed to post a lower speed limit during construction and that a lower limit is posted. Temporary work zone speed limit assemblies that are used only when workers are present will not maintain a lower speed limit throughout the life of the project and must be accompanied with permanently posted limits where the design speed is less than the normally posted speed.

25. Where pedestrian facilities are provided within the limits of a project, it is important to verify that pedestrian MOT is established. This may include detours, temporary pedestrian facilities, pedestrian signage and special provisions. Where detour routes are being used, consider the length of the detour and that the detour route must provide accessible features (curb ramps, push buttons, etc). When there are sidewalks on both sides of the street, the design should phase MOT to retain one sidewalk open while the other is closed.

26. Emergency response can be most difficult on freeway facilities where only one lane of traffic is open. In these instances, it is imperative that a plan be developed for emergency response. For non-interstate projects, verify that property access is maintained for local use of emergency services.

27. Does the traffic control plan appear adequate and does it address all traffic movements? Are grade changes significant or managed by the MOT phasing?

28. Self explanatory. These requirements may be listed on the plan sheets or in a special provision. Insure that they are included in the contract documents.

29. Edge drop-offs and fixed objects within the clear zone should be shielded.
    a. Does the edge drop-off have SAFETY EDGE design?
    b. Are fixed objects within the clear zone breakaway or shielded by guard rail?
    c. Is utility work or storm drain work adjacent to the roadway shielded during construction?
    d. On interstates, is the lane closure policy being followed?
    e. Do drop-offs during maintenance of traffic (MOT) adhere to IDM 82-4.0 ?

30. Where sidewalks are present, review intersections to insure standard ramp type is specified or a specially designed ramp is provided. Look for minimum 4' sidewalk width with 5' preferred or passing blisters for 4' width. Spot check pinch points where signal poles are placed within the sidewalk width. Spot check typical sections to insure appropriate sidewalk cross-slope. Look for route continuity at the project limits.

31. Spot check major items in the estimate to insure quantities are correct and items are included. All bid

items must be covered by specification. Method of Measurement and basis of payment in units different than in the Standard Specifications requires a Special Provision.

32. Non-participating items should be denoted with an asterisk in the estimate. This indicates to FHWA and INDOT that a separate 100% state or local purchase order must be established and automates the payment of non-participating items when progress estimates are processed. Maintenance work items, such as culvert cleaning, mowing, and delivery of highway hardware salvaged from a project to an INDOT facility are not eligible for Federal participation.

33. 23 CFR 635.411 Review the contract special provisions, notes on plans and cost estimate to look for words such as: “manufactured by”, or “inc.”. This is quickly accomplished by performing a find operation in word on the Contract Information Book for these phrases. After this first scan, review the special provision menu. Proprietary items are more likely to occur in unique special provisions for decorative items, utility fixtures (water lines), benches, lighting, signal components, protective coatings, paint, or pavers, to name a few. If a proprietary item is found, a State Certification for use of the Proprietary item is needed in order for federal funds to be used on the item. On rare occasions, when there are multiple items that meet the project requirements but a single item is specified a Public Interest Finding from FHWA is required. When three or more products or services are listed along with the phrase “or equal”, the item is not considered proprietary as competitive prices can be obtained and the checklist can be marked NA. If a proprietary item is specified without a certification or PIF, the item must be indicated as non-participating and funded with 100% state or local funds. For additional information on proprietary product use, refer to the Proprietary Materials SOP or INDOT Design Manual.

Project Manager Review

34. 23 CFR 450.216 All federally funded construction projects must be included in the state transportation improvement program (STIP) and as applicable the Metropolitan Planning Organizations transportation improvement program (TIP). This reference must be included in order for the project to proceed with letting. Exceptions may be granted only for emergencies and necessities as described in 23 CFR 450.220(e). Items to check with relation to the STIP include:
    a. Is the STIP approved by FHWA without any conditions with respect to this project?
    b. Are there any discrepancies between the project to be let and the project information in the STIP? Any that exist need to be resolved with logic concerning the intent of the regulations. The items required to be included in the STIP are outlined in 23 CFR 450.216.
    c. Description of work and phase of work must agree.
    d. Normally the project location, termini and length should agree. A project totally within the project limits as listed in the STIP may be acceptable, providing the actual project information is either a more accurate description or a definite subdivision of a larger project listed in the STIP. Work outside the STIP limits, may be acceptable only if it is incidental to and necessary for proper completion or the project listed in the STIP.
    e. Estimated total cost and amount of Federal funds. The information in the STIP for the project should be in reasonable agreement with that used for programming. Any significant discrepancy, especially where there is an overage in the Federal amount for the project as compared with the STIP or TIP, should have documentation explaining the source of additional funds.

