1. At what stage in this process do you anticipate including bridge in the 3D submittals?

   Bridge Division is currently testing OBM and seeing the functionality for them. It will be up to Bridge Division as to when they want to begin using it.

2. Is Bridge going to OpenBridge Modeler?

   Bridge Division is currently testing OBM and seeing the functionality for them. It will be up to Bridge Division as to when they want to begin using it.

3. What is TxDOT's view on risk for contract documents when 3D models are provided to Contractors pre-bid or for use during construction? Is this being viewed as "for Contractor's information only use at risk" or is TxDOT expecting 3D models to be signed and sealed with risk being placed onto engineers despite potential differences between field conditions and model dependent information?

   Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

4. Will any training be offered to consultants?

   TxDOT's focus is to train the internal users. There may be opportunities to include consultants in classes that are not full. This will be determined closer to each training session.

5. Is TxDOT going to provide Feature Definitions for each type of drainage components that is required per project.

   All drainage components will be available in the workspace.

6. By when is the ORD Rollout?

   This is to be determined. We have several steps necessary for TxDOT to roll out ORD. Once these steps are complete, we will begin the rollout.

7. Is TxDOT looking at accepting ORD files from consultants before the TxDOT internal rollout is complete?

   No, TxDOT will not accept ORD files until after the rollout is complete.

8. Is it possible to access the TxDOT ORD Workspace today?

   No. The workspace is currently under development.

9. What is the ftp site?

   The FTP site is a public site where TxDOT provides information to contractors to assist in the bidding process.

10. Will design surveys be required to be completed using ORD?

    Yes, surveys will be completed in ORD Survey.

11. How will TCP be handled when plan sets are gone and deliverables are just 3d models. Are we going to be expected to make TCP 3D models for each phase?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

12. Will we have access to the workbook prior to the class?

    Possibly, the workbook will be posted by the first training course.

13. What will be the schedule for this training?

    That is still to be determined. PD will work with the districts to determine their training needs.

14. Working with Bentley has TxDOT addressed all issues and concerns before rolling out ORD? Can you share those issues?

    Initially, there were issues with the superelevations not solving correctly. Also there were some additions requested on the vertical profile table. The biggest issue was the ability to cut sheets into separate dgns. The original method was to cut sheets into models within a single dgn. This is now an option as to whether the user would like to have all sheets in a single dgn or a single sheet per dgn.

15. Can we get a copy of the presentation?

    Yes, the slide deck, recording of the presentation, and Q&A will be posted on the external site under Design Division.

16. Will TxDOT accept iModels and digital twins from consultants that already use this technology for other clients?

    No, because TxDOT does not have the ability to review those. We are not to the point where we have the training or the technology necessary to be able to review iModels or digital twins accurately.

17. If everything is going to be digital delivery are we moving to open bridge

    Bridge Division is testing OBM right now. BRG will make a decision on OBM.

18. When will the workset be delivered?

    The workspace will be available by the first training session.

19. Second and third on the TCP questions. Is this a 4D Model?

    This is still to be determined.

20. Is this moving away from CADD staff for sheet creation

    Once digital delivery is the requirement, there will be no sheets. However, CADD staff has the ability to create models.

21. What is the status of the TxDOT Developed 3D SUDA Library availability to consultants?

    The library is complete. The hydraulics team is testing the software and developing a training session.

22. How will drainage design work once Geopak is gone?

    SU will be used for storm drain design.

23. What will be the requirement for sealing the electronic surface submittals? Will there be a process for all projects?

    TxDOT is still reviewing sealing electronic surfaces.

24. In a previous WebEx, TXDOT discussed Bentley upgrading ORD to allow for plan sheets to be in individual dgns. Has this been accomplished?

    Yes, in this latest release there is option to have all plan sheets in one DGN or to make a single DGN for each sheet.

25. When will a TxDOT SUDA library be available for ORD Connect Edition?

    The SU library will be available before training is delivered to the districts.

26. Is the plan for a drainage report to be required in place of H&H data sheets?

    TxDOT is still in the preliminary stages of digital delivery. The specifics will be worked out and communicated.

27. Is this mainly for the design side? When is survey projects going to require ORD?

    Survey will be required to use ORD Survey along with the rest of the users.

28. When can consultants expect the TxDOT ORD workspace to be released?

    The ORD workspace will be available by the start of district training.

29. When will TxDOT's ORD workspace be complete?

    The ORD workspace will be available by the start of district training.

30. Are we using the same workspace we use for Geopak?

    No, it will not be the same because they are not the same programs. The ORD workspace will be available by the start of district training.

