



# **Construction Bureau's Roadway Plan Review**

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ALDOT Construction Bureau**



**PRECONSTRUCTION CONFERENCE  
Montgomery, Alabama**



# Construction Bureau's Review Process (Roadway Portion)

- **Construction Bureau reviews all the plans that are to be let to contract by the Bureau of Office Engineer. We review the plans for Design Bureau's Roadway Section & Consultant Management Section, All Divisions, County Transportation Bureau and Innovation Bureau.**
- **Construction Bureau receives the completed plans for our review approximately 12 weeks prior to letting. We have approximately 4 weeks before they are due back to the Office Engineer.**



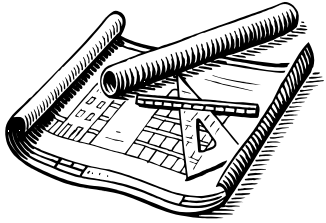
# Construction Bureau's Review Process (Roadway Portion)

- **We try to complete our reviews within 3 weeks so that our review comments can be included in the plans and returned to the Bureau of Office Engineer by the required 4 weeks.**
- **We review approximate 33 to 50 projects per letting during each 3 to 4 week period.**
- **Our review consists of checking plans for correctness along with approved construction practices.**
- **Review consists of keeping department policies and procedures.**



# Construction Bureau's Review Process (Roadway Portion)

- **Spot checking design criteria.**
- **Review plans in accordance with guidelines for operations.**
- **Review plans in compliance with standard specifications and special provisions.**
- **Review plans in compliance with special drawings, standard drawings, and any special detail drawings included in the plans.**
- **Review all correspondence pertaining to the development of the project.**



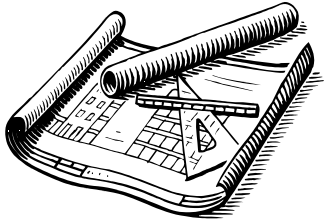
# Construction Bureau's Review Process (Roadway Portion)

- **Assign needed general applications special provisions and other needed specifications.**
- **Figure and assign construction fuel percentages for the specific type projects.**
- **Figure construction time to build the project.**
- **Time needed for constructing the project is normally Working Days except for Interstate projects when Calendar Days (Completion Date) should be used. Calendar Days can also be used for special type projects.**



# Construction Bureau's Review Process (Roadway Portion)

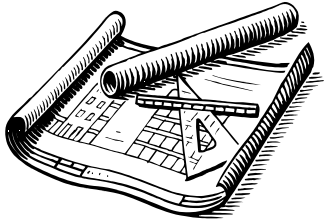
- **The Division construction engineers also figure the work time needed to complete construction of the project. We agree on the needed Construction Time and start work dates on maintenance resurfacing projects. If Construction Time is over 200 Work Days, Mr. Curtis Vincent also works with us in computing the needed construction time and any needed incentive/disincentive requirements. Mr. Vincent also works with us on all Interstate projects in computing work time.**



# Guide For Developing Constructions Plans

## GDCP 252

- **Needs to be followed for all of Construction Bureau's plan submittal and any additional submittals for our final review.**
- **Plans should be complete before we start our construction review.**
- **We often receive plans after required submittal date.**



# Construction Bureau's Roadway Comments/Problems

- The following are some of the most common roadway write-up comments and some of our problems for all the different types of projects during the final review.





# Construction Bureau's Roadway Comments/Problems

- **Title Sheet**

- Always need a Title Sheet and Pay Sheet with Construction Bureau's Plan submittal for the D.B.E. goal setting committee meeting
- Include Code Number (Charge Number) in the top right corner of sheet.
- Mileage not correct for Mileage Box.
- When in place bridges are shown, clearly label the type work, Retain, Remove, Stripe Only, etc.
- When plans have a preliminary project number, make sure the number is included on the top right corner.