    The STIP approved by FHWA is available on the INDOT website at **http://www.in.gov/indot/2348.htm**.

    Supporting documentation consists of the page from the current STIP. Use Ctrl-F to search for the project Des number. Print the page upon which the listing is contained to a .pdf file. Each district program manager should be able to provide assistance when needed.

35. All projects except bridges and transportation enhancements (TE) are required to be on the federal

aid system of routes in order to receive federal funding. The federal aid system is comprised of all routes designated rural major collector or above. This means that projects on local roads or rural minor collectors are in general ineligible for federal aid funding unless they are bridge or TE projects. All state routes are on the federal aid system. Functional classification maps should be provided for non- state route projects except those utilizing TE or bridge funds.

36. 23 CFR 635.309(g): This section of the CFR requires that a statement is received stating that all right of way has been acquired or that acquisition is not necessary for the project. Verify that the right of way certificate is signed and dated. Letting a project without clear right of way, or "Letting With Exception", is undesirable due to the potential to add costs and time thru claims and change orders while the project is in construction. In rare instances, when all parcels have not been acquired, an exception may be requested under 23 CFR 635.309(c)(1) or (2).

    There are 3 levels of Right-of-Way Certifications as described below. Level 2 or 3 Certifications require approval by the FHWA Right of Way specialist.
    a) Level 1. All needed ROW acquired, all occupants have moved. The contractor may access all parcels for construction activities.
    b) Level 2. Not all needed ROW acquired, proof of payment to all property owners has been demonstrated and/or all recorded rights of entry have been obtained on all other remaining parcels while awaiting ancillary documentation as part of proof of payment, together with the relocation of all occupants. Any parcels with the aforementioned rights of entry and/or encroachments to be removed will have been clearly defined within the contract information book (CIB), and the current status will be conveyed to the contractor prior to issuance of the notice to proceed (NIP). The contractor may enter onto the parcels with right-of-entry; however, no construction, including utility relocations can begin on parcels with rights-of-entry until property acquisition is complete.
    c) Level 3. Acquisition of ROW is not complete, and occupants are still on the project. Level 3 Certifications are not routinely approved for use on federal aid contracts, they are exceptions granted only when it can be demonstrated to be in the public interest which requires a full explanation, notices in the bid proposals, and special assurance about protection of the occupant against in convenience, injury or any other action coercive in nature. Letting a project without clear right-of-way with Level 3 certification is undesirable due to the potential to add costs and time thru claims and change orders while the project is in construction. The contractor may not enter onto parcels that have not been acquired.

    All ROW certifications must advise that ROW been acquired in accordance with FHWA directives. When relocations are involved, the certification also advises that relocation assistance and payment rules were followed in accordance with 49 CFR Part 24.

    Verify that the right-of-way certificate is signed and dated.

37. 23 CFR 635.309(b) – Following on item 36, if the project has been approved for Letting with Exceptions due to unclear right of way, potential bidders must be notified about unclear right-of-way. There must be reasonable clearance dates given in the special provision. Whenever all right-of-way has not been acquired and the project was approved to be Let with Exception due to unclear right of way, issue a conditional authorization containing the following statement: "This project is being authorized without right-of-way clear. This authorization is given with the understanding that Federal-aid funds will not participate in additional costs, time extensions, or suspensions, which are necessitated by right-of-way clearance.

38. 23 CFR 635.307 Utility Certification: Utility work is to be so coordinated with the construction contract that no unnecessary delay or cost for the physical construction will occur. The Utility Certificate demonstrates fulfillment of this requirement.

