

BORROW/WASTE MATERIAL PROCESS

The Contractor's Prospective

APC Fall Seminar
November 17, 2011



CURRENT PROCESS

- **PRIOR TO BID**

1. Research potential waste/borrow sites.
2. Preliminary negotiations with potential property owners.
3. Possibly sign agreement with property owner, which will be executed once contractor is the successful bidder.

● **CONTRACT AWARD**

- Finalize agreement with property owners.
- Procure design firm or use in-house forces to develop grading plan.
- Grading plan reviewed and agreed to by the property owner.
- Contractor procurement of permits begins.
 - Local Township/Boro Requirements
 - Environmental Permits

ENVIRONMENTAL PERMITS

- NPDES (National Pollutant Discharge Elimination System) for Stormwater Associated with Construction Activities.
- PA Code Chapter 102.5 effective November 19, 2010 states
 - A permit is required for “ an earth disturbance activity that involves equal to or greater than one acre of earth disturbance, or an earth disturbance on any portion, part, or during any stage of, a larger common plan of development or sale that involves equal to or greater than one acre of earth disturbance, shall obtain an individual NPDES Permit or coverage under a general NPDES permit for Stormwater Discharges associated with Construction Activities prior to commencing the earth disturbance activity.

- General Permits

- Non-High-Quality Watersheds-Permit Issued by the local County Conservation Districts.

- Individual Permits

- Site located in High-Quality Watershed-Has additional requirements and the Permit is issued by the DEP.

- Requires Erosion and Sediment Control Plan

- Requires PCSM Plan (Post Construction Stormwater Management Plan)

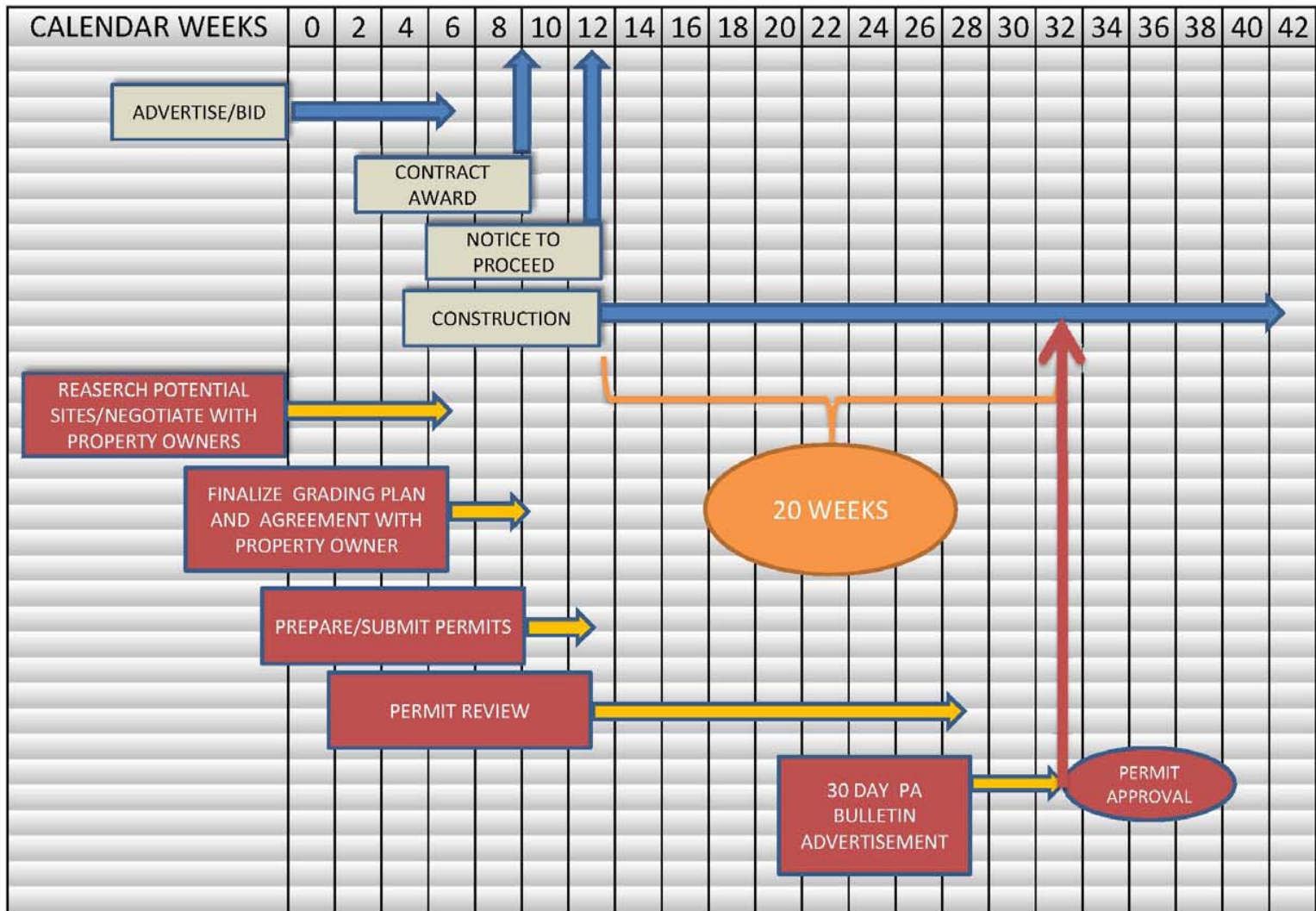
- PCSM Plan (Post Construction Stormwater Management Plan)
 - Prevent an increase in the rate of stormwater runoff and runoff volume after construction is complete.
 - Minimize impervious areas.
 - Maximize the protection of existing drainage features and existing vegetation.
 - Minimize the amount of land clearing and grading.
 - Requires special requirements and increased review time if site is located in a High-Quality Watershed.

