MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Inter-Departmental Memorandum

TO: Squad Leaders

DATE: November 10, 1997

FROM: Steven W. Reeves SWR
Quality Control Engineer
Roadway Design

SUBJECT OR PROJECT NO: Checklist

INFORMATION COPY TO:

John Pickering
Ray Balentine
Section Leaders
Active Consultants
File

COUNTY:

Please find enclosed a copy of the checklist that will be used by all Design Squads. This checklist will be required to be filled out prior to submitting plans to Quality Control. A copy of the completed checklist shall be placed in the quantity file.

A copy of the RWD-600 shall also be placed in quantity file. This will aid the checking squad. Copies of the checklist are available in the Quality Control office.

If you have any questions or comments, please call my office.

SWR/swr
enclosures

DESIGN TEAM LEADER
QUALITY REVIEW REGISTER
(to be submitted with plans and
quantity file for final review)

P.E. NO. _____

CONSTRUCTION NO. _____

TERMINI _____

COUNTY _____

DISTRICT _____

SECTION ENGINEER _____

DESIGN SQUAD _____

LETTING DATE _____

DATE DELIVERED TO QUALITY CONTROL _____

DATE RETURNED FROM QUALITY CONTROL _____

ALL ITEMS HAVE BEEN REVIEWED AND DETERMINED TO BE READY FOR PRINTING!

_____
Design Team Leader

Date_____

CHECKLIST FOR TITLE SHEET

IS PROJECT IDENTIFICATION COMPLETE? _____

IS CODE NUMBER CORRECT? _____

IS DESCRIPTION COMPLETE? _____

IS NORTH ARROW SHOWN? _____

IS DESIGN CONTROL DATA COMPLETE? _____

ARE SCALES SHOWN CORRECTLY? _____

IS LOCATION MAP CORRECT (township-range-section)? _____

ARE THE FOLLOWING SHOWN, IF REQUIRED?

a. bridges (include box culverts over 20' (6 m) measured along centerline _____
b. railroads and names _____
c. streams, include names _____
d. city, urban, and/or rural limits _____
e. county lines _____
f. all roads and streets identified _____
g. plan-profile sheets superimposed _____
h. equations _____
i. omitted sections _____

ARE STATIONS FOR BOP, EOP, COUNTY LINES, AND/OR URBAN LIMITS SHOWN CORRECTLY? _____

ARE BRIDGE AND ROADWAY LENGTHS SHOW IN FEET AND MILES OR METERS WITH BREAKDOWN FOR RURAL, URBAN, COUNTIES AND TOTAL? _____

IS PROJECT NUMBER SHOWN PROPERLY AT TOP AND BOTTOM ON RIGHT END OF SHEET? _____

ARE CHIEF'S AND DIRECTOR'S SIGNATURES AND DATES SHOWN? _____

IS GENERAL INDEX COMPLETE? _____

DOES GENERAL INDEX AGREE WITH DETAIL INDEX SHEET? _____

IF THE PROJECT IS TO HAVE CONTROL OF ACCESS, IS THE RIGHT NOTE SHOWN ON SHEET? _____

IS PROJECT LOCATION SHOWN ON STATE INSERT? _____

DO STATION NUMBERS FOR BRIDGES, BOX BRIDGES, BOP, EOP, EQUATIONS, OMITTED SECTIONS, URBAN LIMITS AND/OR COUNTY LINES AGREE WITH STATIONS SHOWN ON PLAN/PROFILE SHEETS AND BRIDGE SHEETS? _____

CHECK PLANS FOR WETLANDS, CHANNEL CHANGES, WATERS OF THE U.S. OR STANDARD GROUND PREPARATION OVER 5 ACRES. IF ANY OF THE ABOVE EXIST, WETLAND AND/OR STORM WATER PERMITS REQUIRED. CHECK IF PERMITS HAVE BEEN OBTAINED. _____

CHECKLIST FOR DETAILED INDEX AND GENERAL NOTES SHEETS

DESCRIPTION OF EACH SHEET GROUPED UNDER THE SAME TITLE AND SEQUENCE AS IN THE GENERAL INDEX? _____

WORKING NUMBERS LISTED _____

SHEET NUMBERS LISTED AS SHOWN IN CHAPTER 15 OF THE DESIGN MANUAL _____

LATEST REVISION DATES FOR STANDARDS SHOWN _____

SUB-TOTAL SHEETS FOR EACH GROUP AND SHOW TOTAL NUMBER OF SHEETS AT THE END _____

P.S. & E. ASSEMBLY STAMP WITH DESIGNER'S NAME SHOWN AND DATE OF PRINTING _____

TYPICAL SECTION SHEETS SHOULD BE ARRANGED AS SHOWN IN CHAPTER 15 OF THE DESIGN MANUAL _____

FIRST PLAN/PROFILE SHEET WILL BE WORKING NO. 3 _____

ALL NECESSARY STANDARD DRAWINGS INCLUDED _____

GENERAL NOTES SHALL INCLUDE THE FOLLOWING:

a. listing of public utilities or note referring to wk. no. 3 where utilities may be listed. _____
b. shrinkage factor _____
c. soil profile note _____
d. any other information specifically applicable to a particular project that is not contained in the standard specifications or special provisions _____

