

April 18, 2024

MEMO TO: AGC/NCDOT Roadway Subcommittee Members

FROM: R.E. Davenport, Jr., PE
State Contract Officer

SUBJECT: AGC/NCDOT Roadway Subcommittee Meeting – April 18, 2024

The meeting will be held in the Riverwood Conference Room at NCDOT Century Center on April 18, 2024, at 10:00 am. Microsoft Teams will be available for those that wish to attend virtually. The following are items scheduled for discussion:

- Permanent Soil Reinforcement Mat (NCDOT)
 - *Performance based design application.*
 - *Add some additional language to keep some topsoil to keep a seed bed, issue having get vegetation.*

- Snowplowable Delineation Special Provision Update (NCDOT)
 - *Material change, new choices instead of just composite ones.*
 - *Victor to circulate the comments from the departments.*
 - *All the new materials in this provision work on both concrete and asphalt.*
 - *Installation may be slower in concrete but will work.*
 - *If the Divisions all decide they don't like a certain option, it can be taken off the list.*
 - *Delineation goes over saw and seal joint on concrete pavement, does it affect the integrity of the joint?*
 - *Manual operation, can't pick up to get away from that joint? Shadow effect.*
 - *Need to see if inlaid markers/markings are good on asphalt.*

- Junction Box Material Language change (NCDOT)
 - *Allows for composite or thermoplastic JB instead of concrete.*
 - *Junction boxes need to be a single piece, bottom and sides screwed in or bolted. Only applies to composite or plastic.*

- Automated Machine Guidance – Supplying NCDOT with a rover (AGC)
 - *When contractors are using AMG, then they need to supply a rover.*
 - *Reference Construction Stakeout Manual*

- Paving within the Railroad R-O-W on resurfacing projects (AGC)
 - *Getting flaggers on the railroad is a recurring issue.*
 - *A possible solution is a railroad crossing only contract for each Division.*
 - *Still in education stage, gathering feedback from divisions.*
 - *The Divisions need to plan railroad work within the contract time.*

- Proposed special provision for haul roads (AGC)

- *Alternate delivery needs to know if they need to have more money added to haul roads, more special provisions.*
 - *Victor to gather feedback and discussion for next time.*
 - *Intent was not to change how each Division operates, just wanted to have projects think about haul roads & plan before haul roads get used.*
- ORD/E-Ticketing Update (NCDOT)
 - **E-Ticketing Update**

E-Ticketing Spec for Asphalt has now been finalized. The spec states that E-ticketing is optional. It will make it official that Contractors can use e-Ticketing for Asphalt but also that it is not required. Also, no parallel process of manual tickets will be required. We have several projects now that we are looking to get this spec in place through an SA to go ahead and begin doing Asphalt E-ticketing now. (We would like to do more!). We are targeting July of this year to incorporate this Asphalt E-Ticketing spec into all contracts. Again, use of e-ticketing will be optional.

Copy of Spec sent to Victor and Lisa Penny.

We are also looking at Aggregate E-ticketing and preparing for piloting.

We will focus on Concrete E-Ticketing after we get the Aggregate rolling.

One question was brought up regarding Concrete E-ticketing (which is yet to be addressed). The question was will there be provision for changing the E-Ticket in situations where material is coming from a couple hours away, then arrives at site only to find that operations have been shut down for some reason .. and consequently the material gets routed to another project. In the E-Ticketing world, this would necessitate a ticket change. This scenario was noted and will be addressed with Concrete E-Ticketing.

ORD / 3D Model update

Established a Contractor Model section on Digital Transformation Webpage where contractors can download sample 3d ORD model files. These files are DGN format. This will allow contractors to explore these models in their own environment to help with familiarity, understanding, and preparation for what is coming. There is also a link to provide feedback to NCDOT on issues or concerns.

<https://connect.ncdot.gov/projects/DigitalDelivery/Pages/default.aspx>

Sample ORD 3D Models

R5912_GradingModel_L



R5912_GradingModel_Roundabout



HL0008F Grading and Drainage Model



Provide 3d Model Feedback to
NCDOT.aspx



All projects going forward will be designed using ORD and thus will come with a 3D Model. The primary focus for now on the 3d models is Grading and Drainage. As other disciplines mature in their development and use of ORD, more detail will be included in the 3d models.