39. 23 CFR 635.309(b) – Potential bidders must be notified about concurrent utility and railroad work. There must be reasonable clearance dates given in the special provision. Whenever the utility relocations do not precede construction of the transportation project, issue a conditional authorization

containing the following statement: "This project is being authorized without all utilities clear. This authorization is given with the understanding that Federal-aid funds will not participate in additional costs, time extensions, or suspensions, which are necessitated by utility interference." If a utility is to be reimbursed for their work, an executed agreement should be in hand. However, in some instances an agreement might not have been executed. In these cases, the utility company and INDOT should at a minimum formulate a plan for the adjustment of the facility. The project manager should be able to furnish appropriate information to allow you to make a determination on whether the project can be Let with Exception for incomplete utility coordination. This is not routinely approved on federal aid contracts.

40. 23 CFR 635.309 (j) & 23 CFR 771.115- All federally funded projects are required to comply with the requirements of the National Environmental Policy Act of 1969, codified in 23 CFR 771. There are 3 major classes of environmental documents: Environmental Impact Statements (EIS's), Categorical Exclusions (CE's), and Environmental Assessments (EAs). FHWA must approve all EIS and EAs respectively through either a Record of Decision (ROD) or Finding of No Significant Impact (FONSI). CE-4 documents are also approved by FHWA. Copies of all FHWA approved NEPA documents are available in the project files and only the signature page will be transmitted as part of the PSE approval package. CE 1-3 documents will be transmitted in their entirety as part of the PSE package.

    You should verify that NEPA has been completed, the project submitted for approval is within the study limits of the NEPA document and consistent with the project description provided in the NEPA document. When 3 or more years have elapsed from the time of NEPA conclusion or a major development step, a written re-evaluation is needed. Re-evaluations, or Additional Information Statements (AI's) are also needed when the project impacts areas outside of the original NEPA footprint. Verify that any required AI's are complete. Include the date of the originally signed NEPA document and the date of the most recent AI as applicable. Projects may not be advertised for construction until NEPA is complete. If the project is design – build, an RFQ may be issued prior to conclusion of NEPA but the RFP should be issued after conclusion of NEPA *or* the RFP must contain the status of the NEPA process in accordance with 23 CFR 636.109.

    The Environmental Consultation Form (ECF) documents that the NEPA for the project remains valid, in accordance with 23 CFR 771.129 (c). This is particularly important for projects where a significant amount of time has elapsed from completion of the NEPA to project letting. The ECF is completed and approved by the designer and INDOT Environmental staff and should be included in the project file. Verify that the form is complete and approved.

41. 23 CFR 635.309 (i); Federal aid projects must conform with all applicable state and federal regulations regarding permitting. The state must take all measures to minimize possible soil erosion and water pollution as a result of highway construction operations. This is demonstrated by obtaining all required waterway permits from the Army Corps of Engineers, Indiana Department of Environmental Management, and / or Indiana Department of Natural Resources. Typical permits are: 401, 404, Construction in Floodway, and the Rule 5 Notice of Intent. Where permits are required, work cannot be performed within the areas necessitating a permit until a permit is secured. In rare instances, a conditional approval may be given to proceed with construction in the absence of permits when the contract specifications clearly define the restricted areas and date when permits will be secure, the permit process is underway, and there is sufficient work area for meaningful construction to proceed. When permits have not been secured and the project is approved for Letting with Exception due to incomplete permits, issue a conditional authorization containing the following statement: "This project is being authorized without all waterway permits secured. This authorization is given with the understanding that Federal-aid funds will not participate in additional costs, time extensions, or suspensions, which are necessitated by delay in issuance of permits. Further, the project will be removed from federal funding eligibility if work proceeds in permit areas prior to issuance of a permit."

42. 23 CFR 635.771.109 (b) It is the responsibility of the project owner in coordination with FHWA to implement the mitigation measures stated as commitments in the NEPA document. Prior to construction, the state must list all NEPA commitments and include their provision in the construction contract. Verify that a commitments list has been developed and spot check that the commitments are

included in the contract documents.