CHECK LIST FOR TYPICAL SECTIONS

CHECK DESIGN DATA SHEET AND APPROPRIATE INSTRUCTIONS FOR SHOWING THE FOLLOWING ON EACH TYPICAL:

a. roadway, shoulder and pavement widths _____
b. structure thickness and subgrade slope _____
c. plan grade location _____
d. all slopes including rate and width _____
e. erosion control _____
f. description of materials or treatment _____
g. widening at bridges _____
h. benching if required _____
i. angle of repose shown _____

EACH TYPICAL IS CLEARLY IDENTIFIED BY NAME AND STATION LIMITS _____

STATION CONTINUITY---BOP TO EOP _____

EACH SECTION DRAWN AS 1/2 CUT SECTION AND 1/2 FILL SECTION _____

TYPICAL IS DRAWN TO SCALE _____

VERTICAL SCALE SHOULD BE EXAGGERATED TO CLEARLY DEPICT THE VARIOUS COURSES _____

EACH COURSE IS INDEXED BY A NUMBER AND EACH NUMBER IS DESCRIBED ON THE TYPICAL SECTION SHEET, AS PER THE DESIGN MANUAL _____

CONTROLLED DESIGN SOIL AND UNDERCUTS WILL BE SHOWN WHERE REQUIRED _____

EACH COURSE DESIGNATED BY A SHADED BLOCK, NOT AN ARROW _____

CHECK LIST FOR SUMMARY OF QUANTITIES SHEET

ARE PAY ITEMS LISTED IN NUMERICAL ORDER? _____

IS EACH PAY ITEM DESCRIPTION COMPLETE AND IN ACCORDANCE WITH LATEST PAY ITEM LIST? _____

HAVE THE QUANTITIES BEEN SEPARATED ON PROJECTS THAT HAVE DIFFERENT COUNTIES AND/OR URBAN/RURAL SECTIONS? _____

ARE THE UNITS OF MEASUREMENT ALL CORRECT? _____

HAVE THE QUANTITIES BEEN ROUNDED TO A WHOLE NUMBER? _____

HAVE ALL FOOTNOTES NEEDED FOR CLARIFICATION OF SPECIFIC PAY ITEMS BEEN ADDED? _____

CHECK PAY ITEM NUMBER VS. DESCRIPTION _____

ARE ALL PAY ITEMS NEEDED FOR CONSTRUCTION OF PROJECT BEEN ADDED? _____

ARE ALL PAY ITEMS GROUPED UNDER THE CORRECT HEADINGS? _____

COMMON OMISSIONS AND ERRORS

******EARTHWORK ITEMS******

201-B CLEARING AND GRUBBING--ACRE OR HECTARE: THIS PAY ITEM MUST BE INCLUDED ON ALL PROJECTS WITH TEMPORARY EASEMENTS. _____

202-A REMOVAL OF OBSTRUCTIONS(_____)--LUMP SUM: THIS PAY ITEM MUST HAVE FOOTNOTE INCLUDING NO. AND TYPE OF SPANS, BRIDGE NUMBER AND STATION NUMBER FOR EACH BRIDGE TO BE REMOVED. _____

206-A SELECT MATERIAL FOR UNDERCUTS (CF) (FM)--CU. YD OR CUBIC METER: THIS PAY ITEM IS TO BE USED ON ALL PROJECTS CONTAINING BOX CULVERTS OR BOX BRIDGES. _____

******ROADSIDE DEVELOPMENT ITEMS******

214-A SEEDING ( )--LB. OR KILOGRAM: ALL TYPES OF SEED SHOWN ON VEGETATION SCHEDULE SHALL BE SHOWN ON SQ SHEET. IF A PARTICULAR TYPE OF SEED IS NOT REQUIRED, IT SHALL NOT BE SHOWN ON SQ SHEET NOR ON VEGETATION SCHEDULE. _____

219-A WATERING--M/GALLON OR 1000 L: THIS PAY ITEM IS TO BE USED ON ALL PROJECTS CONTAINING A PAY ITEM FOR SOLID SOD. CHECK THAT QUANTITY HAS BEEN DIVIDED BY 1000. _____

