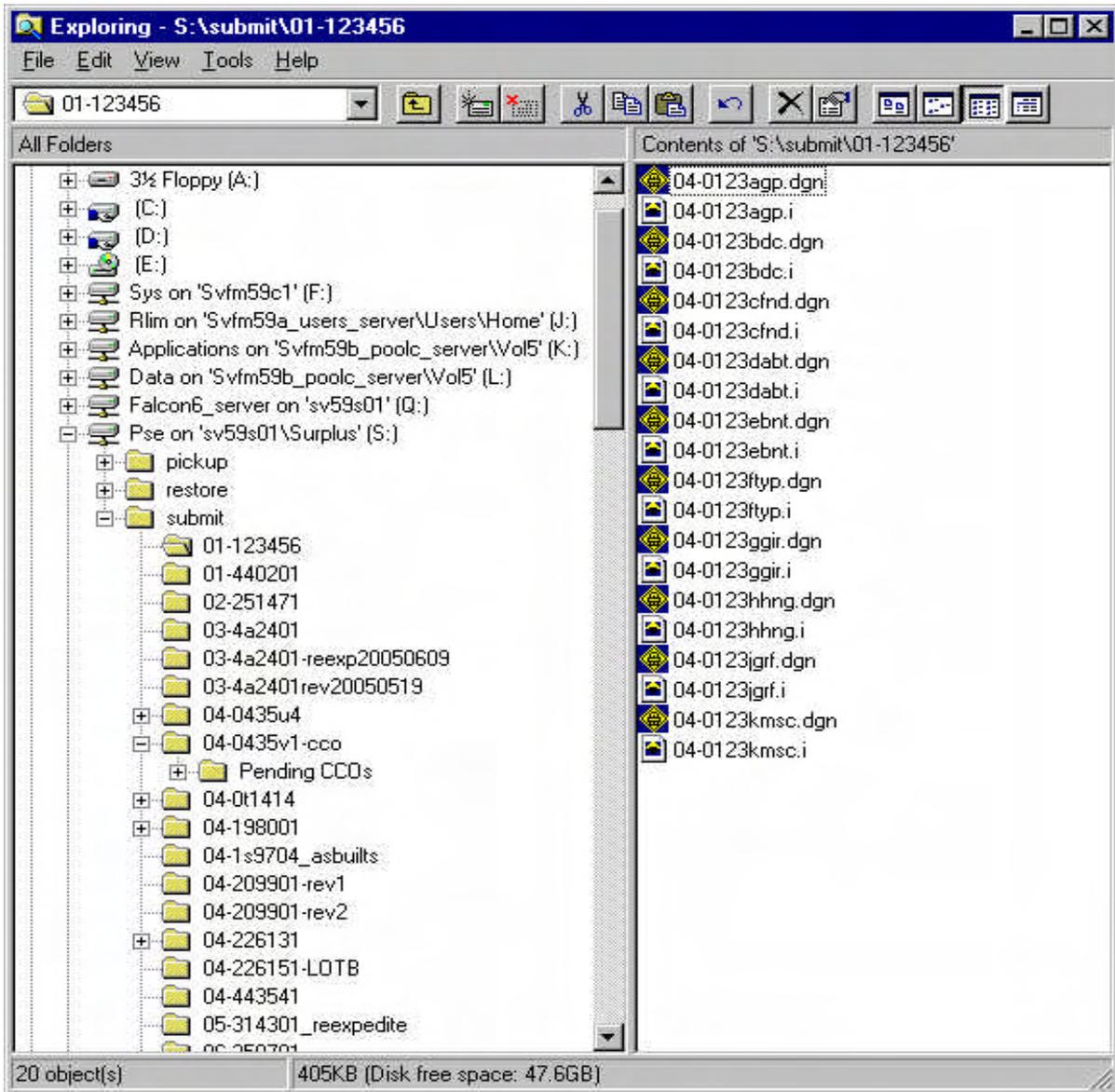


DIRECTORY TREE

An example of the PSE directory tree and of project 01-123456 with dgn & iparm files.



## M e m o r a n d u m

*Flex your power!  
Be energy efficient!*

To: MS. DOLORES M. VALLS  
Deputy Division Chief  
Structure Construction

Date: April 23, 2002

MR. JOHN MCMILLIAN  
Deputy Division Chief  
Structure Earthquake Engineering and  
Design Support

File: 065

From: **DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN – MAIL STATION 9 4/11G**

Subject: Memo to Designers 1-16

Structure Design is in the process of releasing the new Memo to Designers 1-16, "Release of Structure's Electronic Contract Plan Files (AFTER AWARD)." Attached for your information is a draft copy.

This memo addresses the release of electronic copies of contract plans produced by or for the Division of Engineering Services. In general, requests should come through Structure Construction and electronic copies should be released through Structure Construction.

The actual procedure to obtain Structure's Electronic Contract Plan Files (AFTER AWARD) is described in Memo to Designers 1-16.

Individuals and/or organizations seeking to use Structure's Electronic Contract Plan Files will assume all responsibilities and liabilities upon receipt of such electronic files.

If you have any questions, please contact Ofelia P. Alcantara by Email or call her at 227-8697.

Original signed by

RICHARD D. LAND  
Deputy Division Chief  
Structure Design

Attachment

c: RBuckley  
RHarnagel  
Structure Design Office Chiefs



# Expedite Notice for Final Structure PS&E

Complete highlighted areas of this form and immediately e-mail to SOE at Structure\_OE@dot.ca.gov

Expedite Notice Date: <Date, 4 weeks before Current Final SPS&E>  
Current Final SPS& E D ate: <Date >

59 <CC>

<Branch Chief's Initials>

<Dist-CO- R te- PM(KP)>  
CC < Dist-CC> < EA #>  
<Split/Combined EA #s:> <EA #s>  
<Location/Job DDESription>

This project is now in the final stage of submittal to DISTRICT-OE or DES-OE to prepare for advertising.

KEEP THIS MEMO WITH THE EXPEDITE PACKAGE, SIGN AND DATE AT EACH STEP , AND HAND CARRY TO THE NEXT PERSON ACCORDING TO THE FOLLOWING ROUTING:

1. Design Branch
2. Estimates Branch
3. Specification Branch
4. Design Branch
5. Estimates Branch
6. Specification Branch

Step 1 requires completion and delivery to the Estimates Branch by <Date> (2-1/2 wks before FSP S&E) to ensure timely delivery to DISTRICT- OE or DE S-OE .

1. Design Branch \*\*\* Initials \_\_\_\_\_ \*\*\* Date forwarded \_\_\_\_\_
  - ( ) Plans complete, accumulated corrections made, and new rack sets obtained.
  - ( ) 2 - (11 x 17) hard copy set of plans enclosed.
  - ( ) Quantities complete:
    - ( ) (a) Previously forwarded, no revisions required.
    - ( ) (b) Revised. Marginal estimate updated \_\_\_\_\_ .
  - ( ) *4-Geotechnical Reports & Foundation Review Forms for Information Handout.*

Remarks: \_\_\_\_\_ .

E-mail quantity decal to: \_\_\_\_\_ .

2. Estimates Branch \*\*\* Initials \_\_\_\_\_ \*\*\* Date forwarded \_\_\_\_\_
  - ( ) 11 x 17 hard copy set of plans compared with BEES
  - ( ) Quantity decal sent **by E-mail**.
3. Specification Branch \*\*\* Initials \_\_\_\_\_ \*\*\* Date forwarded \_\_\_\_\_
  - ( ) 11 x 17 hard copy set of plans and marked rack set compared.

