Attachment 6

Project Commitments – Pages 1-5

Heavy Haul Transportation Corridor
Jeffersonville, Clark County, Indiana
Des. No. 1382612
Project Commitments

FIRM COMMITMENTS

INDOT

1. Local school districts and emergency services will be notified of any potential traffic delays at least two weeks prior to the start of construction.
2. If additional permanent or temporary right-of-way is determined to be required, INDOT Environmental Services will be contacted immediately.
3. If the scope of the project changes from that which is described within this document, INDOT Environmental Services will be notified immediately.
4. If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment (PPE) should be used. Contaminated materials will need to be properly handled by trained personnel and disposed in accordance with current regulations. IDEM should be notified through the spill line at (888) 233-7745 within 24 hours of discovery of a release from a UST system and within 2 (two) hours of discovery of a spill.
5. All conditions of required regulatory permits (i.e., Section 401 WQC, Section 404 RGP, Rule 5, and Construction in a Floodway Permit) must be observed unless exempt through coordination with the permitting agency.
6. Use erosion and sediment control measures, including temporary earthen berms to control sediment from construction zones entering sinkholes.
7. Bare and disturbed areas within sinkhole drainage areas should be re-vegetated as soon as practical following construction with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrubs and hardwood tress species.
8. Management of post-construction runoff should be implemented by the installation of side ditches to collect surface runoff from the roadway and embankments.
9. All side drainage ditches should be directed to existing surface streams throughout the length of the proposed project.
10. Discharge of roadway runoff will not be directed into existing karst features.
11. Where possible, the existing vegetation surrounding features should be maintained throughout construction, including a minimum 10-foot buffer measured from the rim, or highest closed contour, surrounding the depression.
12. All sinkholes and surrounding buffer areas should be fenced for the duration of construction.
13. Closure or repair of sinkholes within the project limits.
14. If the proposed drainage design is modified to use existing karst features, a full-scale pollutant loading calculation should be performed to estimate the potential loads anticipated for the specific karst feature and dye-tracing should be performed to determine flow paths from these features.
15. A low salt and no spray strategy should be implemented, including the use of road signs that indicate the no spray zone.
16. An Emergency Response Plan, including a site-specific Spill Response Plan, will be developed prior to the start of project construction to identify response protocols if a spill occurs during construction.
17. Material storage and staging areas, as well as equipment storage, maintenance and re-fueling areas should not be located within the drainage are of any karst features.
18. Use of structural BMPs (e.g., water quality filters and hydrodynamic devices) should be considered at the stormwater outfalls to surface streams in the area to minimize pollutant loading and contain releases from spills.
19. Per the Karst MOU, the revised Karst Report will be redistributed to the participating MOU agencies (IDEM, IDNR, USFWS) for final review prior to construction.
20. If any permanent structures or equipment utilized for the project penetrates the 100:1 slope for the airport, FAA Form 7460 must be filed with INDOT, Office of Aviation (317-232-1477).