43. 23 CFR 635.307 (a) & 23 CFR 646.216 (d) Where construction of a federal-aid project requires use of railroad properties or adjustment to railroad facilities, there shall be an agreement in writing between INDOT and the railroad company. This agreement is the result of coordination which is required if a project crosses or is adjacent to a railroad, and which potentially has an impact on the railroad facilities or operation. This includes roadway design features (e.g., roadway widening, earthwork) which obviously require work on railroad right-of-way, and not-so-obvious impacts (e.g., maintenance of traffic, contractor work activities during construction) which may impact the safe operations of the affected rail line. Verify that the agreement exists and is signed by both entities when there is a railroad within the limits of the project. In some rare instances, the railroad coordination is underway but a signed agreement is not available. When this is the case and the project has been approved for Letting with Exception due to incomplete Railroad coordination, issue a conditional authorization containing the following statement: "This project is being authorized without a railroad agreement in effect. This authorization is given with the understanding that Federal-aid funds will not participate in additional costs, time extensions, or suspensions, which are necessitated by delay in execution of a railroad agreement." No work can take place within the limits of the railroad property until such agreement is in place. Conditional authorizations require appropriate stipulations in the contract documents indicating the status of the agreement and anticipated date of execution. 23 CFR 646.105,.107 & .109 describe the requirements for liability, property damage, and protective insurance when work is performed within, on or about the railroad right-of-way. In general, where work is within 50' of the railroad right-of-way the contractor will be required to obtain insurance. Verify that the requirement for insurance is contained in the contract documents.

44. Title 23. United States Code, Highways Section 318 (23 USC 318) requires coordination of airport and highway developments. 23 CFR 620.103 (c) states: "Federal-aid funds shall not participate in projects where substandard clearances are created or will continue to exist." Required vertical clearances over highways are contained in Part 77 of the Federal Aviation Administration Regulations. NS 23 CFR 620A suggests examination of any federal-aid project within 2 miles of an airport to determine if there is a possibility of a conflict or if coordination is required. It also states that "any highway project on which mobile objects are shielded by existing structures of permanent and substantial character or by natural terrain or topographic features of equal or greater height or which are located more the than 2 miles from an airport will, normally, nor require coordination". Airport coordination would normally be the exception rather than the rule, for projects such as new roadway lighting or other relatively tall structures.

45. Title 23, United States Code, Highways Section 111 (23 U.S.C. 111) provides that all agreements between the Secretary of the U.S. Department of Transportation and the State DOTs for the construction of projects on the Interstate System shall contain a clause providing that the State will not add any points of access to, or exit from, the project in addition to those approved by the Secretary in the plans for such a project without prior approval of the Secretary. A policy statement consolidating a series of policy memoranda including guidance for justifying and documenting the need for additional access to the existing sections of the Interstate System, was published in the Federal Register on October 22, 1990 (55 FR 42670) entitled "Access to the Interstate System" and was then modified on February 11, 1998 (63 FR 7045) and on August 27, 2009 (74 FR 20679). When interstate access is being modified in a construction contract, an FHWA approved IJ is required unless the modifications are minor, Minor modifications include:
    a. Construction of new signing, striping and or resurfacing of ramps where the geometric features are not changed
    b. Widening a single lane freeway exit or entrance ramp to two or more lanes
    c. Widening an off-ramp at its intersection with a crossroad to provide two or more intersecting approach lanes
    d. Minor horizontal or vertical realignment of a ramp
    e. Converting a taper type on or off ramp to a parallel type ramp
    f. Increasing the length of an on ramp acceleration lane or an off ramp deceleration lane

g. Addition of one or more continuous auxiliary lanes between two adjacent interchange ramps; or
h. Implementation of ramp metering or other active control of vehicles entering the Interstate System

As applicable, verify that an IJ has been completed and approved and include the date of approval from the FHWA approval letter on the checklist. The FHWA approval letter should be included in the PSE package.

46. 23 USC 106 (e) and 23 CFR 627 require that all significant bridge projects where the total project costs exceeds $20 million and all other projects where the total costs exceeds $25 million have a completed value engineering study prior to advertisement. Value Engineering studies must be performed in accordance with the federal regulation and an approved state VE program. Total project cost is defined as the sum of all engineering, environmental, right-of-way, utility, rail, and construction costs attributable to the project. As appropriate, verify that a study has been conducted by reviewing the State's implementation of VE recommendations letter, which should be included in the PSE submittal. Effective with MAP-21, October 1, 2012, project cost thresholds were increased to $40 million and $50 million respectively.