31. Define complete. Will we need to have all SUE, traffic signals, illumination, pavement markings, etc.

    Please contact PD to discuss.

32. Is the transition from Geopak Drainage to OpenRoads SUDA going to be occurring at the same time? Also related, is TxDOT going to be providing a drainage library/catalogue for use with SUDA that includes TxDOT precast drainage items?

    The workspace will include all needed drainage items.

33. Has TxDOT considered how design review will occur with model deliverables for people who aren't knowledgeable about OpenRoads Designer?

    Yes, this is a consideration we are exploring. There are several options for the review function. We will thoroughly explore all options and decide what is best for the users.

34. What is the timeline for the rollout?

    The rollout will occur once all of the steps on the ORD Rollout roadmap have been complete. There may be complications due to the current working conditions.

35. How will PE's protect their seal if circulated digital?

    We are exploring this with TBPE

36. How will QA/QC (ISO 9001) will fit with the digital delivery? How will the management use the Digital plans rather than pdfs?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

37. Will TxDOT ORD workspace be available to consultants before roll out?

    The ORD workspace will be available by the start of district training.

38. How "rough" are the Schematic deliverable models will be in comparison to a PS&E model deliverable? What is the measure of accuracy for a Schematic design? How inaccurate can the finished surface be in a Schematic job?

    The schematic model should be as accurate as the information at hand allows. All sideslopes, transitions, etc. should all solve correctly in the model and be shown visually accurately.

39. Which version of SS10?

    DES is researching which version of SS10 TxDOT will be going to.

40. Will surveyors be required to take more ground shots to allow for more accurate tie in conditions?

    DES is working with COGS on the language in the survey contracts to ensure the survey for all projects has the level of detail needed to produce accurate terrains and thus accurate models.

41. Is Bentley going to provide SS10 to all consultants that use SS4? This is going to be a major cost for small consultants.

    SS10 is available for everyone, not just TxDOT. Consultants will need to work with their Bentley rep to see about cost.

42. Will the models be modified during construction to reflect actual construction and serve for as-built or will post construction survey be required?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

43. What happens to current projects that require 3D model with SS4?

    Models created in SS4 can directly be transferred to SS10. Once ORD is rolled out, there will be parameters in place as to when ORD will be required.

44. Is there a way consultants can help TxDOT move forward?

    If/when there is a need for help, TxDOT will explore consultant help.

45. What guidelines will TxDOT have for existing SUE? Will full Level A be required?

    DES will work with ROW to determine guidelines for SUE

46. Will "Concept Station" be similarly used and coming soon by TXDOT for Schematics? Right now, will Concept Station design options will be considered?

    TxDOT has tested Concept Station on one project. We will evaluate it for schematics but currently SS4/SS10 and eventually ORD are required for schematic design.

47. With the rollout of SS10, when will TxDOT stop accepting SS4 files on new projects?

    SS4 and SS10 are directly compatiable.

48. Is TxDOT looking for consultant feedback on the workspace and standards?

    We are conducting a User Acceptance Test that has consultants involved to get consultant feedback.

49. What is the process if a job needs to be upgraded to ORD from an earlier version?

    The parameters of whether or not a project will need to be upgraded will be decided and communicated.

50. When will TxDOT provide SS10 workspace, config, feature definitions, etc., and SUDA 3D library to consultants?

    Once the SS10 workspace is complete, we will post on the website.

51. What are the main differences between SS4 and SS10? Why there is need to move to SS10 before ORD?

    The main difference is licensing. Bentley has SS4 licenses on a server that they are decommissioning. SS10's licenses are cloud bases. Bentley is discontinuing support of SS4 in 2020.

52. I am currently working on a 1.6 billon dollar design build. OpenRoads crashes continually. Do you Jacob have an opinion on this?

    In the testing conducted by PD, ORD works really well. The standard we follow is limiting corridors to no longer than 2 mile increments. If a corridor is very dense, the increment should be reduced.

53. Can you give us the specific release number of ORD?

    That is still to be determined. TxDOT hasn't decided on a specific release number as of yet. Once this is decided, we can share that information.

54. Have you considered design-build projects and how that process would use ORD?

    DES is working with PFD to see what impacts ORD will have on design build.

55. Will sealing the model require multiple seals due to different disciplines (structures, roadway, drainage, traffic, etc.)?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

56. How are simple projects such as mill overlay be handled?

    Mill and overlays can be handled in a MicroStation environment since there is no alignment work involved. If there are changes to any alignments, a model will need to be produced.