Expedite Notice

E. A.

Page 2

4. Design Branch \*\*\* Initials \_\_\_\_\_ \*\*\* Date forwarded <due 1 week before FSPS& E>
- ( ) Quantities decal placed on the plans
  - ( ) Signatures placed on the plans.
  - ( ) 3 - (11 x 17) hard copies of GP with quantities. 3- hard copies of other newly revised plans sheets
  - ( ) Structures Drafting Plan Review Checklist enclosed
  - ( ) Federal Type Codes (for federally funded, non-maintenance, non-retrofit jobs only)
  - ( ) Final Structures PS&E CADD SUBMITTAL form enclosed.
  - ( ) Copy of Authorization for use of electronic signature form enclosed.
  - ( ) Listing of electronic files and directory block size enclosed.
  - ( ) Plans placed in PSE Directory.
  - ( ) Copy of Final Structures PS& E CADD Submittal Form  
e-mailed or hand delivered to Structures CADD Software Support group.  
(Structures\_CADD\_Software\_Support@dot.ca.gov)

Remarks: \_\_\_\_\_ .

5. Estimates Branch \*\*\* Initials \_\_\_\_\_ \*\*\* Date forwarded \_\_\_\_\_
- ( ) GP reviewed for quantities decal (hard copy)..
  - ( ) (a) Estimate, no revisions required.
  - ( ) (b) Estimate revised, new blue attached.
  - ( ) (c) Working Days, no revisions required.
  - ( ) (d) Working Days, revised and attached.

6. Specification Branch \*\*\* Initials \_\_\_\_\_
- ( ) Plans reviewed for quantities decal (hard copy)..
  - ( ) (a) Specifications, no revisions required.
  - ( ) (b) Specifications Revisions and Signatures Seal Sheets sent to District OE  
on \_\_\_\_\_ and cc to \_\_\_\_\_ in DES-OE on \_\_\_\_\_.

Remarks: \_\_\_\_\_ .  
\_\_\_\_\_ .

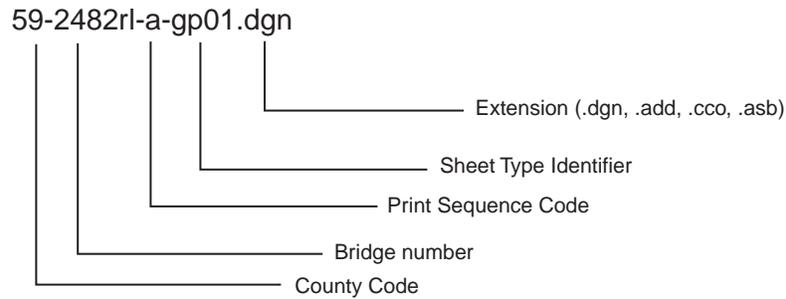
- ( ) Final Structures PS& E Transmittal package sent to District and DES-OE .  
Submitted on \_\_\_\_\_ .



ATTACHMENT 4

### STRUCTURES DESIGN FILE NAMING CONVENTION

This is a guide for naming Structure Electronic Design files. The reason for this guide is Office Engineer (OE) requires that all files for any particular job be placed in one EA directory without sub-directories. Within this directory each discipline files need to be grouped together and print in sequenced order. Following this guide in creating sheets will help you meet OE requirements at expedite.



- dgn** is through expedite
- add** is from 2<sup>nd</sup> notice through bid opening
- cco** is from bid opening through end of construction
- asb** is for as built

LOCATION CODE	SHEET TYPE	EXAMPLE
a	GENERAL PLAN	59-2482rl-a-gp01.dgn
b	INDEX TO PLANS	59-2482rl-b-itp.dgn
c	STRUCTURE PLAN	59-2482rl-c-sp01.dgn
d	DECK CONTOURS	59-2482rl-d-dc01.dgn
e	FOUNDATION DATA	59-2482rl-e-fdat01.dgn
e	FOUNDATION PLAN	59-2482rl-e-fp01.dgn
f	ABUTMENT LAYOUT	59-2482rl-f_a01-lo01.dgn
f	ABUTMENT DETAILS	59-2482rl-f-a01dt01.dgn
f	ABUTMENT RESTRAINER DETAILS	59-2482rl-f-a01rdt01.dgn
g	RETAINING WALL LAYOUT	59-2482rl-g-rw-lo01.dgn
g	RETAINING WALL DETAILS	59-2482rl-g-rwdt01.dgn
g	RETAINING WALL FOOTING	59-2482rl-g-rwftg.dgn
h	BENT LAYOUT	59-2482rl-h-b01-lo01.dgn
h	BENT DETAILS	59-2482rl-h-b01dt01.dgn
h	BENT FOOTING DETAILS	59-2482rl-h-b01fdt01.dgn
h	BENT FOOTING RETROFIT DETAILS	59-2482rl-h-b01frdt01.dgn
i	PIER LAYOUT	59-2482rl-i_p01-lo01.dgn
i	PIER DETAILS	59-2482rl-i-p01dt01.dgn
i	PIER FOOTING	59-2482rl-i-p01fdt01.dgn
i	PIER FOOTING RETROFIT	59-2482rl-i-p01frt.dgn
i	PIERS RESTRAINER	59-2482rl-i-pres.dgn
j	COLUMN DETAILS	59-2482rl-j-cdet01.dgn
j	COLUMN ISOLATION CASING	59-2482rl-j-ciso01.dgn
j	COLUMN RESTRAINER DETAILS	59-2482rl-j-crdt01.dgn
k	TYPICAL SECTION	59-2482rl-k-ts01.dgn
k	PART TYPICAL SECTION	59-2482rl-k-tsp01.dgn
l	GIRDER LAYOUT	59-2482rl-l_g-lo01.dgn
l	GIRDER DETAILS	59-2482rl-l-gdt01.dgn
m	CAMBER DIAGRAM	59-2482rl-m-cam.dgn
m	LONGITUDINAL SECTION	59-2482rl-m-lsec.dgn
n	HINGE	59-2482rl-n-hinge.dgn
n	HINGE DETAILS	59-2482rl-n-hingedt01.dgn
n	HINGE BEARING DETAILS	59-2482rl-n-hngbdt.dgn
n	HINGE RESTRAINER	59-2482rl-n-hngres.dgn
o	GIRDER REINFORCEMENT	59-2482rl-o-gir_rf01.dgn
o	GIRDER REINFORCEMENT TOP	59-2482rl-o-gr_top01.dgn
o	GIRDER REINFORCEMENT BOTTOM	59-2482rl-o-gbot01.dgn
p	PILE DETAILS	59-2482rl-p-pdt01.dgn
q	BEARING DETAILS	59-2482rl-q-brgdt01.dgn
q	JOINT DETAILS	59-2482rl-q-jntdt.dgn
r	DECK DRAINS	59-2482rl-r-dd01.dgn
r	DRAIN DETAILS	59-2482rl-r-ddet01.dgn
s	STRUCTURE APPROACH	59-2482rl-s-sa.dgn
s	STRUCTURE APPROACH DRAIN DETAILS	59-2482rl-s-sadd.dgn
t	BARRIER RAILING DETAILS	59-2482rl-t-brdt.dgn
t	CRASH CUSHIONS	59-2482rl-t-crc.dgn
t	RESTRAINER UNIT	59-2482rl-t-resunit.dgn
u	MISCELLANEOUS DETAILS	59-2482rl-u-miscdt01.dgn
v	END DIAPHRAM DETAIL	59-2482rl-v-eddt.dgn
w	ADDITIONAL SLAB REINFORCEMENT	59-2482rl-w-asr.dgn
x	LADDER DETAILS	59-2482rl-x-ltd.dgn
y	ACCESS OPENING DETAILS	59-2482rl-y-aodt.dgn
y	GIRDER ACCESS DETAIL	59-2482rl-y-gadt.dgn
y	EARTHQUAKE RETROFIT DETAILS	59-2482rl-y-erdt.dgn
z	LOG OF TEST BORINGS	59-2482rl-z-ltb01.dgn



## EXPEDITE CHECKLIST

Note: The following should be done prior to expedite on every sheet.  
It should be incorporated into the final drafting/detailing check.