47. 23 USC 106(h), Initial Financial Plans (IFPs) are required for Major Projects (as described in item 48) and for projects with a total cost between $100 M and $500 M. The IFP and subsequent annual updates should be based on detailed estimates of the cost to complete the project. Financial Plan Annual Updates (FPAUs) are to be submitted annually for review and approval. The FPAU must be submitted within 90 days after the end of the IFP one-year cycle or as specified in the IFP. For example if the IFP was approved on 9/1/14, the cycle would be 9/2/14 - 9/1/15, and the update would be due 90 days later on 11/29/15.

    Verify that the IFP or that an annual update has been submitted and is current for projects whose total cost exceeds $100 M. The project which the cost is based on is the project as defined in the NEPA document. FHWA approval of the IFP and FPAU from projects between $100 M and $500 M is not required. It is recommended that projects with a construction cost of $75 M be reviewed for this requirement as their total cost may exceed the $100 M threshold.

48. 23 USC 106(h), A Project Management Plans (PMPs) are required when federal funds are used on projects whose total costs exceed $500 million dollars and for such other projects as identified by the Secretary of the USDOT. The same section of the code prescribes the requirement for IFPs for this subset of projects exceeding $500 M in cost and known as "Major Projects". All Major Projects must have an independent Cost Estimate Review (CER) developed in conjunction with the FHWA. The project, which the cost is based on, is the project as defined in the NEPA document.

    a. PMP : The project management plan shall document the processes and procedures in place to effect timely project delivery and effectively manage the scope, costs, schedules, quality of, and the Federal requirements applicable to the project in addition to documenting the role of agency leadership and management team delivery of the project. PMP's should be advanced, reviewed and approved prior to the PSE submittal. Verify that an FHWA approved PMP exists for projects with total costs in excess of $500 M.

    b. IFP, Initial Financial Plan (& Updates): The IFP and subsequent annual updates should be based on detailed estimates of the cost to complete the project. FPAUs are to be submitted for review and approval, (as described in item 47). Verify that the IFP is current or that an annual update has been submitted and approved by FHWA.

c. CER, Cost Estimate Review, FHWA will conduct independent evaluations of the cost estimate as appropriate at critical stages throughout the project continuum. These stages may include prior to approval of the FEIS or EA and again during the preparation of the IFP. Additional CERs may be conducted anytime an Annual Update of the Finance Plan shows a significant cost increase, schedule delay, or scope change from the previous Annual Update. Verify that the CER has been completed.

49. 23 CFR 625.3(f) (i) Experimental Features are designs that have prior limited application or for which the department has minimal experience in utilization. Inclusion of experimental features within a project requires that the state submit and obtain approval of an Experimental Features Work Plan. As necessary, verify this is complete by reviewing the FHWA approval letter for the Experimental Work Plan.

50. 23 CFR 635.413 Guarantees and warranties – For projects on the NHS system, warranty provisions may only be included when:
    a. The warranty is for a specific construction item
    b. The warranty does not impose an undue burden on the contractor
    c. The warranty does not include items of maintenance that are not routinely eligible for federal funds
    d. Use of the warranty is approved by either the State for State Oversight Projects or the FHWA for FHWA Oversight Projects, based on the above items a-c

    Warranty provisions included in the INDOT Standard Specifications have been approved by FHWA as part of the approval of the standards specifications. Warranty provisions for HMA or PCC pavements have been approved on a programmatic basis and require no further approval or attachments. Electrical and mechanical equipment can (1) have the manufacturer's normal warranties transferred to INDOT or (2) there can be a specification providing for the contractor's in-service operation for no longer than 6 months after project acceptance without an individual project warranty approval. For all other warranty provisions, approval must be provided by INDOT for State Oversight projects or the FHWA Transportation Engineer assigned to the District in which the project occurs. To obtain approval, submit the item description, warranty terms, and reason a warranty is being required to the approving authority no later than Stage 3 design submittal. The approving authority will issue approval or denial in writing for inclusion in the project file. INDOT approval should be given by the appropriate office, such as the Director for Pavements, Roadways, Bridges or Construction.