We discussed that the designers and contractors likely have different softwares and there could be issues with compatibility. This may cause some issues in the short term but the long range the major (software) players are working towards a common data dictionary (IFC) that is expected to address the compatibility issues across different platforms.

- *Spec for asphalt only – got feedback and finalized.*
 - *Want to get it into contracts. Would be a supplemental agreement to get it into existing contracts.*
 - *It will be made optional, don't need to do double duty.*
 - *Would like to get more contractors to do this, won't be perfect but we feel confident it works.*
 - *Starting in July contracts – Centrally & Division (opt-in)*
 - *Reach out if you have a contract you want to add it to let us know now then. Or if you want to help pilot the aggregate portion.*

- *Most contractors are using an e-ticketing vendor already, just need them to implement in NCDOTs portal.*
- *Safety & efficiency*
- *Cement & lime time frame.*
 - *Changing tickets if the trucks go to different project. Inspection staff may not know how to send tickets somewhere else. NCDOT has the flexibility to change tickets.*
- *Sending Bryan list of suppliers.*
- *ORD –*
 - *Sandbox type models for contracting community the opportunity to see what's coming and to offer feedback if there's meaningful changes to bring more value.*
 - *Roadway and hydraulics drainage models. Going live next week*
 - *Talking with trimble to use their model system, quadri, will it implement well in the field.*
 - *What type of model? Specific scope or the whole projects. Small drainage projects or full-blown projects. How much information do we put in the model, but the desire is to use it on all projects because that's also how we're designing.*
 - *Design can include what type of data should go in the model, which is why the contractors need to provide feedback.*
 - *IFC model/standards – still need to figure out what needs to be in the model, 2D vs 3D, looking for feedback to know where to focus the energies.*
 - *Converting topic, temporary issue, no need to convert from microstation yet since we're not ahead enough yet.*
- *Crash Investigation Reports (NCDOT)*
 - *There have been difficulties in getting crash reports inside work zones.*
 - *Regional traffic safety engineers can pull those incidents/reports and get a hold of crash report data more efficiently.*
- *Blue Light Radar Trailers (NCDOT)*
 - *NCDOT is expanding blue light projects to replace law enforcement. We currently have 20 and we're getting 25.*
 - *Piloting across the state. Blue light detects speed, effectiveness at night, has a static blue light mode, etc.*
 - *When the project doesn't qualify for a speed reduction, it can be a good place to implement blue light radar.*
 - *Looking for projects to implement these trailers.*
 - *Don't need highway patrol to move these. RE staff or the contractor can move these around. They should so the public doesn't get complacent about their location and purpose.*

- *They can capture data, good for HAWKS.*
- *Supplemental Agreement will be used to add these to project.*
- *These lights need to be only used when work is going on. Use wisely. It will have stipulations on when to use them.*
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Other items:

- *Workzone training*
 - *Required before you get your license. It's a nationwide training, still in legislation.*
 - *Possibly raising the fine for speeding in workzones.*
- *Proof roll boxes*
 - *Hard to find and/or fabricate. Loaded trucks can be used for detours and temporary roads, but proof roll boxes are still needed for new alignments.*
 - *Other states use loaded tri-axel or water-filled equipment.*
 - *NCDOT to review if we want to use other methods to proof roll.*
- *Existing Utilities*
 - *Payment to have existing utilities investigated prior to project and have them drawn up/into the model*
 - *Time between when utilities are moved and project is let can be years and things can change in those years.*
 - *Getting as-builts on relocated lines is difficult and causes issues on the project.*
 - *Some lines aren't even in the files, get missed, and becomes a major issue.*
 - *NCDOT discussing level of SUE data and having it in the bid documents.*
 - *Exploratory investigations to find utilities not shown on plan. (Using extra work specification).*
 - *DOT still having routine meetings with utilities to address these issues at the project level. Needs to be addressed at the State level.*
 - *What are the as-built requirements for encroachments or utility relocation? We need as much as-built data possible.*
 - *As-builts are becoming less accurate as directional boring becomes more popular.*

2024 Meeting Dates

June 20

August 15

October 17

December 19

Attendance:

Name	Company	Email
Michelle Gaddy	NCDOT - Construction Unit	mhgaddy@ncdot.gov
Kevin Oswandel	Blythe Construction	Kevin.oswandel@blytheconstruction.com
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