ALL REDLINES SHOULD BE DONE PRIOR TO FINAL DRAFTING CHECK

### Final Drafting Check

1. Check prints for correct materials/information
2. Check for correct information on PROJECT ENGINEER'S seal
  - A. The spelling of the name (As shown on the PE license)
  - B. The correct license number
  - C. The correct and current expiration date
3. Fill up completely and check all title block information ( TITLES ARE ALL IN UPPER CASE )
4. Check to make sure a name is in every field (do not leave any field empty) and is spelled correctly for
  - A. Design and Design Checker
  - B. Details and Details Checker
  - C. Quantities and Quantities Checker
  - D. Layout and layout checker (GP Sheet)
  - E. PLANS & SPECS compared (GP Sheet)
5. Check for the correct bridge number
6. Check for the correct Kilometer post number
7. Check for the correct CU number
8. Check for the correct EA number
9. Check for the correct/consistent name, spelling and font for the
  - A. TITLE
  - B. SHEET NAME
10. Check for Caltrans Structural Detailing Standards
  - A. Correct font and size are used for notes, titles and dimensions
  - B. Correct scales are used and called out or must write "No Scale" if drawn without any Scale.
  - C. Correct line types and leveling convention are used (NO DROPOUTS)
  - D. Correct abbreviations are used
  - E. Correct metric conversions are used
  - F. No English dimensions are used, unless required for railroads

11. Check for the following
  - A. North arrow when applicable
  - B. Consistent drafting practices
  - C. Standard plans list
  - D. "Contractor shall verify" note on all applicable sheets
  - E. Reference notes for section views, general notes, quantities decal, etc...on different sheets

## **Expedite**

Note: Check out all dgn's

### **The Expedite should cover the following:**

1. File names must be in accordance with the Structures File naming convention (Attachment 4)
2. The sheets are in the correct order
3. Page Numbers and Total Number of Sheets on every sheet
4. Place Quantities decal
5. Turn off all views except view 1
6. Unrotate view
7. Detach or merge all reference files
8. Turn on all necessary levels
9. Turn on "Constructions" (settings-View Attributes)
10. Delete everything outside the borders on all levels
11. Turn off "Constructions" (setting-View Attributes)
12. Check view Attributes, and Turn on
  - A. Dimensions
  - B. Dynamics
  - C. Fill
  - D. Line Styles
  - E. Line Weights
  - F. Patterns
  - G. Tags
  - H. Text



ATTACHMENT 5

13. Check view Attributes, and Turn off
  - A. ACS Triad
  - B. Background
  - C. Constructions
  - D. Camera
  - E. Data Fields
  - F. Fast Cells
  - G. Fast Curves
  - H. Fast Font
  - I. Fast Ref Clipping
  - J. Grid
  - K. Level Symbology
  - L. Ref Boundaries
  - M. Text Nodes
  
14. Set Global Origin to 0,0
  
15. Zoom max
  
16. Saved view as Plot
  
17. Delete all other saved views
  
18. Check for border plot time and date stamp
  
19. Set mu su pu full size 1000:10000
  
20. Set Fence Mode to inside
  
21. Turn level lock off
  
22. Turn grid lock off
  
23. Turn axis lock off
  
24. Set active angle to 0
  
25. Save settings
  
26. Compress Design
  
27. Copy all dgn outside of falcon
  
28. Place Electronic Signatures
  
29. Print 11x17

## ATTACHMENT 5

30. Make full size lparm (See **I PLOT USER INSTRUCTIONS**) to an 8830
31. Create EA Folder under correct District in Submit folder, PSE Directory, "S" Drive
32. Move all dgn and lparm files to the pse directory Submit folder under the correct Dist / EA
33. Change permissions on the folder and all the files, permissions are: User check: **RWX**, Group: **RX**, and Other: **None**
34. Print on Word Document. The print should list all the files and gives the directory block size in MB)
35. Fill out forms
  - A. Expedite (Electronic) Notice
  - B. Structures Drafting Plan Review Checklist
  - C. FINAL STRUCTURES PS&E CADD Submittal form (DC-OE-21)
  - D. Copy of Authorization for use of Electronic Signature, signed and dated by PROJECT ENGINEER.
  - E. Listing of electronic files and directory block size
  - F. Federal type codes (when applicable) see Attachment 17

## PROCEDURE FOR ELECTRONIC TRANSFER OF QUANTITIES DECAL

### To Get Quantities Decal by E-Mail

Note: The estimator must send (e-mail) the quantities decal to the SDT.