51. 23 CFR 635.127 (d) Incentive/ Disincentive Clauses may be included in contracts to promote early project completion. Approval of the PSE grants FHWA concurrence for the use of the incentive/ disincentive. Incentive / disincentive amounts must be based on user costs and require a user cost analysis. Review the user cost analysis which is included in the PSE package submittal. Incentives & Disincentives are not the same as liquidated damages which are routinely assessed in accordance with the INDOT Standard Specifications.

52. 23 CFR 635.407(a) It is required that the contractor supply and be able to select materials for incorporation in the project. Review the contract special provisions to insure that there are no requirements to use material furnished by the State or Local transportation department of from designated sources. Use of designated materials may be offered as an option to the contractor but not mandated without a Public Interest Finding (PIF). If the contract mandates use of designated materials, verify that a PIF has been approved by FHWA and is included in the PSE package.

    NOTE: This is not a proprietary materials PIF, but rather a demonstration that the requirement to

use specified materials benefits the public. Typical acceptable reasons documented in a PIF include the following:

a. Cost savings,
b. Time savings,
c. Addressing an emergency safety concern, or
d. Other actions to safeguard the public or the public's interest.

53. After coordination with District construction, non-participating items may have been added to the project. The Project manager should verify that any new items are appropriately denoted as either participating or non-participating. See item 32 for further information.

54. After coordination with District construction, proprietary items may have been added to the project. The Project manager should verify that any new items are appropriately denoted as either participating or non-participating. See item 33 for further information.

55. 23 CFR 635.121 INDOT should specify the amount of time required for the completion of the federal aid contract in accordance with their approved procedures for determining contract time. Review the time set with the scope of the contract and verify that it is reasonable. Issues may arise on projects whose letting date has changed without an update of the Contract Information Book (CIB).

56. Stage 3 review comments and responses should be reviewed to ascertain that a Stage 3 or final design review has occurred and that all review issues have been resolved. If final design review comments are not included in the PSE package, contact the project manager and as necessary INDOT's Director of Engineering Services (Road or Bridge) as applicable.

Contracts Review

57. 23 CFR 635.204: A central tenet of the Federal-Aid program is open, free and fair competition for government contracts. In some instances such as emergencies, it may be in the public's interest to utilize a non-competitive procurement process for construction work. When any other process is used, a Cost Effectiveness Finding must be made and approved by FHWA. Cost Effectiveness Findings are most common in emergency situations and where it can be demonstrated that State or Local forces can complete the work with their own staff in a more cost-effective manner. If the bidding process is not being used, verify that there is an approved Cost Effectiveness Finding for the construction work.

58. Self-explanatory; 23 CFR 633.102 & 633.103, FAPG 23 CFR 633A & 635A require the state to include the specified language. Review the RSP menu at phase I PSE review and the CIB at phase II PSE review to insure the appropriate recurring special provisions are contained in the contract.

59. 23 CFR 635.107, 49 CFR 21 & 26, 23 CFR 230; It is the policy of the FHWA to promote increased participation of minority business enterprises in Federal-Aid highway contracts. The state is required to develop a plan to address increased participation. As part of the DBE Program, contract specific goals for DBE utilization are set based on the work available in the contract and the available supply of DBE firms to provide the work. Only in rare cases, where the work is limited to very few items or is considered specialty work for which DBE businesses are not available, a contract is let without a DBE goal. Review the proposal page of the CIB and record the DBE goal set for the contract on the checklist.

60. 23 CFR 635.112 (b) requires a minimum advertisement of 3 weeks for federal aid construction contracts. Reduced advertisement periods can be approved by the FHWA after receipt of a request and justification for a reduced advertisement period. When such a request is made, the TE should review the work type and project scope to determine whether a reduced advertisement period will excessively limit competition. Additionally, severe reductions in the advertisement period are undesirable as they limit the ability of contractors to become pre-qualified within the advertisement timeframe (23 CFR 635.110 (c)). The state should insure shortened prequalification timeframes when less than a 3 week advertisement period is requested.

61. Self-explanatory.