TEMPORARY SILT FENCE, EROSION CHECKS AND SLOPE DRAINS ARE REQUIRED ON ALL PROJECTS CONTAINING GRADING. _____

******SUBBASES & BASE ITEMS*****

304-A GRANULAR MATERIAL (LVM) (CL_,GP_)--CU. YD. OR CUBIC METER: THIS PAY ITEM WILL INCLUDE A 50% SHRINKAGE FACTOR IN THE QUANTITY AND A FOOTNOTE STATING THIS. _____

304-B GRANULAR MATERIAL (CL_,GP_)--TON OR METRIC TON: THIS PAY ITEM WILL INCLUDE A 20% INCREASE IN THE QUANTITY AND A FOOTNOTE STATING THIS. _____

304-C GRANULAR MATERIAL (AEA) (CL_,GP_)--CU. YD. OR CUBIC METER: THIS PAY ITEM WILL NOT INCLUDE ANY INCREASE IN QUANTITY. WHEN CALCULATING GRAN. MAT'L. PAID FOR AS AEA, CHECK THAT THE SUPERELEVATION RATES WERE USED DURING THE CALCULATION OF QUANTITIES. _____

GRANULAR MATERIAL: CHECK THAT THE CLASS AND GROUP MATCHES THE CLASS AND GROUP SHOWN ON THE TYPICAL SECTIONS. _____

******DRAINAGE ITEMS******

603-C-A ___REINFORCED CONCRETE PIPE, CLASS____: ALL CONCRETE PIPE MUST BE LISTED BY SIZE AND BY CLASS. CHECK COVER ON ALL LOCATIONS OF PIPE TO DETERMINE THE CLASS REQUIRED AS PER STANDARD DRAWING PI-1. _____

603-S-B ____BRANCH CONNECTION (____): ALL BRANCH CONNECTIONS NEED TO BE LISTED BY SIZE AND BY THE STRUCTURE THAT THE BRANCH CONNECTION IS ENTERING. _____

******INCIDENTAL CONSTRUCTION ITEMS******

609-D COMBINATION CONCRETE CURB AND GUTTER (TYPE __): THE TYPE OF CURB AND GUTTER IS DETERMINED FROM THE TYPICAL SECTION. IF THE LIFTS OF ASPHALT DO NOT MATCH WITH THE CROSS-SECTION OF CURB AND GUTTER SHOWN ON THE STANDARD SHEET, A MODIFIED CURB AND GUTTER MUST BE USED. CHECK THE COMPATIBILITY OF ASPHALT LIFTS TO CURB AND GUTTER ON ALL PROJECTS REQUIRING CURB AND GUTTER. _____

618-B ADDITIONAL CONSTRUCTION SIGNS--SQ. FT OR SQ. METER: THIS PAY ITEM WILL BE USED WHENEVER THE PAY ITEMS 619-D1 OR 619-D2 ARE NOT USED. _____

619-F3 DELINEATORS (GUARD RAIL) (WHITE): THIS PAY ITEM IS USED WHENEVER TEMPORARY GUARDRAIL IS USED. _____

620-A MOBILIZATION: THIS PAY ITEM IS REQUIRED ON ALL PROJECTS. _____

CHECKLIST FOR ESTIMATED QUANTITY SHEETS

DRAINAGE STRUCTURES (Pipe Culverts, Inlets, etc.)

COLUMNS SHALL BE PROVIDED FOR THE FOLLOWING

a. working sheet number
b. station or station to station
c. each pipe size by class
d. flared end section by size
e. length, width and height of structure
f. standard req'd for structure or item
g. openings in structure
h. class B concrete
i. reinforcement
j. castings
k. gratings
l. paved apron
m. structure excavation
n. estimated depth for structure excavation
o. type A filter material
p. type B filter material
q. geotextile fabric
r. cover over pipe
s. remarks

DRAINAGE STRUCTURES (Box Culverts)

COLUMNS SHALL BE PROVIDED FOR THE FOLLOWING

a. working sheet number
b. station
c. size
d. length of structure
e. standard drawings req'd
f. class B concrete
g. reinforcement
h. estimated average depth for structure excavation
i. structure excavation
j. cover over structure
k. remarks
l. footnotes will be req'd on all boxes that are modified for high or low cover. Include in footnote what depth of high cover was used to estimate quantities.