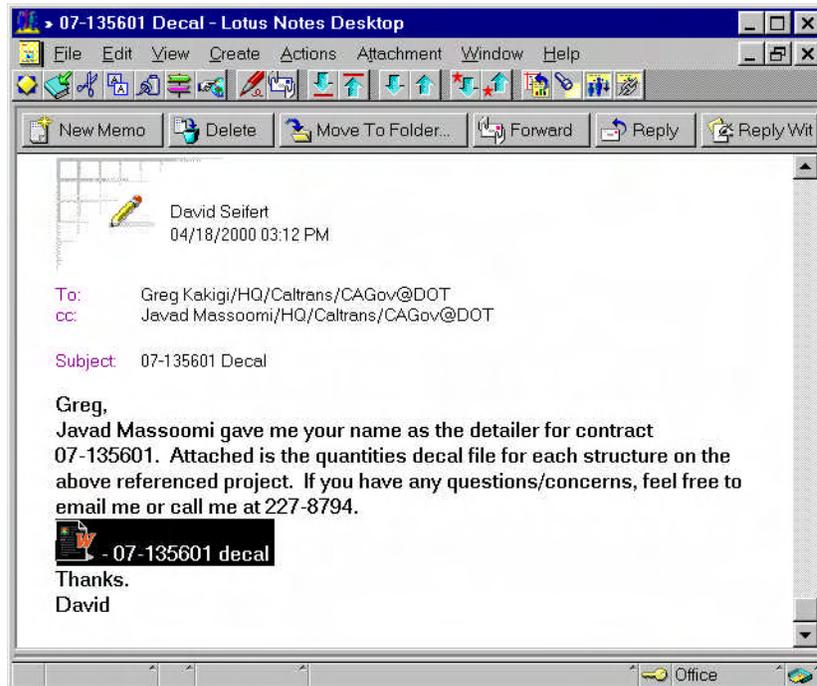
### To detach the quantities decal

1. Open your lotus notes.

---

2. Open the e-mail with the quantities decal

---

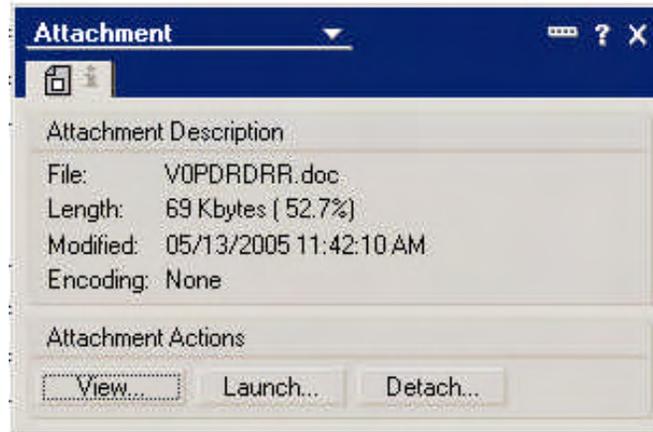



3. Left mouse click once on the icon for the decal

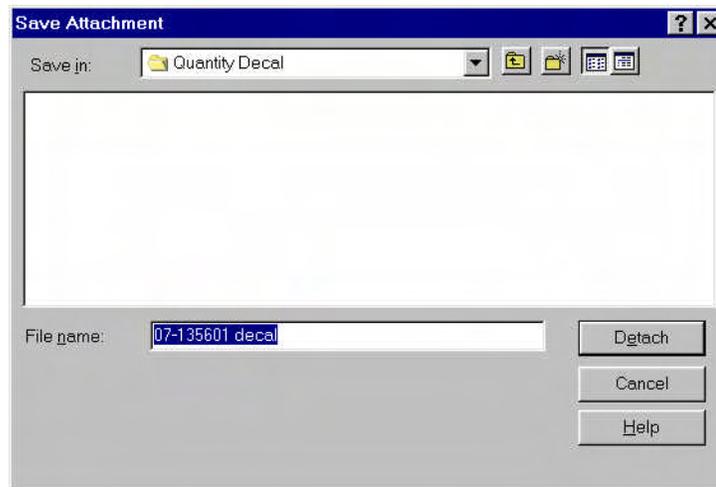
The Icon should be highlighted

---

## ATTACHMENT 6



4. Right mouse click once on the icon to bring up an Attachment Properties window.



5. On the Attachment Properties window left mouse click on "detach"  
A save attachment window comes up



**ATTACHMENT 6**

6. Navigate to where you want to put the decal

Note: It would be good to make a "Quantity Decal" folder on your "D" drive

---

7. Click Detach
- 

8. Close or Exit out of all windows
- 

Open "WORD" by clicking on the Icon on your desktop OFFICE or

1. Click on Start
- 

2. Click on Programs
- 

3. Click on MS Office Pro 97
- 

4. Click on Microsoft Word
- 

Open the Quantity Decal

1. Click on File
- 

2. Click on Open
- 

3. Navigate to the drive and directory you put it in.
- 

4. Open it.
-

## ATTACHMENT 6

Save Decal as a text document not a word document.

1. Click **File** from the menu.
- 

2. Click Save As
- 

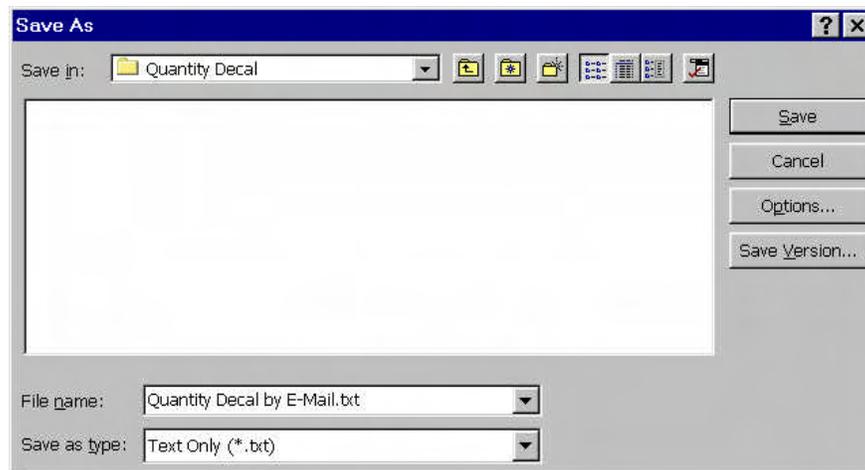
A Save as window opens up.

1. Give it a new file name or keep same.
- 

2. Change Save as type to Text Only (\*.txt)
- 

3. Click Save
- 

4. You may get a message that says **"This document contains formatting that cannot be saved in the text format. Do you want to save changes?"**, click **<YES>**.
- 



5. You will be asked to save the file as **"text only"** or **"Word"** docu



ATTACHMENT 6

ment. Click <Text>.

---

To place the decal

1. Open up microstation as usual
- 

2. Use Falcon as usual to open up the sheet where you will put the decal on (usually on the GP)
- 

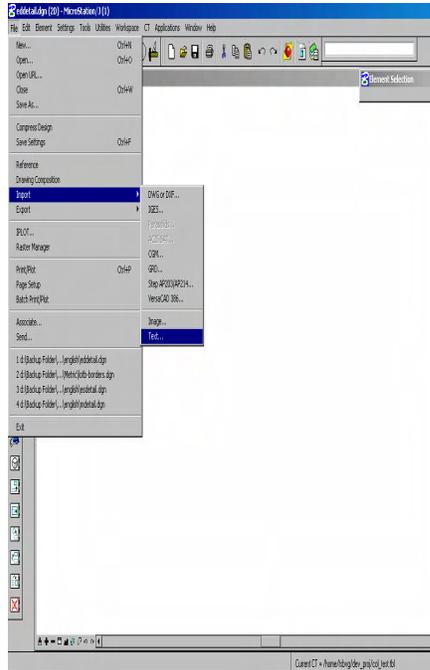
Once sheet is open in microstation

1. Set "MuSuPu" to 1000 /10000, text height to .0036, text width to .0036, Text font to 2 Leroy or 3 CT FONT 1, Level to 14, Color to 14...etc as usual
- 

2. Click on the menu "file"
- 

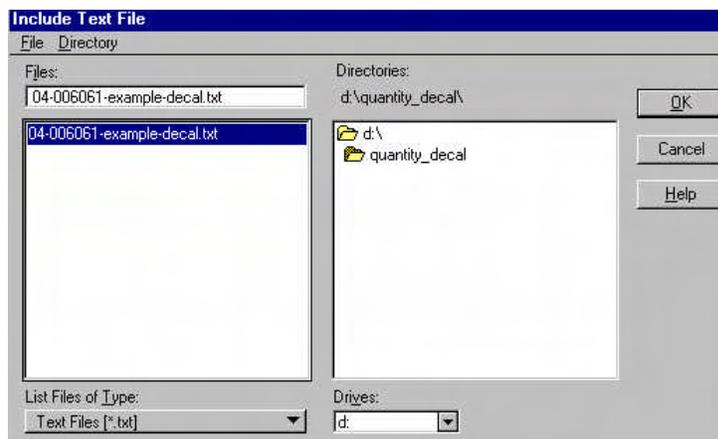
3. Click on "Import"
-

## ATTACHMENT 6



4. Click on "text"

---



5. A "include text file" window opens up

---

6. Navigate to the drive and directory that you detached the decal into

---



ATTACHMENT 6

7. Select the file with the ".txt" extension
- 

8. Click ok
- 

9. Place the text in the drawing
- 

10. Change metric units that are in captial letters to small letters, eg MM to mm, M to m, KG to kg, etc.

Note: Remember that if you are putting the Decal on any sheet but other then the GP, you must put the note ' For Quantities', see "???????" sheet. on the GP.

---

## EXAMPLES OF QUANTITIES DECAL

UNITS OF MEASUREMENT TABLE FROM SECTION 1-1.02 OF THE STANDARD SPECIFICATIONS

Symbols as used in the Specifications	Symbols as used in the Engineer's Estimate	Definitions
A	--	amperes
--	EA	each
g	G	gram
kg	KG	kilogram
ha	HA	hectare (10 000 m <sup>2</sup> )
h	H	hour
J	--	joule
--	LNKM	lane kilometer
L	L	liter
--	LS	lump sum
m	M	meter
km	KM	kilometer
mm	MM	millimeter
μm	--	micrometer
nm	--	nanometer
m <sup>2</sup>	M2	square meter
m <sup>3</sup>	M3	cubic meter
N	--	Newton
Nm	--	Newton meter
Ω	--	Ohm
Pa	--	Pascal
kPa	--	kiloPascal
MPa	--	megaPascal
s	--	second
--	STA	station (100 m )
--	TAB	tablet
tonne	TONN	metric ton ( 1000 kg )
W	--	watt
V	--	volt



EXAMPLES OF QUANTITIES DECAL

THIS IS HOW THE DECAL WILL COME FROM ESTIMATING.