USFWS

21. Any unavoidable impacts should be compensated for in accordance with the Corps of Engineers mitigation guidelines.
22. Implement temporary erosion and siltation control devices such as placement of riprap check dams in drainage ways and ditches, installation of silt fences, covering exposed areas with erosion control materials, and grading slopes to retain runoff in basins.
23. Post DO NOT DISTURB signs at the construction zone boundaries and do not clear trees or understory vegetation outside the boundaries.
24. The project shall not remove trees or forested habitat outside of the proposed construction limits.
25. Low-water in-stream work will be limited to installation of culverts, piers, pilings and/or footings, shaping of spill slopes adjacent to bridge abutments, and placement of riprap.
26. Culverts will span the active stream channel and shall either be embedded or a 3-sided/open-arch culvert, and be installed where practicable on an essentially flat slope. When applicable, culverts placed in streams with high quality substrate such as gravel, cobbles and boulders, shall not disturb the native substrate within the stream bed in order to provide natural habitat for the aquatic community.
27. In-stream channel work and vegetation clearing shall be restricted to the minimum necessary for installation of the stream crossing structure.
28. Construction shall minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible.
29. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
30. Temporary erosion and sediment control BMPs will be utilized within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
31. Work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) will be restricted to outside of the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season.
32. No equipment shall be operated below the Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
33. The project proposes temporary construction and permanent post-construction BMPs for water quality treatment of stormwater runoff from impervious areas within the Proposed Alternative limits and INDOT ROW. Temporary construction BMPs will include sediment traps, check dams, silt fences, ditch inlet protections, temporary construction entrance stabilization, and temporary sediment basin within the preliminary construction plans to protect aquatic habitats. Permanent erosion control features include riprap installation over geotextile at the outflow of all culverts and paved side ditches in areas of 3 percent or steeper grades. Structural BMPs may also be employed to reduce stormwater pollution through filtration, biological uptake, and microbial activity. Post-construction BMPs are effective in treating for total suspended solids, nutrients, and metals as well as reducing impervious area stormwater runoff, thereby protecting aquatic resources that support important macroinvertebrate food sources for gray bats.
34. The project proposes any explosive blasting will be conducted in daylight hours and will utilize blasting mats to prevent flyrock from escaping the project's construction limits.
35. If necessary, the project proposes downward facing permanent lighting to reduce disturbance to nearby suitable bat foraging habitat. No temporary lighting to facilitate nighttime construction will be used.
36. If appropriate, the proposed project will evaluate wildlife crossings under bridges and culverts. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing.
37. A minimum 25-foot wide vegetated/undisturbed buffer will be maintained around karst features.
38. Permanent and unavoidable impacts to forests will be mitigated at 2:1 preservation and 1:1 reforestation ratios.
39. The proposed forest mitigation plans will be finalized in consultation with USFWS, and attempts will be made to improve the connectivity between forest patches in areas known to be used by the local gray bat population.
40. The FHWA, in consultation with the Service, must develop a mitigation plan for any secured mitigation site(s) within six (6) months of securing the site or within six (6) months of the issuance of the BO, whichever is later.
41. All forest mitigation sites must be identified and secured within 2 years of project letting, including the development of final mitigation plans. The final mitigation plans will address and/or establish the following: quantifiable criteria and methods for assessing success of all mitigation plantings and functionality of any contructed wetlands and streams, approved lists of tree/plant species to be planted (and their relative abundance/%)., approved lists of herbicides for weed control, proposed construction schedules, annual post-

construction monitoring schedules, and a long-term, ongoing management/stewardship strategy. Some degree of monitoring and invasive species management should be developed for preservation sites as well.

42. Monitor the post-construction use of the project corridor by the resident gray bat population by conducting a follow-up bat survey of the action area in the summer following completion of the project. This survey will be used to determine whether the conservation measures and reasonable and prudent measures were successful in maintaining useable foraging habitat. Monitoring must consist of a mist net survey following the Service's standard protocols, and should be initiated in the first full summer following the completion of the project (i.e. if construction is completed in June, then surveys would begin the following year). Specific survey plans will be coordinated with the Service's Indiana Field Office.
43. The FHWA will prepare an annual report detailing all Conservation Measures, mitigation efforts, and monitoring efforts that have been initiated, are ongoing, or completed during the previous calendar year and the current status of those yet to be completed. The report will be submitted to the Service's Indiana Field Office by 31 January each year. If proposed Conservation Measures or mitigation goals cannot be realized, then as provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action (e.g., highway construction, operation, and maintenance) are subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.
44. FHWA/INDOT staff will investigate and propose alternative solutions that are of equal or greater benefit to gray bats within the Action Area.
45. The proposed bridge will span Lentzier Creek and the associated floodplain.
46. Impacts will be avoided or minimized by implementing equipment servicing and maintenance guidelines, contaminant spill, erosion-control, and herbicide use plans, following standard construction BMPs, and by installing filtering barriers around sinkhole areas (in accordance with the 1993 Karst MOU) and containment of roadside ditches as appropriate.
47. All construction activities (including blasting) will take place during daylight hours to prevent percussive disturbance to foraging bats. If blasting is necessary, this activity will utilize blasting mats to contain rock fragments (flyrock) within the construction limits.
48. Lower speed limits along the operating HHTC roadway will be considered in order to reduce collisions with bats.
49. If permanent or temporary roadway lighting is installed, downward faceting lights with full cut-off lenses are suggested.
50. Use of structural BMPs (e.g., water quality filters and hydrodynamic devices) will be considered at the stormwater outfalls to surface streams in the area to minimize pollutant loading and contain releases from spills.
51. INDOT will routinely assess bridges for bat use and will coordinate with the USFWS if needed to reduce unnecessary disturbances.
52. Use design measures such as guardrails and steeper road slopes, where feasible, to minimize tree removal, particularly in riparian zones.