# Construction Bureau's Roadway Comments/Problems

- **Index Sheet**

- **Sometime the Special Drawing will have changed to Special Project Detail Drawing.**
- **Needed Special Drawings are missing from the list.**
- **It's common to have missing sheets from the plan assembly.**



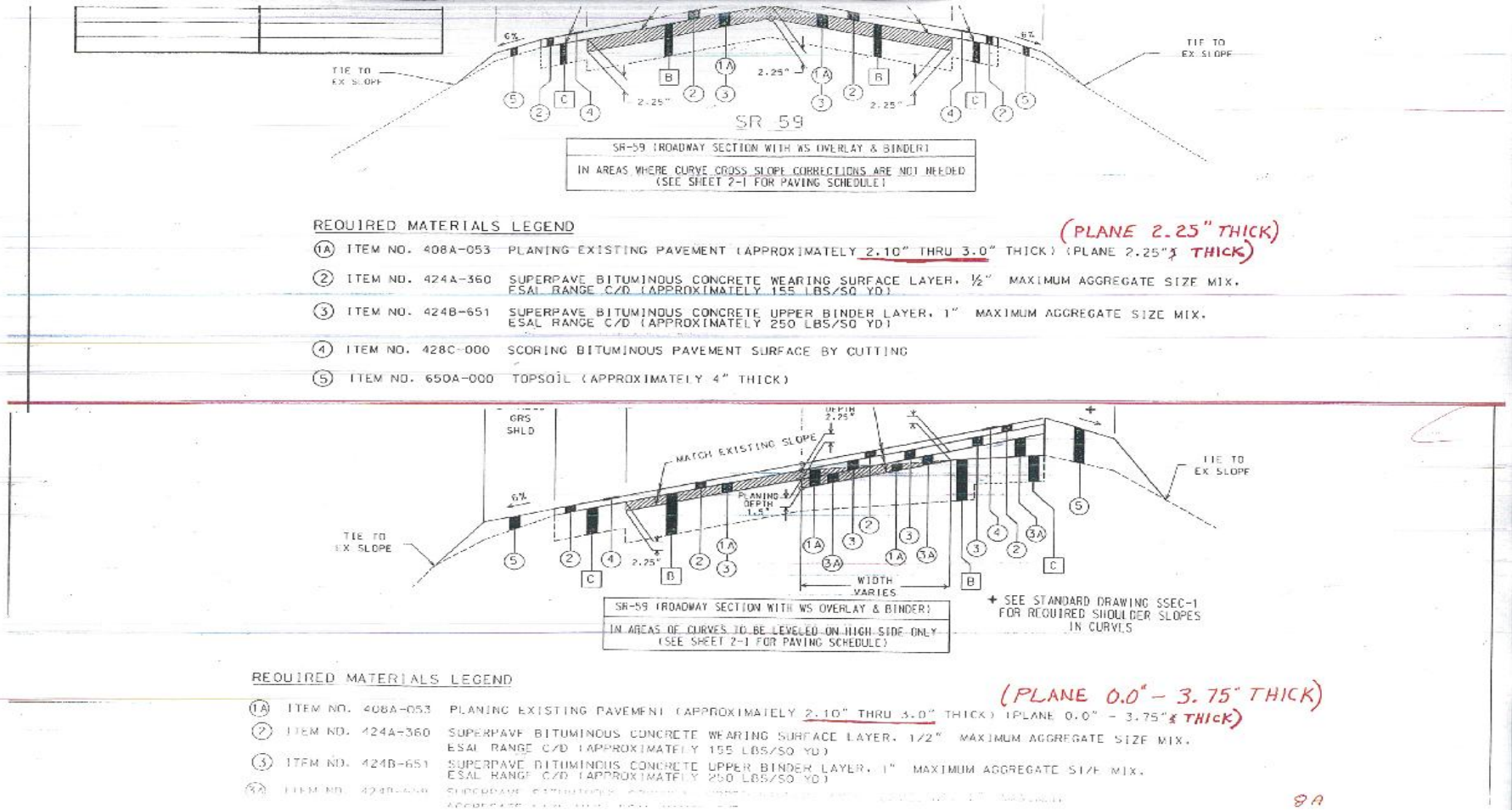
# Construction Bureau's Roadway Comments/Problems