WEST ARSENAL UNDERCROSSING 23-0127R  
QUANTITIES

	LUMP SUM
BRIDGE REMOVAL (PORTION), LOCATION B	
STRUCTURE EXCAVATION (BRIDGE)	110 m <sup>3</sup>
STRUCTURE BACKFILL (BRIDGE)	80 m <sup>3</sup>
AGGREGATE BASE (APPROACH SLAB)	19 m <sup>3</sup>
1.2 M CAST-IN-DRILLED-HOLE CONCRETE	20 m
PILING	
STRUCTURAL CONCRETE, BRIDGE FOOTING	10 m <sup>3</sup>
STRUCTURAL CONCRETE, BRIDGE	140 m <sup>3</sup>
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	19 m <sup>3</sup>
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	69 m <sup>3</sup>
DRILL AND BOND DOWEL	51 m
FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (15 m - 20 m)	8 EA
ERECT PRECAST PRESTRESSED CONCRETE GIRDER	8 EA
JOINT SEAL (TYPE B - MR 30 mm)	42 m
BAR REINFORCING STEEL (BRIDGE)	29,200 kg
CONCRETE BARRIER (TYPE 25)	67 m

THIS IS THE CORRECTED DECAL.

QUANTITIES

	LUMP SUM
BRIDGE REMOVAL (PORTION), LOCATION B	
STRUCTURE EXCAVATION (BRIDGE)	110 m <sup>3</sup>
STRUCTURE BACKFILL (BRIDGE)	80 m <sup>3</sup>
AGGREGATE BASE (APPROACH SLAB)	19 m <sup>3</sup>
1.2 M CAST-IN-DRILLED-HOLE CONCRETE PILING	20 m
STRUCTUREAL CONCRETE, BRIDGE FOOTING	10 m <sup>3</sup>
STRUCTURAL CONCRETE, BRIDGE	140 m <sup>3</sup>
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	19 m <sup>3</sup>
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	69 m <sup>3</sup>
DRILL AND BOND DOWEL	51 m
FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (15 m - 20 m)	8 EA
ERECT PRECAST PRESTRESSED CONCRETE GIRDER	8 EA
JOINT SEAL (TYPE B - MR 30 mm)	42 m
BAR REINFORCING STEEL (BRIDGE)	29,200 kg
CONCRETE BARRIER (TYPE 25)	67 m

## EXAMPLES OF QUANTITIES DECAL

## THIS IS HOW THE DECAL WILL COME FROM ESTIMATING.

MSE RETAINING WALL NO. 4 23-0225  
QUANTITIES

EARTH RETAINING STRUCTURE, LOCATION B	310 m <sup>2</sup>
CONCRETE SURFACE TEXTURE	310 m <sup>2</sup>
CONCRETE BARRIER (TYPE 25)	67 m
CONCRETE BARRIER (TYPE 60 D MODIFIED)	67 m

## THIS IS THE CORRECTED DECAL.

## QUANTITIES

EARTH RETAINING STRUCTURE, LOCATION B	310 m <sup>2</sup>
CONCRETE SURFACE TEXTURE	310 m <sup>2</sup>
CONCRETE BARRIER (TYPE 25)	67 m
CONCRETE BARRIER (TYPE 60 D MODIFIED)	67 m

## THIS IS HOW THE DECAL WILL COME FROM ESTIMATING.

MSE RETAINING WALL NO. 5 RWALL05  
QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	205 m <sup>3</sup>
STRUCTURE BACKFILL (RETAINING WALL)	278 m <sup>3</sup>
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	8 m <sup>3</sup>
STRUCTURAL CONCRETE, RETAINING WALL	71 m <sup>3</sup>
BAR REINFORCING STEEL (RETAINING WALL)	88,400 KG
CHAIN LINK RAILING	22 m

## THIS IS THE CORRECTED DECAL.

## QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	205 m <sup>3</sup>
STRUCTURE BACKFILL (RETAINING WALL)	278 m <sup>3</sup>
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	8 m <sup>3</sup>
STRUCTURAL CONCRETE, RETAINING WALL	71 m <sup>3</sup>
BAR REINFORCING STEEL (RETAINING WALL)	88,400 KG
CHAIN LINK RAILING	22 m



ATTACHMENT 7

Division of Engineering Services  
Structure Design

### Authorization for Use of Electronic Signature

I, the undersigned, on the date noted following my signature, hereby authorize my signature to be electronically placed on the following plan sheets:

---



---



---



---



---

for the project in \_\_\_\_\_ County

Route \_\_\_\_\_

Kilometer Post Description \_\_\_\_\_

District / EA \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Registration No.)

\_\_\_\_\_  
(Date of Expiration)

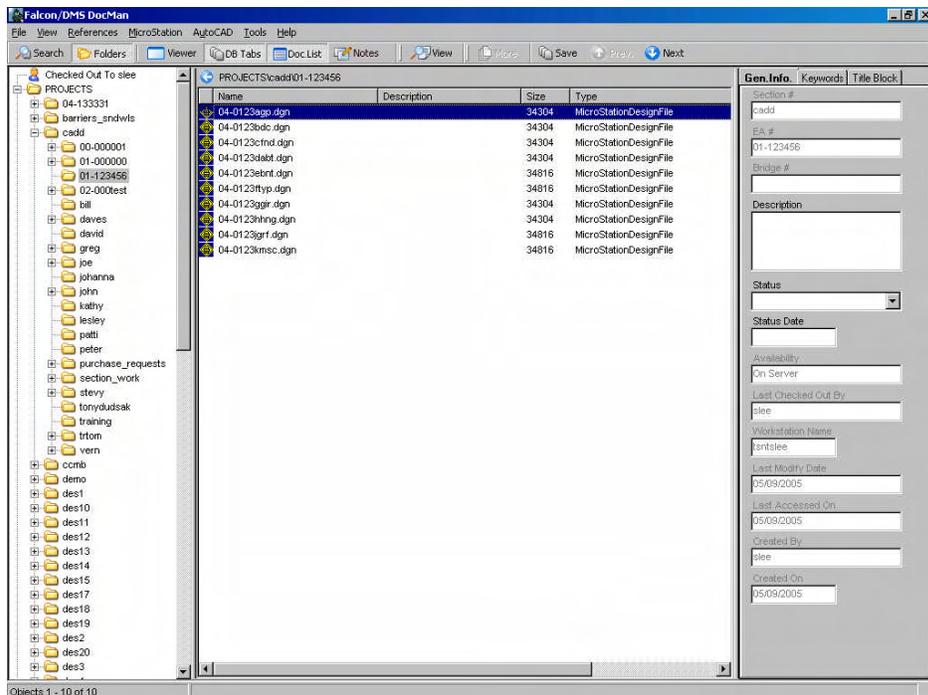
## ATTACHMENT 8

## TO TRANSFER FILES FROM THE PC TO THE PSE DIRECTORY

Note: All the files (dgn's) for all bridges involved must have unique filenames, (see file naming convention sheet). Please keep in mind that this also includes Architecture, Mechanical, Electrical, Waste Water and Roadway plans as well as Structures Design Bridge plans.

You must have created the iparms ".i" files already. ".i" files may show up either on your J:/ drive or on the D:\ drive. I suggest making a folder on your D:\ drive called "Iparms".

For instruction on how to create Iparms see "How to create Iparms" Handout.