57. Any thoughts on how detailed the model will need to be? For instance, around bridge abutments, we could spend a lot of time getting it "right" versus getting it "close"

    The level of accuracy needs to be so that the project is buildable from the model.

58. Would schematic roll plots still be needed for Public information meetings and Public involvement?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

59. Does "adequate" level of detail include the modeling of ADA curb cuts and noses of concrete traffic separators, small details like that?

    Please contact DES to discuss this topic further.

60. Will level C/D existing utilities be required in the proposed model. In other words, if vertical is not confirmed on exist utils, are we sealing an estimated location?

    DES will work with ROW on guidelines for SUE.

61. Will TxDOT consider design software vendors other than Bentley.

    There was a RFP released about 5 years ago. AutoDesk and Bentley both responded to it. Both gave presentations and TxDOT decided to continue with Bentley.

62. ORD is continuously updated and not backwards compatible, how will you manage these releases.

    TxDOT is going to find a version that will be used for the roll out. Each Bentley release after will be vetted to determine if/when we are going to go to that version.

63. Should new contracts currently under negotiation be under ORD?

    ORD timeline is somewhat fluid so writing it in the contract now is not advisable.

64. So, if we are using SUDA / ORD for drainage items...will we be moving away from HY8 and other software?

    SU is used for storm drain design. Although there is the capability to analyze culverts, the Hydraulics section of DES is recommending using HY 8 or HEC RAS, whichever is more appropriate.

65. Is DES working with CST on tools/process for construction inspection from digital model?

    Yes, DES is working with CST on digital delivery.

66. will any sheet such as survey control sheets have to be digitally sealed by RPLS as well?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

67. Will there be a TXDOT tool set inside ORD coming up, something similar like FDOT has?

    Please contact PD to discuss this question.

68. Will TxDOT adopt Level of Development Standards (LOD) for accuracy as Vertical design has . Developed by BIMForum?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

69. Is 2 weeks enough time for the UAT?

    This UAT will be a final UAT. We are currently conducting an internal UAT. If we do find other issues in the UAT, it may be extended.

70. ORD is a 64-bit software requiring better graphics cards and multi-core processors for regular use. Other State DOT's struggle with the financial end of upgrading internal computer systems for TxDOT staff. How is TxDOT dealing with this or prioritizing users to even be able to view these mega files?

    All TxDOT engineering hardware currently has the ability to run ORD effectively and efficiently. PD has tested all the models of laptops used in design and ORD has functioned as expected.

71. Will TxDOT utilize the Bentley Communities for feedback?

    TxDOT is planning on using Bentley Communities.

72. Will a Model Execution Plan be required, and will a template be supplied? Will this be a document that goes to the contractor with the model?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

73. How will follow-up to questions asked during this session and items in work be shared with this group?

    Please reach out to the contacts listed on the presentation for any additional questions.

74. Will feature definitions and template libraries be setup using current TxDOT bid codes for pulling quantities out of the model?

    Once we implement Item Types, they quantities and bid codes should be able to be extracted from the model.

75. Have you reviewed Docu-sign in the cloud for signatures?

    We are exploring all options for signing models.

76. What about the logos from different consultants and borders? Info including CSJ number etc.

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

77. Will accuracy for PS&E be defined by a maximum horizontal/vertical error similar to survey is now? Would schematic accuracy be defined as enough to confirm ROW footprint?

    Digital Delivery is still in the very beginning stages of development. Once specifics are developed, TxDOT will communicate them.

78. If the schematic model needs to be to the level of detail for construction, what would be the difference between PS&E level of detail and Schematic?

    Schematics do not have all the details of PS&E, ie. pavement design. All constraints are not known during the schematic phase of a project. These are vetted during PS&E and the schematic design could change.

79. For culvert design and analysis, will TxDOT require only SUDA/ORD? So will we not able to use HY8 or other culvert design and analysis software?

    No, SU will only be used for storm drain design. The Hydraulics section of DES is recommending that HY 8 or HEC RAS be used to analyze culverts, depending on which is more appropriate.

80. Is TxDOT planning to provide all CADD resources (Civil Cells, Roadway Templets, Feature Definitions, etc.) to label plan view and cross sections elements including storm drainage and utilities existing and proposed?

    All this information will be in the workspace. Note that there will be basic templates in the workspace but these templates may not address the needs of specific projects.

81. Is TxDOT planning to update the plans preparation manual and it requirements to include in our design and 3D Roadway model?

    The PS&E prep manual is scheduled to be updated.