

Design to Construction Transition Project Turn-Over Plan

Information Needed at Turn Over to Construction

This plan is useful to coordinate your project's transition from design to construction. Use this as applicable to project scope and complexity.

1. Survey

- **End areas (cut & fill):** Should include plots of each station analyzed or developed during earthwork computer runs and be in a format that a contractor can understand. This information will be made available to bidders upon request and should be organized in a logical format.
- **Staking data:** Should be detailed enough to allow survey crews to do slope staking, set clearing limits, and set subgrade and surfacing hubs. Should correlate with the end areas.
- **Horizontal/Vertical control:** A list should be provided that includes vertical and horizontal control datums, scale factors (to get from Project Datum to State Plane coordinates), temporary benchmark locations, GPS monuments, other monuments used, and basis of survey data (ground survey vs. aerial photogrammetry). Include copies of traverses and backup notes from the Survey Crew field books.
- **Monumentation/Control information:** Include backup notes from the Survey Crew.

2. Design Backup

- **Index:** For all backup material.
- **Backup calculations for quantities:** This should be a bound book arranged in the same order as the Summary of Quantities. Tabs are recommended for the major sections of work like Preparation, Grading, Drainage, and so on. There should be at least one calculation sheet for every item in the project. The calculation sheets for the individual items should include any assumptions about how the quantity or price was determined as well as details about special locations or situations that would be pertinent to the inspector.
- **Geotech shrink/swell assumptions:** Include assumptions for amount of material lost due to clearing; adjustments made to embankment, excavation, and borrow quantities due to shrink or swell; and the weight-to-volume conversion factors used. Should be included as part of the earthwork backup calculations.
- **Design decisions and constraints:** What decisions and constraints should the Construction Office be aware of? For instance, if a future contract is dependent on a profile or alignment being constructed in this project, it should be noted. Other issues to consider might be weather sensitivity of embankment material, order of work constraints, contractor staging areas, and public acceptance of or opposition to the project.

- **Approved deviations & project/corridor analysis:** Copies of the actual letter approving the deviation, project analysis, or corridor analysis should be included to help explain the reasoning behind the deviation. These letters should come directly from the Design File for Approval.
- **Hydraulics/Drainage information:** Include all assumptions and limitations; describe the reasoning behind inlet locations and pipe designs; and note which locations could be changed and which could not. Reference discussions with Maintenance about structure type, pond location, or access points. Include a copy of the Hydraulics Report.
- **Clarify work zone traffic control/workforce estimates:** Describe the WZTC philosophy. As backup, describe the impact to the public and what your expectations are, expected durations for detours, and the work effort required to accomplish the work within the time allowed. Also, include how the subject project will be impacted by adjacent and associated projects and how WZTC will have to be coordinated with those other projects. Include assumptions about traffic control hours and number of flaggers and patrollers used.
- **Geotechnical information (report):** Include a copy of all Geotechnical Reports for walls and bridges. Some projects will have a copy of the Geotechnical Report printed and available for the bidders. A copy should be sent to the Construction Office for its use.
- **Package of as-builts used (and verified) and right of way files:** Provide half-size copies of the as-builts and right of way plans used in the design process. Include an index so the Construction Office can understand which as-builts were used and what they were used for.
- **Detailed assumptions for construction CPM schedule (working days):** Include limitations on concurrent work activities; limitations from weather; and how the CPM could be impacted by adjacent projects, production rates assumed for work activities, and durations of shutdowns for critical items.
- **Graphics and design visualization information (aerials).**
- **Heads-up regarding controversies in the field:** Provide a list of issues that the Construction Office may have to deal with (adjacent residences and businesses, political considerations, and so on) and names and phone numbers of a contact person for each issue.
- **Specific work item information for inspectors:** Provide any detailed information not covered in the plan set that would simplify or assist the inspection effort (detailed stations for items, assumptions, and so on).
- **Traffic counts:** Include the sheets from the Plan for Approval with traffic volumes. If possible, include information about who developed the traffic information and how they arrived at the numbers.
- **Management of utility relocation:** One person from the Design Office should be designated to manage utility relocations. A description should be provided of how utilities were located (as-builts; potholing; and so on), and backup information for each utility should be included.

3. Concise Electronic Information With Indices

- **Detailed survey information:** See [Survey](#) above.
- **Archived InRoads data:** This should include end areas and both the existing and proposed DTMs. Only final alignments and channelization should be included; preliminary alignments and points are not needed and should not be included.
- **Only one set of electronic information:** For all electronic information, only include the final project configuration. Do not include any early iterations as they only serve to confuse those who are unfamiliar with the project.
- **“Storybook” on electronic files:** This should be written by the designer who created the electronic file (the Survey Crew describes survey data, the designers describe the Caice files, and so on).
- **CADD files.**

4. Agreements, Commitments, and Issues

- **Agreements and commitments by WSDOT:** Include an indexed list of all the agreements created for the project, including utility relocation, service (power, phone, water), participants (local agency, developer), and on-call consultant(s) for construction support (if consultants were used during design).
- **RES commitments:** Include a list of all landowners and contacts in the area and a list of agreed-to conditions.
- **Summary of environmental permit conditions/commitments:** Environmental permits and conditions that must be adhered to during construction should be made part of the special provisions. The backup documents for those conditions (usually a copy of the actual permit) should be included in the file.
- **Other permit conditions/commitments:** Include a list of other commitments if not specified in the contract documents, such as local agency conditions (work hours, zoning rules, and so on).
- **Internal contact list:** Include a list of names and phone numbers of persons involved in the design of the project. A single point of contact should be identified, usually the Design Team Leader.
- **Construction permits and easements:** Include a list of all construction permits and easements acquired for the project.
- **Utility status/contact:** This should be coordinated with the “Management of Utility Relocation” item.

Support Needed From the Design and Construction Offices

The Design and Construction offices should be responsible for the following support between the offices:

1. Prior to Construction

(a) More careful review of plans:

- Provide a set of plans for review at 30%, 60%, and 90% to the Construction Office.
- Consider allowing more time for the review process.
- Consider notifying the Construction Office in advance of the review so that an inspector can be available during the review time.

(b) How do we ensure that WZTC and staged construction plans will work?

- Allow time for adequate review by the Construction Office.
- Meetings between the Design and Construction offices are desirable as well.

2. Within the Design Office

(a) Work out support between the Design and Construction offices before a project is advertised to provide one or more of the following:

- Designer/design support during construction (Design Technical Advisor).
- Responsible/knowledgeable designer available during construction.
- Lead designer transfer to the Construction Office during construction.
- Designers available for redesign.
- Criteria for using design support.
- Design support during construction should be a higher priority.
- Design support for addenda (involving Construction, as directed).

3. Within the Construction Office

(a) Work out support between the Design and Construction offices before ad to provide one or more of the following:

- Lead inspector to work in the Design Office prior to ad to learn about the project.
- Determine the need for on-call agreements with any consultants who participated in the design.
- Provide feedback to the Design Office during construction.

4. Post-Construction

(a) In some cases, the Design office may benefit by receiving as-built plans from Construction. An example might be contiguous projects within a corridor where construction changes will impact ongoing design. The Construction Office should provide as-builts to the Design Office as appropriate.