- PCSM Plan (Cont.)

- Permittee-Copermitee must record an instrument with the recorder of deeds. This must list the PCSM BMP's, provide notice that the long term maintenance of the BMP's is a covenant that stays with the property. Therefore the property owner/operator(contractor) is listed on the deed as the responsible party for the long term maintenance of the BMP's.
- Requires 30 day advertisement period in the Pennsylvania Bulletin.
- Provides an opportunity for interested members of the public, Federal and State agencies to provide written comments on a proposed permit.

Impacts to Construction

- Schedule:
 - Not many sites are < 1 acre which will require NPDES permit.
 - Long review times: Could take 4 to 6 months to receive approval.
 - If site is located in a High-Quality Watershed, review times will increase due to additional requirements.
 - Smaller projects with shorter schedules do not have sufficient time to acquire permits.
 - Penndot is not allowing sufficient time to acquire the proper permits.



- Cost:

- There are too many UNKNOWNs for the contractor that affect the cost.
- What will the requirements be?
- Will the contractor be required to maintain the site after the project is done? If so, for how long?
- Will a property owner be willing to attach the maintenance of BMP's to his property deed. This may reduce his property value.
- Let's assume a contractor estimates his hauling based on a careful selection of a site prior to bid. After going through the review process, the permit is rejected for some unforeseen environmental concern? How does a contractor plan for that?

Field Experience-Waste Area

- Initial negotiations and verbal agreement of grading plan and terms. Site was a 9 acre site capable of handling 150,000 cy.
- Bid is prepared based on:
 - Known haul distances and equipment to fill the site.
 - Estimated costs for preparing the site.
 - Estimated costs for erosion and sedimentation control of the site.
- Designer developed a preliminary grading plan for review and approval by the property owner.

Field Experience (cont.)

- Designer developed a final grading plan, erosion control plan and post construction stormwater management plan.
- PCSM Plan required a permanent detention pond that required long term maintenance and recorded on the property deed.
- Property owner was not receptive to the long term maintenance required.
- After further negotiations an agreement could not be reached.

Improvements to the Process

- Regional waste and/or borrow areas.
 - Located within the Districts' current Right of Way.
 - Develop a few sites and maintain them until they are fully developed.
 - Give contractors the option to use them or acquire one of their own.
 - Smaller projects could benefit with “permitted” sites ready for construction.
 - Use for storage of recycled materials/concrete slabs/rock.

Improvements to the Process (Cont.)

- Provide permitted optional waste areas near the project.
 - Permits are already acquired.
 - All BMP's are designed and approved. All potential contractor's bidding on the same scope of work.
 - Give contractors the option to acquire a different waste area if they believe it could reduce the cost further.
 - Some projects are bid using permitted waste/borrow areas that are further away because there is not enough time to acquire waste/borrow areas near the site. Haul cost are higher and Penndot is paying more \$/cy for the work.

Improvements to the Process (Cont.)

- Improvements to Designs
 - Increase Limit of Disturbance to the Right of Way Line
 - Balanced cuts and fills.
 - Widening cuts/fills in order to help balance the earthwork.
 - Analyze earthwork phasing with respect to MPT.
 - Better use of recycled materials
 - Recycled concrete for rock, subbase.

Summary

- Penndot and the DEP must work with the industry to design a complete project including borrow/waste requirements.
- By designing complete projects:
 - Eliminates risk/unknowns prior to bid.
 - Construction schedules will shorten.
 - Construction cost will decrease.

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Thank You