DRAINAGE STRUCTURES (Box Bridges)

COLUMNS SHALL BE PROVIDED FOR THE FOLLOWING

a-l. same as Box Culverts
m. length along centerline

JUNCTION BOXES

a. working sheet number
b. station
c. size & skew of pipe for each side
d. side W1-3 width
e. side W2-4 width
f. height
g. class B concrete
h. reinforcing steel
i. separate column for each bar (A1,A2,A3,A4, B, C, D,E & F)

CHECKLIST FOR ESTIMATED QUANTITY SHEETS(continued)

HYDRAULIC DESIGN DATA

a. see example provided in Design Manual _____

b. must be included on all Federal Aid projects _____

OTHER RECAPITULATION BLOCKS AS NECESSARY(ditch treatments, rip rap, pavement markings, side drains, ramps, earthwork,etc.) _____

TRAFFIC CONTROL SIGNS

a. End estimated quantity sheets with "ESTIMATED QUANTITIES FOR TRAFFIC CONTROL SIGNS" sheet. _____

ESTIMATED QUANTITIES FOR BRIDGES

a. Bridge Division should provide EQ sheet for any bridges required for project. _____

COMPARE QUANTITIES

a. All quantities on EQ sheets shall match plan-profile sheets. _____

b. All totals on EQ sheets shall match quantities shown on Summary of Quantities sheets. _____

CHECKLIST FOR PLAN-PROFILE SHEETS

CHECK THAT THE FOLLOWING ARE SHOWN CORRECTLY ON ALL SHEETS

a. existing pavement with width _____
b. bearings _____
c. north arrow _____
d. horizontal alinement _____
e. curve data--including P.C., P.T., & P.I. stations _____
f. topography _____
g. superelevation rates--on superelevation stamp/label _____
h. bench marks _____
i. construction limits _____
j. easements--check all ramps for constructibility within ROW and provide easements where needed _____
k. right-of-way and access control(include double line for NO ACCESS & show limits with arrows) _____
l. property lines with stations and angles at centerline of traverse _____
m. property owners _____
n. limits of pavement for driveways ramps,etc. _____
o. limits of construction on crossroads & streets _____
p. intersection details-- curve data , etc. _____
q. right-of-way markers _____
r. cuts, fills, and sheet totals for same _____
s. profile line and elevations _____
t. grade line with percent grade _____
u. detours and detour data _____
v. utility poles and utility lines(gas, water, etc.) _____
w. drainage structures (show in plan and profile) (include all necessary data:length, width , height, openings,, etc.) _____
x. stations and drainage areas for bridges and box bridges(include bridge numbers) _____
y. erosion control and ditch treatment(symbols, location and quantities) _____
z. scale of drawing and profile _____
aa. wetlands limit _____
bb. clearing limits _____
cc. undercut areas in profile _____
dd. ramps and side drains notes _____
ee. silt basins and notes (include riser pipe size) _____
ff. all pipes listed in increments of 4 feet or 1.2 meters _____
gg. classes of pipe _____
hh. all cross drains a minimum of 24" or 600 mm _____
ii. skew all junction boxes to smallest pipe when possible _____
jj. for minimum height inlets show "H=min" _____
kk. "H" shown on plan-profile for inlets shall be same "H" as shown on standards. ("H" is not the same as "depth to inlet flowline") _____
ll. continuity of storm water flow _____
mm. show direction of flow _____
nn. constructibility for different phases of construction _____
oo. public utilities listed on wk. no. 3 if not shown on General Notes sheet _____
pp. show dimension for c.l. to c.l. between lanes at both ends of plan view _____

CHECKLIST FOR DETAIL SHEETS

SPECIAL DESIGN SHEETS

a. can a standard drawing sheet be used instead? _____
b. is title of sheet clear? _____
c. can contractor build the item from the details? _____
d. is payment for all items covered on the special design sheet or elsewhere in plans? _____
e. are all items needed for construction included? _____
f. is special design sheet drawn to scale? _____
g. is scale shown on drawing if needed? _____

VEGETATION SCHEDULE

a. are instructions removed from top of page? _____
b. are all items required from SQ sheet listed? _____
c. have all nonessential items been removed? _____
d. are detour application rates been listed? _____
e. is lespedeza required on project? _____

INTERSECTION DETAILS

a. is curve data or radius shown for all curves? _____
b. is drawing to scale? _____
c. is scale shown? _____
d. are stations, offsets and distances given for all tapers, curbs, etc.? _____
e. are construction limits for local roads shown? _____
f. is the correct curb shown?(type 2 except for urban projects) _____

TRAFFIC CONTROL PLANS

a. have all sheets been checked and signed by Phil Hunt or James Tucker? _____
b. is traffic control sheets separated into phase of construction if req'd? _____
c. have all detour roads been signed? _____
d. have all temporary pavement markings been shown? _____
e. can traffic control plans be followed from BOP to EOP? _____
f. has construction signing sheet been included in plans? _____
g. have barricade details been shown? _____
h. have barricades been shown as either double-faced or single-faced? _____

PAVEMENT MARKING SHEETS

a. have all markings not shown by standards been added to plans? _____
b. do all stop bars indicate the width of stripe? _____
c. is beginning and ending of detail stripes shown? _____
d. are the raised pavement markers indicated? _____
e. have all sheets been checked and signed by Phil Hunt or James Tucker? _____
f. are the pavement markings for a railroad crossing indicated on plans if required? _____