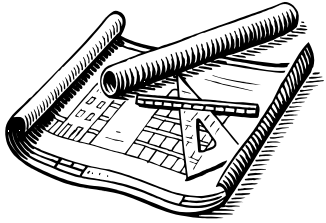
- **Typical Section Sheet**
  - **Need to show the actual required planing depth at the end of the description, for uniform depth show (Plane 1.5" thick) – varying depth show (Plane 1.5" to 6" thick). The planing range depth for payment is always included in the pay item description.**



# Construction Bureau's Roadway Comments/Problems

## • Typical Section Sheet





# Construction Bureau's Roadway Comments/Problems

- **Typical Section Sheet**
  - Provide tie-ins for all paved and unpaved side roads and driveways. Include all sketches needed for longitudinal transitions tie-ins.
  - Will have started review on plans and have not received Approved Material Write-Up. Also we will be working on plans and the Materials Write-Up is being changed. Sometimes plans do not agree with Material Write-Up.
  - Tack coat (405A) and/or Joint Sealant (407B) requirements should be included in the materials write-up.
  - Typical sections should provide station to station locations and details for requirements like Undercutting, Underwater Embankment, Rip-Rap Areas, Rock Buttress, etc.



# Construction Bureau's Roadway Comments/Problems

- **Typical Section Sheet**
  - **Provide ditch typical sections for all special ditch grades and normal ditch grades where a different type ditch treatment is required.**
  - **Blow up details for Concrete Median or Safety Barriers, show layer barrier sitting on and the tie to adjacent asphalt layers, etc.**
  - **Always show thickness of In Place Asphalt Pavement to be (Retained, Removed, Partial Remove, etc).**
  - **When 2:1 and steeper slopes are required, you must obtain approval from the Chief Engineer.**

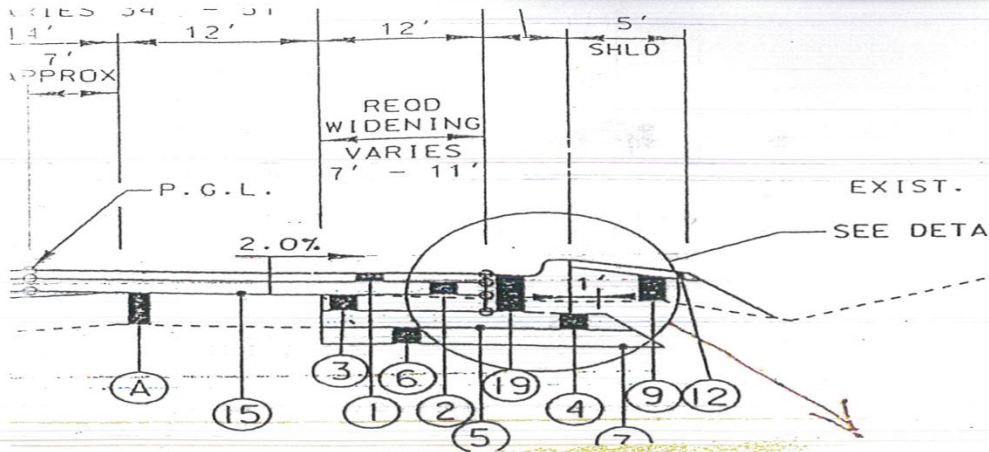


# Construction Bureau's Roadway Comments/Problems

- **Typical Section Sheet**
  - **Only provide the applicable project note numbers that pertain to the particular typical section (Don't put note numbers on the typical that do not apply)**
  - **Provide blow up details for TY "C" curb and gutter layers and TY "N" curb layers. Try to fit bottom of structure to the top of a layer so that new placed layers will not need partial removing and also show the layers adjacent to the face of gutter. If the bottom of the TY "C" curb and gutter is sitting on a 2% slope, make sure you have a 6 inch minimum thickness for the gutter portion. See Special Drawings for the varying heights of these structures.**