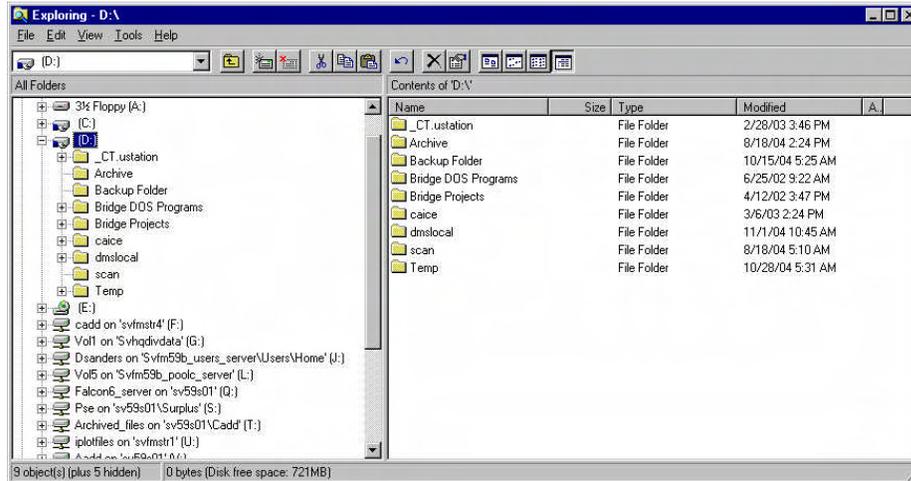


1. From the Falcon Manager in Microstation check out all the dgn's from Falcon

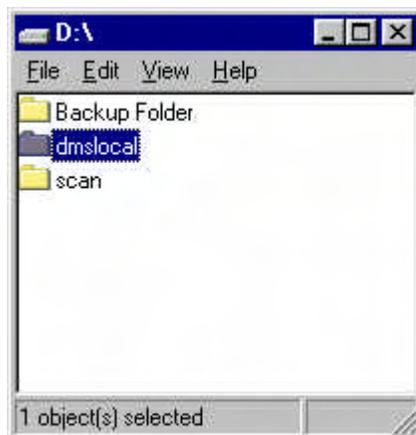
Note: Make sure you check out all the dgn's for all the bridges in the EA that is involved

### ATTACHMENT 8

2. Click on My Computer

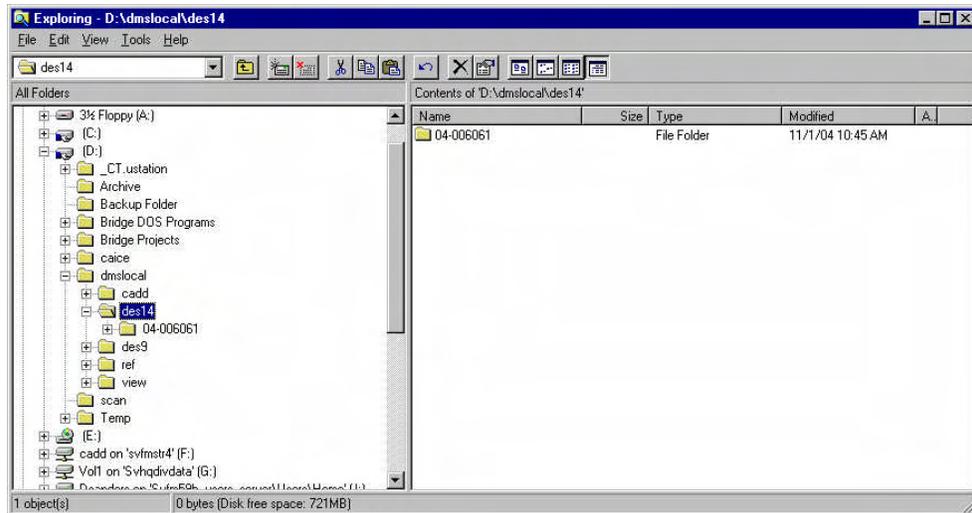


3. Click on "D:" drive



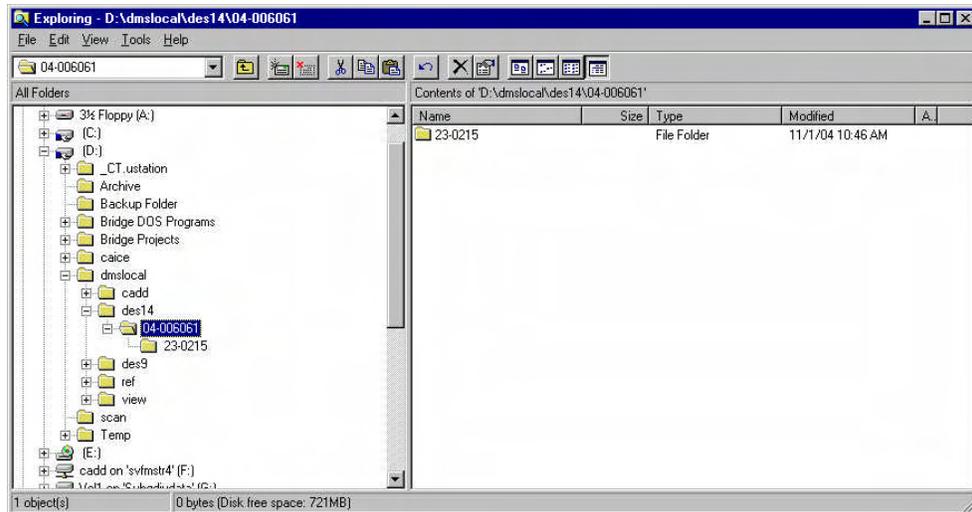
4. Click on dmslocal

## ATTACHMENT 8



5. Click on the design section that your dgn's are under (for example "des14")

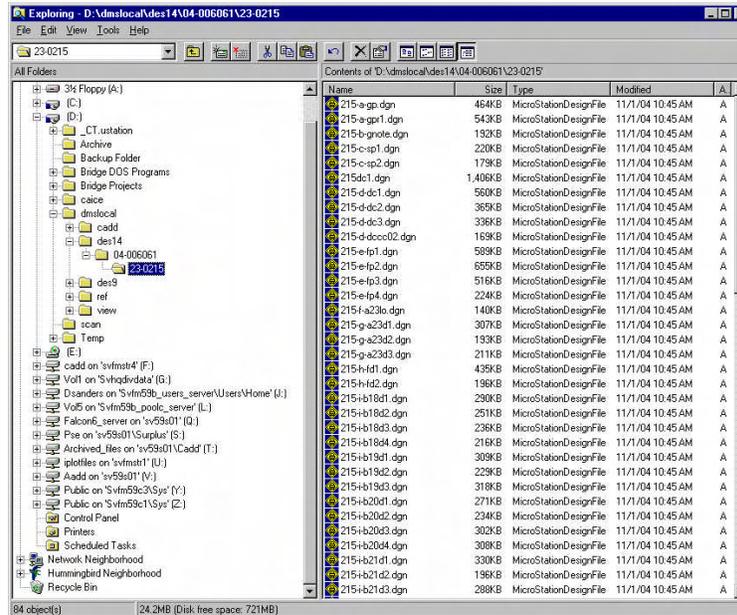
---



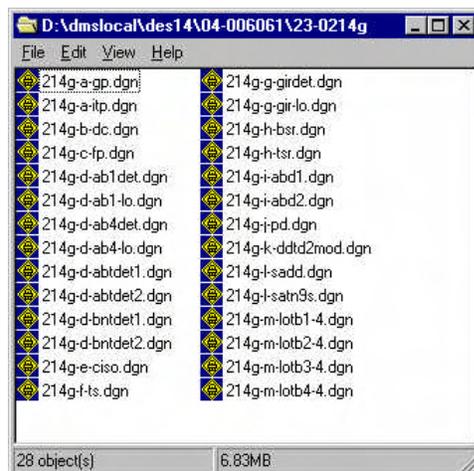
6. Click on the EA that your dgn's are under (for example "04-006061")