IDNR

53. If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Department of Natural Resources within two (2) business days
54. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of fish and Wildlife.
55. Do not cut any trees suitable for Indiana bat or northern long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
56. Post "Do Not Mow or Spray" signs along the right-of-way.

IDEM

57. The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.
58. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.
59. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October.
60. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility.
61. The IDEM Office of Water Quality will be identified as the appropriate reporting authority with regards to coordination on the emergency response plan.
62. A monitoring and maintenance plan for the affected karst features will be developed. IDNR, IDEM and USFWS will be provided an opportunity to review this plan. The establishment of water quality and a point at which a standard is established for remediation will be a part of each monitoring plan. The results of the monitoring will be submitted to IDNR, USFWS and IDEM on a regular basis.
63. The Heavy Haul Monitoring and Maintenance Plan (HHMMP) will include the following: identification of water quality monitoring locations (i.e., representatives springs throughout the corridor); water quality sampling and analysis methodology, including a list of appropriate water quality parameters; water quality sampling schedule, including pre-construction conditions to establish baseline, regular sampling during construction, and regular monitoring post-construction; criteria for remediation is established water quality thresholds are exceeded as a result of the project; roadway maintenance policy to protect karst features, such as use of de-icing compounds, herbicide applications, etc.; hazardous material spills; and maintenance and periodic monitoring of karst feature treatments.
64. All required mitigation and monitoring measures included in the Karst Report will be implemented.

FOR CONSIDERATION

USFWS

1. Although the area is not within the designated karst area of the state, INDOT is encouraged to follow the protocols and procedures outlined in the 1993 Memorandum of Understanding for construction of transportation projects in karst areas.
2. Wetland and stream impacts should be avoided as much as possible.
3. Restrict channel work and vegetation clearing to the minimum necessary for installation of any structures and roadway.
4. Re-vegetate all disturbed soil areas immediately upon project completion, using native trees and shrubs in riparian zone.

IDNR

5. Minimize impacts to and fragmentation of wetland, non-wetland forest in and outside of the floodway, streams, and floodway habitat with an alignment that minimizes the construction footprint through forested habitat, the number of forested areas impacted, and the number of stream crossings.
6. A multiple-span bridge/elevated roadway design could be combined with MSE walls to reduce right-of-way impacts when crossing forested valleys. If a multiple-span elevated roadway is not feasible, then the road's footprint should be minimized through the use of MSE walls throughout the valley rather than cut/fill.
7. Further habitat studies are recommended to determine areas to avoid. A floristic quality assessment and fauna surveys such as amphibian/herpetological surveys of the potentially affected area are recommended.
8. Impacts to non-wetland/riparian forest in the floodway/floodplain will require mitigation. 1:1 ratio for less than 1 acre of impact to non-wetland forest; and 2:1 ratio for impacts to non-wetland forest over 1 acre.
9. Impacts to streams including intermittent and ephemeral streams should be addressed in any mitigation proposal. Unavoidable stream enclosure should be done with a 3-sided culvert designed with the inclusion of grates every 100 feet to allow the enclosed stream area to approximate normal lighting conditions.
10. A single-span or multiple-span elevated road/bridge design is needed to avoid the unreasonably large impact to the stream resulting from the amount of fill needed for the road berm.
11. Creek crossings should be constructed using a bridge or 3-sided culvert instead of 4-sided (box) culverts. If box or pipe culverts are used, the bottoms should be buried a minimum of 6 inches below the stream bed elevation. Crossing should span the entire channel width and should maintain the natural stream substrate within the structure. Crossing structures should have a minimum openness ratio of 0.25 (height x width / length). Stream depth and water velocities in the crossing structure during low-flow conditions should approximate those in the natural stream channel.
12. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and native shrub and hardwood tree species as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants (e.g., crown-vetch).
13. Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush.
14. Use minimum average 6 inch graded riprap tone extended below the normal water level to provide habitat for aquatic organisms in the voids.
15. Plant native hardwood trees along the top of bank and right-of-way to replace the vegetation destroyed during construction.
16. Do not construct any temporary runarounds, causeways, cofferdams, pump around or stream diversion systems.
17. Seed and protect all disturbed slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.