# Construction Bureau's Roadway Comments/Problems



① 135 = 1.22"  
 ② 180 = 1.62"  
 ③ 250 = 2.25"  
 ④ 350 = 3.15"  


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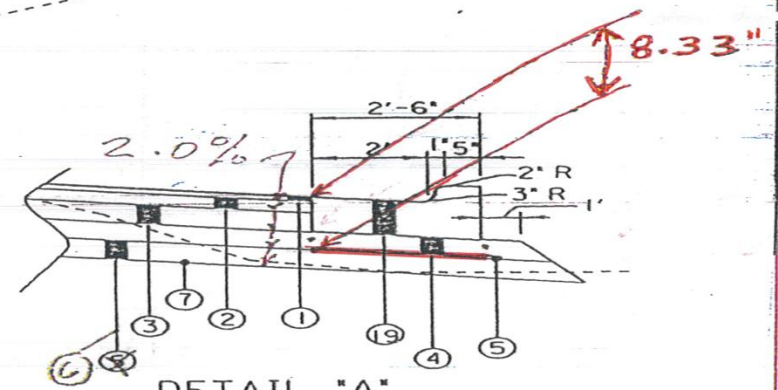
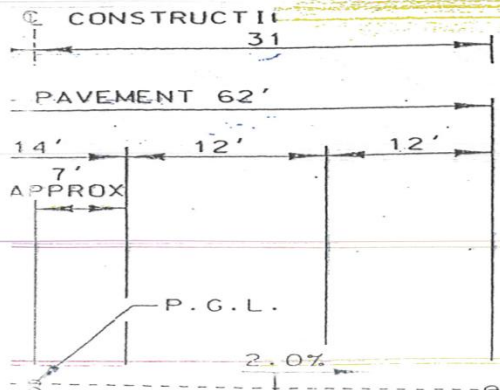
 8.3"  
 Needs to Set on layer ⑥

L SECTION  
 R-53  
 TO STA. 36  
 T.S.

① 135 = 1.22  
 ② 180 = 1.62  
 ③ 250 = 2.25  


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 5.09  
 sitting on Layer ④



DETAIL "A"  
 TYPE "C" CURB AND GUTTER  
 N.T.S.

NOTE: FOR DETAILS NOT NOTED,  
 REFER TO STD. DWG. 623-XY

• Gutter 6" Min  
 thickness  
 • Set on top of layer  
 6 (8.33")  
 can vary  
 6" to 10"

EXIST. GROUND





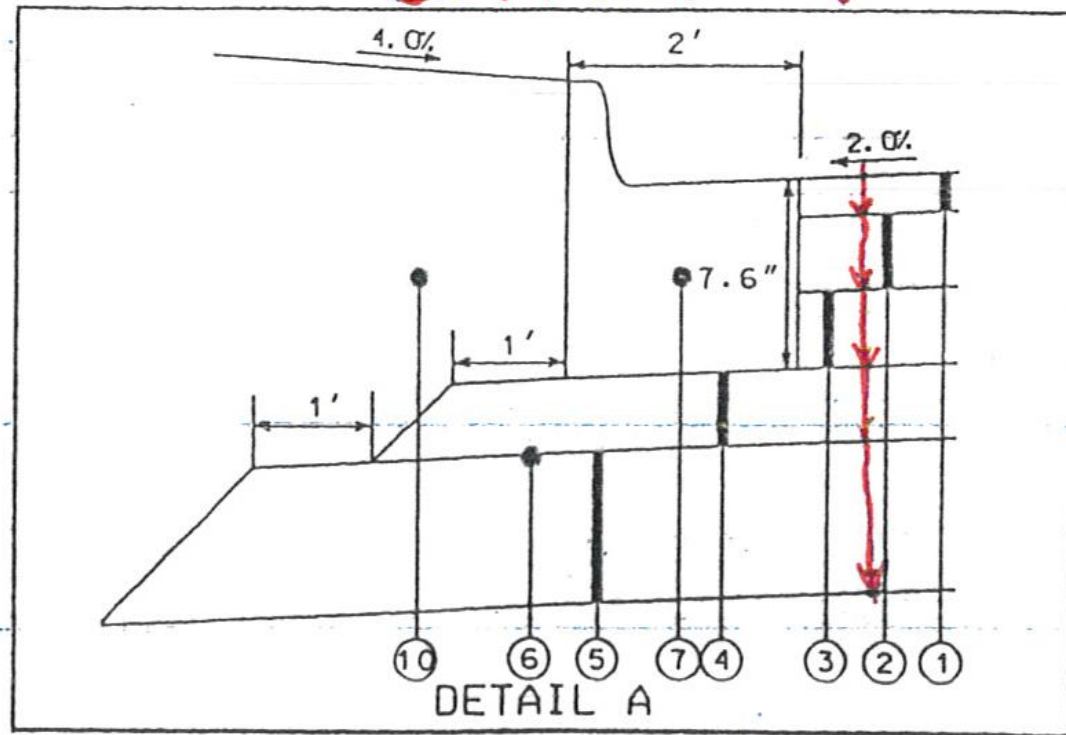
# Construction Bureau's Roadway Comments/Problems