---

### ATTACHMENT 8



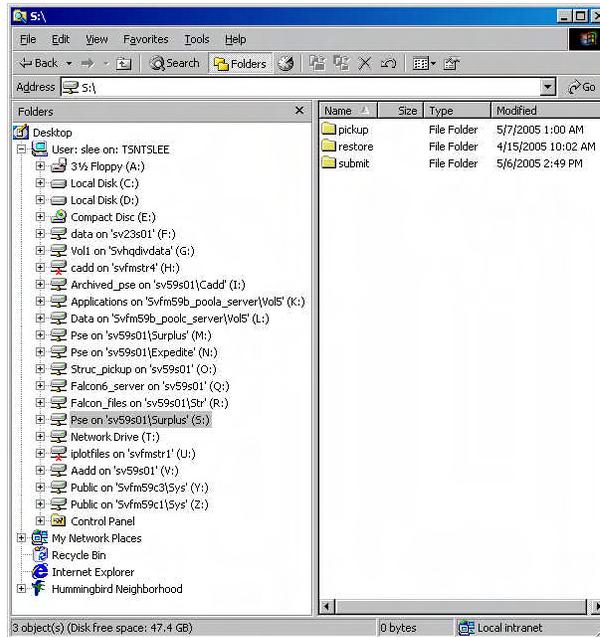
- Click on the Bridge Number that your dgn's are in (for example "23-0214g and 23-0215")



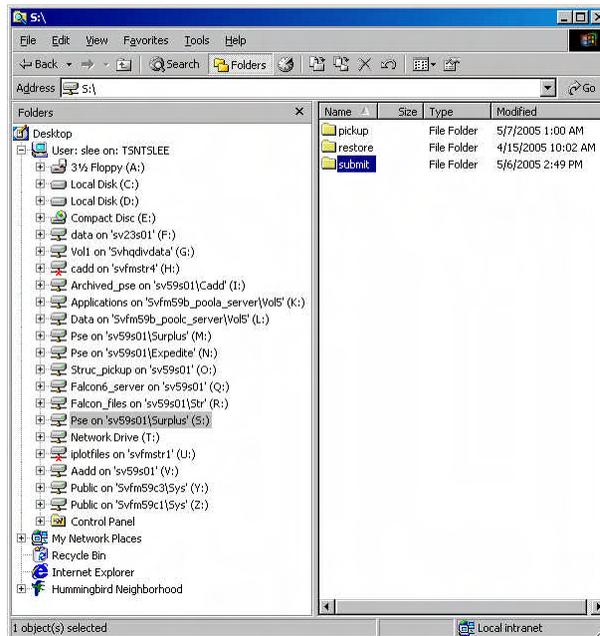
- Select all the dgn's that are to be copied to the PSE directory for all bridges involved. You can do this by right mouse click in an open space and dragging the mouse to highlight the filenames you want.

Note: You should have already have created the lparm ".i" files. They may show up in the same directory as the dgn's or on your J:\drive. I suggest making a folder on your D:\drive called "lparms". The lparm ".i" files along with the dgn's should both be copied.

## ATTACHMENT 8

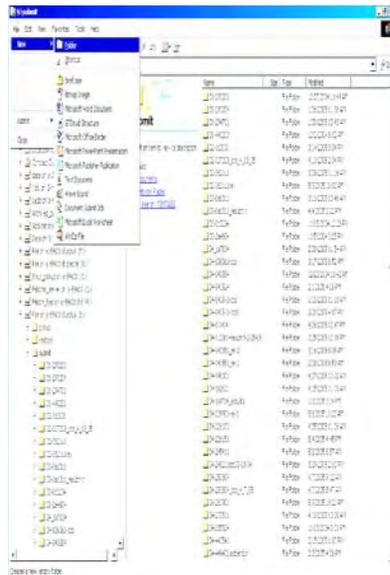


9. From My Computer, Click on the "S" drive (PSE)

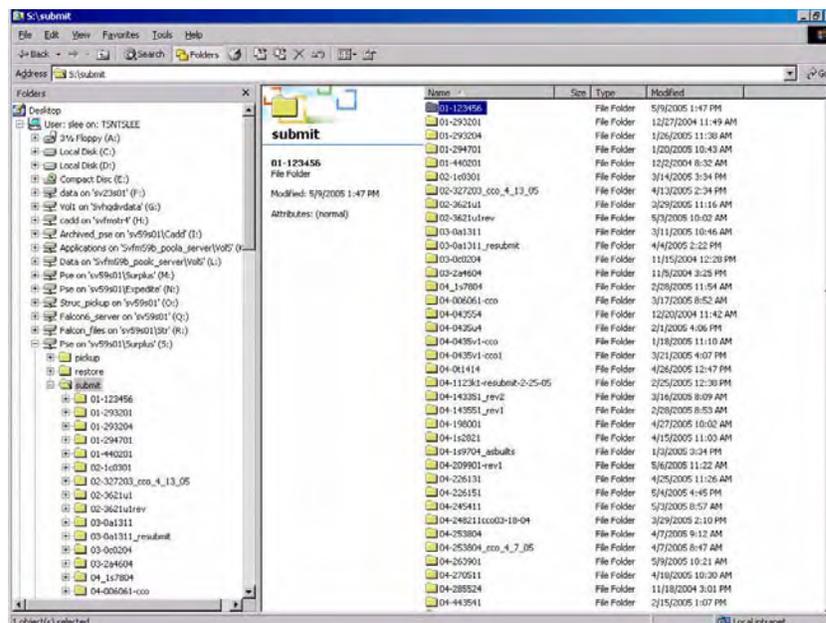


10. Click on the SUBMIT folder.

### ATTACHMENT 8

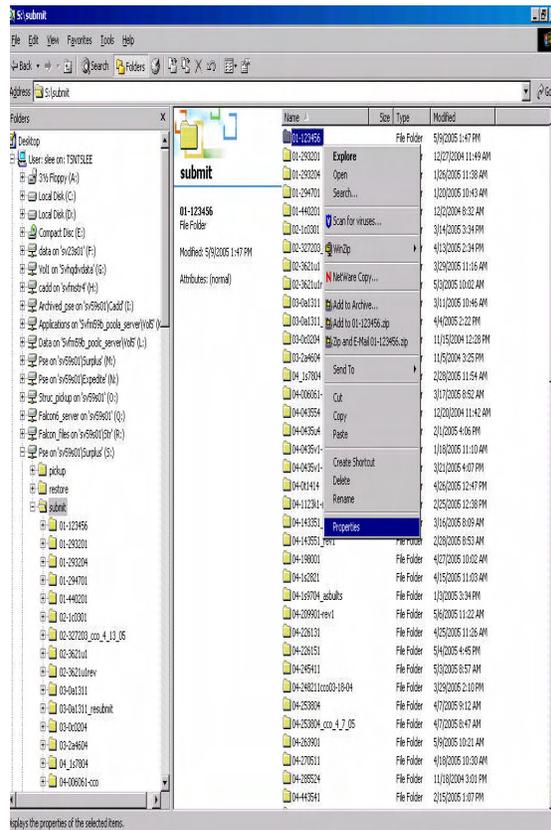


11. If you don't see your EA in the district folder, you need to create it.
- A. Click on File on the top menu bar
  - B. Click on New
  - C. Click on Folder
  - D. Then name the folder the project's EA number (ex: 04-006061)