Correct ↴

- ① . 1.49"
- ② 2.93"
- ③ 3.15

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- 7.57
- or
- 7.6"



- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧
- ⑨



# Construction Bureau's Roadway Comments/Problems

- **Typical Section Sheet**
  - **If the Material Write-Up could include information that the requirements in GFO-5-26 are followed in the development of plans and the scope teams recommendation, this would avoid comments and questions.**
  - **If project is on National Highway System and cross slope and/or super elevation corrections are needed;**
    - a) **(2% or “e”) is to be shown on typicals. (Special Provision 12-0104)**
    - b) **Super elevations drawings are needed.**
    - c) **Provide Cross Slope Correction Boxes to include a leveling schedule and leveling quantities.**



# Construction Bureau's Roadway Comments/Problems

- **Typical Section Sheet**
  - **If project is not on N.H.S. and cross slope and /or super elevation corrections are needed.**
    - a) **(2% or “e” Approximate) is to be shown on typicals.  
(Special Provision 12-0105)**
    - b) **Super elevations drawings are needed.**
    - c) **Provide Cross Slope Correction Boxes to include a leveling schedule and leveling quantities.**



# Construction Bureau's Review Process (Roadway Portion)

- **Summary of Quantities**
  - **Pay Item 680A is now Geometric Controls instead of Engineering Controls.**
  - **Pay Item 665B Temporary Mulching (Acre) Unit of Measure in now (Ton).**
  - **Need specifications and new pay item number for required new items that are not included in our Special Drawings and Standard Specification. A Special Provision number will be assigned for the item so that the Method Of Payment and Specifications can be included in the proposal.**



# Construction Bureau's Review Process (Roadway Portion)

## ALABAMA DEPARTMENT OF TRANSPORTATION

DATE: February 1, 2012

Special Provision No. 12-0156

SUBJECT: Pole Mount Radar Speed Display Sign, Project Number SRTS-SR12(906), Elmore County.

Alabama Standard Specifications, 2012 Edition, shall be amended by adding the following:

### SECTION 747 POLE MOUNT RADAR SPEED DISPLAY SIGN

#### 747.01 Description.

This Section shall cover the work of furnishing and installing a pole mount radar speed display sign.

Descriptions and definitions of the equipment, word and terminology used in the furnishing and installing of radar speed detection sign are given in the Manual of Uniform Traffic Control Devices (MUTCD) publications of the Institute of Transportation Engineers (ITE), the National Electrical Manufacturers Association (NEMA), the National Electrical Code (NEC), and the International Municipal Signal Association (IMSA).

#### 747.02 Materials.

Specification	}	Sign Face Plate	
		Case Work	Call
		Electronics	John Lucas
		Warranty	Specifications Engineer

#### 747.03 Method of Measurement.

The installation, purchase for the City of Tallassee of a radar speed detection device, when provided by the plans or proposal, shall be measured in the individual radar speed detection devices, and each device shall be as a separate individual unit.

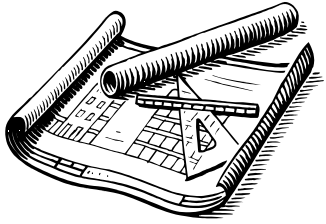
#### 747.04 Basis of Payment.

##### (a) UNIT PRICE COVERAGE.

Each speed detection device shall be paid for at the contract unit price per each which shall be full compensation for all materials, services, and incidentals necessary for the City of Tallassee to retain ownership of the device.

##### (b) PAYMENT WILL BE MADE UNDER ITEM NO.:

747-C Pole Mount Radar Speed Display Sign - per each



# Construction Bureau's Review Process (Roadway Portion)

- **Box Sheet**

- **Show “Required” in all the box titles. (Including Removal Items)**
- **Pay Item Unique Numbers and Quantities don't match the pay sheet.**
- **List all of the Special Drawing and Detail Drawing sheet numbers that are needed for all the different roadway requirements in the box.**



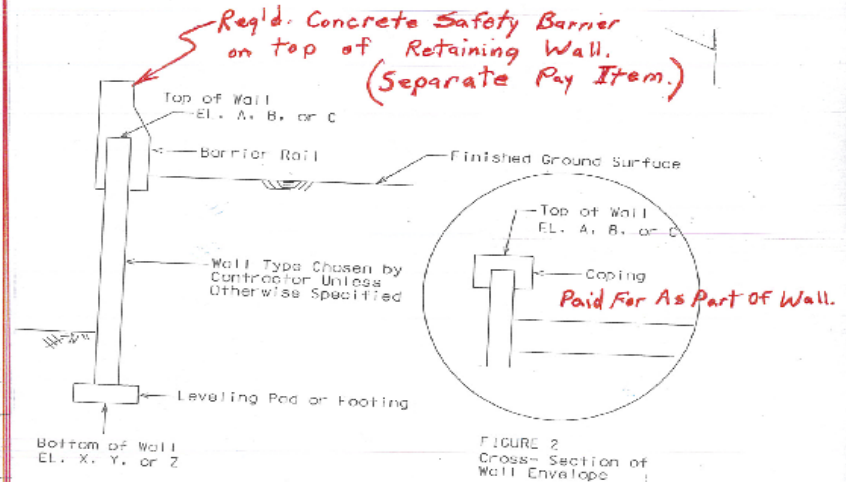
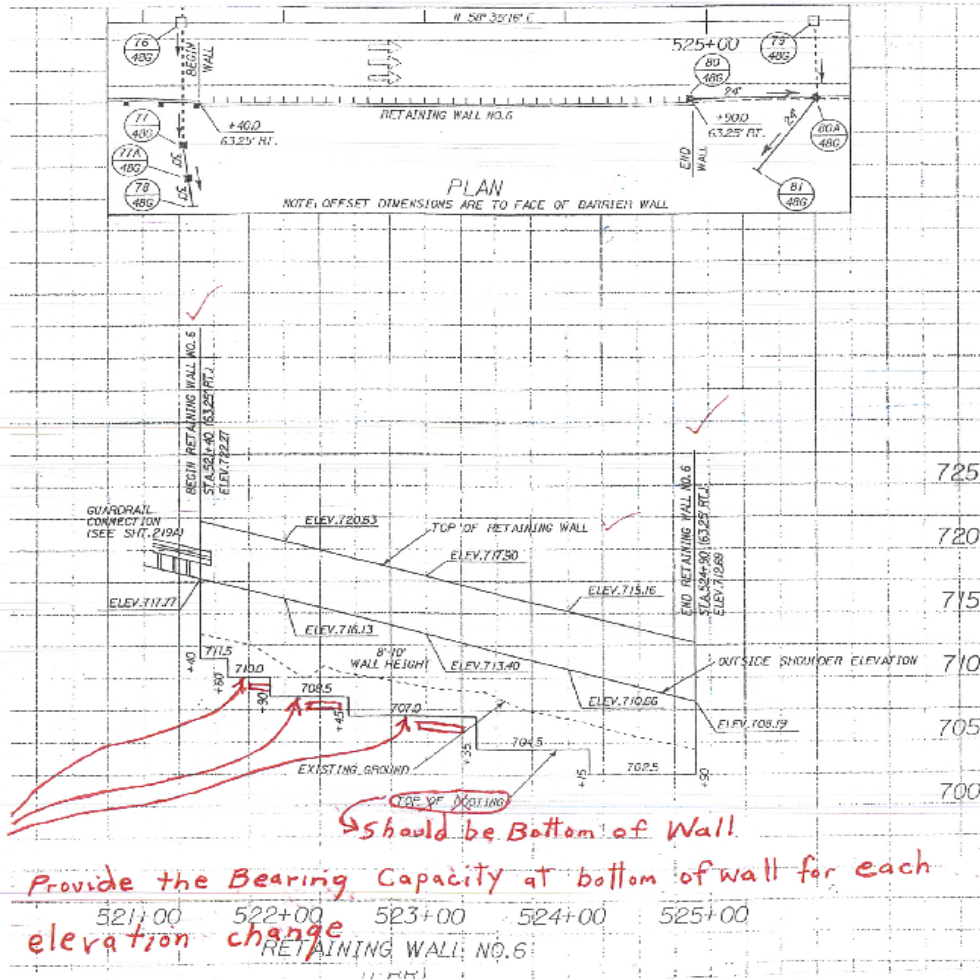
# Construction Bureau's Review Process (Roadway Portion)

- **Plan Sheet**

- **Label Centerline Construction, Baseline Construction and Profile Grade on the plan sheet to the correct locations as shown on the Typical Section.**
- **Correct use of work area shading and/or hatching.**
- **Make sure the legend symbols and abbreviation in the plan assembly match what is shown on the Plans Legend Sheets.**
- **The retaining wall details sheet needs the Elevations and Bearing Capacities shown at each elevation change at the bottom of the retaining wall.**



# Construction Bureau's Review Process (Roadway Portion)







# Construction Bureau's Review Process (Roadway Portion)

- **Plan Sheet**

- When permanent Concrete Safety Barriers are to be mounted on top retaining walls, Pay Item 629A, Concrete Median or Safety Barrier TY 4A (Reinforced) (Retaining Wall Mounted) should be provided.
- While we are reviewing plans, there have been several situations where we have completed our reviews or while working on certain projects to find out that they are being redesigned, which diminishes our time and slows our review process.
- Project Notes should not be added that would reiterate the Specifications.



# Construction Bureau's Review Process (Roadway Portion)

- **Traffic Control Plans**

- **Try to use the Special Project Detail TCP Sketches as much as possible (Index Nos. 2000 to 2023). Approximate 17 of the Special Project Detail TCP Sketches were updated for the 2013 year. Also the Latest Holiday Notes are now on Index Number 2000, located on the ALDOT Design Bureau website labeled Traffic Control Details and Special Detail Drawings.**
- **When Portable Concrete Safety Barriers Type 6 is needed for traffic control on the bridges. Pay Item 726A, Portable Concrete Safety Barrier, Type 6 (Bridge Bolted) is needed.**
- **Carry through TCP Notes from note sheet to the first sheet of the TCP plans.**



# Construction Bureau's Review Process (Roadway Portion)

- **Traffic Control Plans**

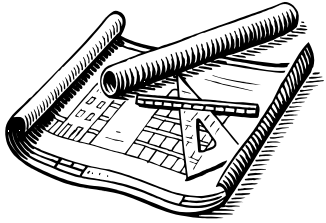
- **Show correct Standard Highway Sign drawing numbers for the required construction signing. Sometimes the SHS drawing numbers are for the yellow and black signs.**
- **If Planing (any length) is required and there is no note stating that traffic will not be allowed on planing, the W8-15 and W8-15p (Motorcycle Plaque and Sign) should be set-up.**
- **When Bridge Rail Retrofit is required for 4 Lane Highway, we need two project notes.**
  - a. The equipment used to construct the bridge rail retrofit shall travel in the direction of traffic.**
  - b. Once the existing guardrail has been removed from the bridge ends, the contractor shall have 5 calendar days to attach the type 13 guardrail end anchor to the new bridge rail retrofit.**



# Construction Bureau's Review Process (Roadway Portion)

- **Utility Sheet**

- **The required Relocated Utilities are not plotted when we receive final plans for review.**
- **Utility Requirements will not be completed until the last 4 or 5 weeks before letting.**
- **The Utility Certificate provides the utility relocation dates that the contractor needs to know in order to bid and that also affects the contract time that is set and determines whether the project should be let at this time. The Utility Certificate is needed when the plans are sent to Construction Bureau. Without this we cannot do a proper review of the Sequence of Construction.**



# Construction Bureau's Review Process (Roadway Portion)

- **Signing**

- Using correct signing pay items for signs based on type of background.
- When U-Channel is required, make sure to provide pay item 710B-021, Roadway Sign Post (No 3 U-Channel, Galvanized Steel or 2" 14 Ga. Square tubular steel) so that the 2" tubular steel post is an alternate.



# Construction Bureau's Review Process (Roadway Portion)

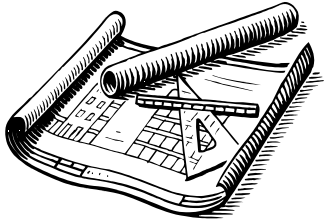
- **Traffic Stripe & Markings**
  - **Add Special Details for placing Pavement Markers not shown by Special Drawings.**
  - **Detail sketch for placement of Traffic Control Markings for transition and island areas.**
  - **Show the correct Standard Highway Signs special drawing number for the required construction signing needed.  
(Several drawing numbers and sign location on SHS sheets changed January 1, 2013)**



# Construction Bureau's Review Process (Roadway Portion)

- **Erosion Sediment Control**

- If soil disturbance, make sure that you have all of the ESC drawings listed.
- If you have Wattles or Riprap for ditch checks, then 610D-003, Filter Blanket, Geotextile will be needed.
- If 10 acres and over is disturbed on a priority site a Turbidity Meter (Pay Item 665M) is needed.
- Label Primary and Secondary Stormwater Discharge and Background Points for all projects.
- Show Stabilized Construction Entrances
- Phase Erosion and Sediment control plans.



# Construction Bureau's Review Process (Roadway Portion)

- **Cross-Sections**

- **Phased projects should show all the Temporary Construction Slopes on cross-sections and the necessary temporary construction slopes for each phase on the drainage sections. They are needed for Constructability, Erosion Sediment Control and Earthwork Quantities.**
- **Cross-sections should have earthwork volumes labeled or included in a separate table in the plans.**





# Construction Bureau's Review Process (Roadway Portion)

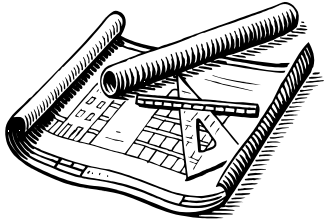
- **Earthwork Sheet**

- **Send two Earthwork Sheets with one showing percentage for Swell and Shrinkage Factors included for our review. The Swell & Shrinkage sheet will be removed for the final plan assembly.**



# Construction Bureau's Review Process (Roadway Portion)

- **Top Three Problematic Areas**
  - **Not receiving the required plotted utilities and the utilities certificate with the construction submittal.**
  - **Not receiving approved materials reports on time, and modifying the materials reports after reviews have started.**
  - **For projects where cross-slope correction is needed, Cross-Slope Correction Boxes are not included in the plan assembly; or if the boxes are included, not using the standard format, or not following the guidance/examples provided.**



# Construction Bureau's Review Process (Roadway Portion)

Questions?