12. Make sure the permissions on the EA folder is set as follows:

## ATTACHMENT 8

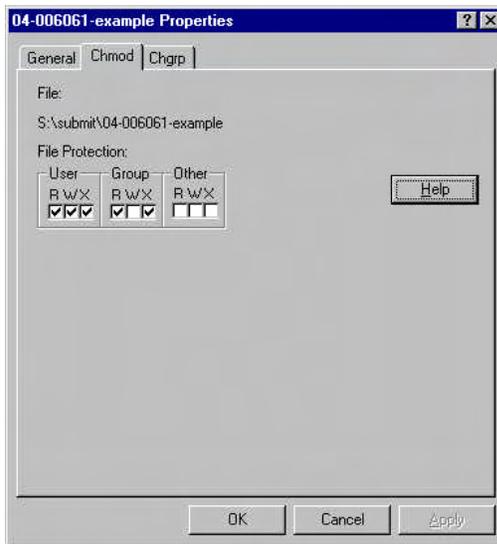


13. Check this by highlighting the EA folder and right click properties

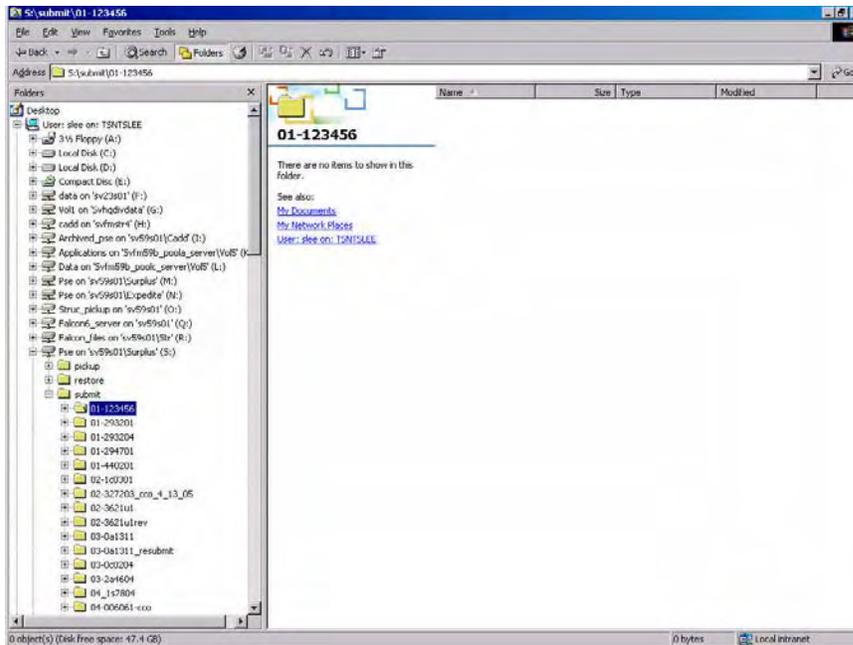


14. Select the CHMOD tab

ATTACHMENT 8

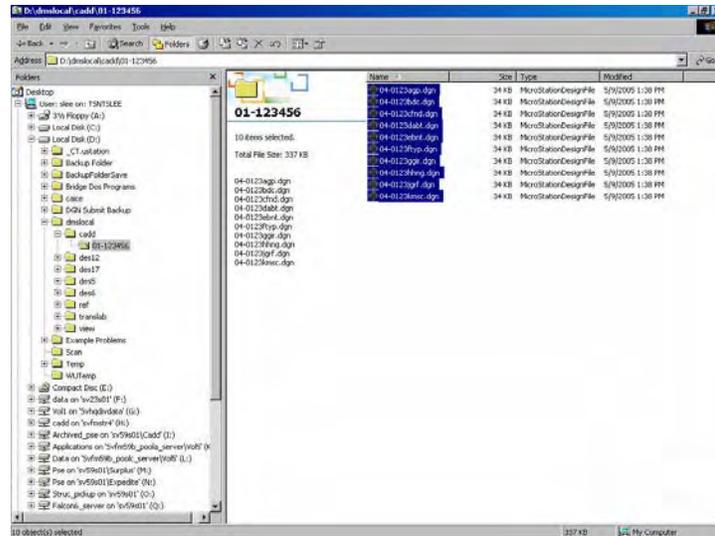


15. Set the File Protections for the EA directory as follows... .

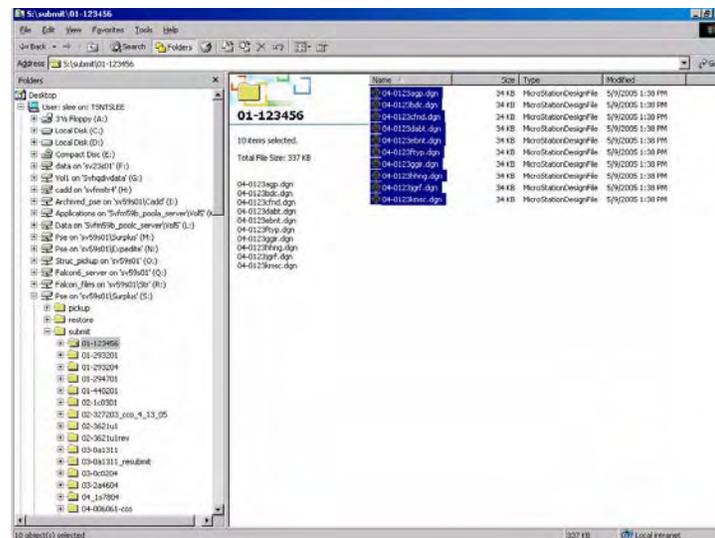


16. Open this EA folder by double clicking on it

Copy from your D:\dmslocal\~\~\~\~



To the S:\ SUBMIT\dist-EA



- Now copy all the dgn's files selected from the D drive under the dmslocal/section/ea/bridges (for example D:\dmslocal\des14\04-006061\23-0215 and 23-0214) to the S drive under the district/ea (for example dist04\04-006061) S:\submit\EA

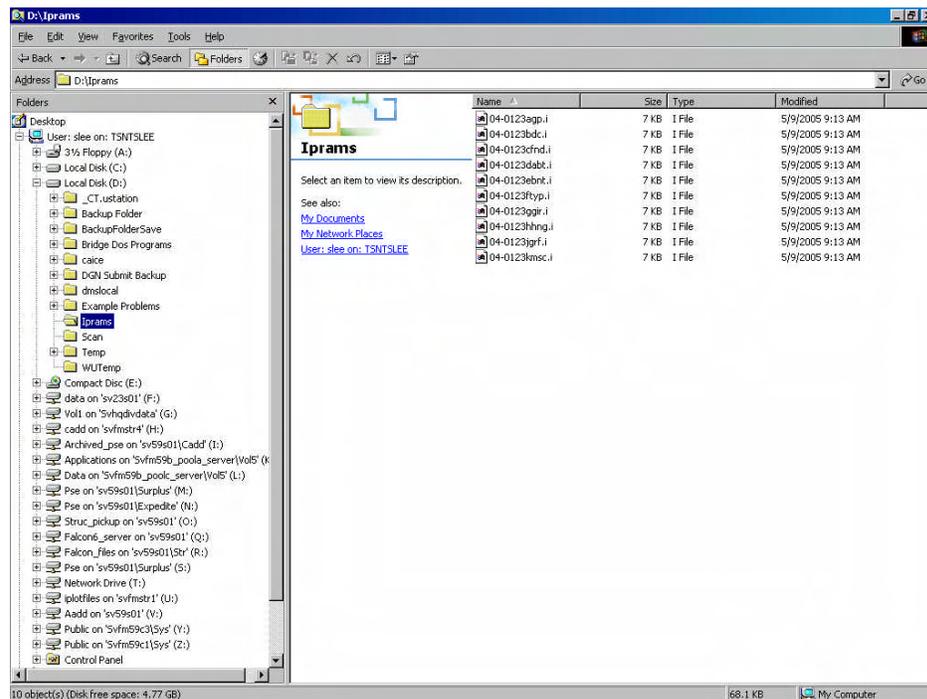
Note: Repeat steps again for more than one bridge.

### ATTACHMENT 8

18. Now copy all the Iparms ".i" files to the PSE SUBMIT \ EA folder.

For instruction on how to create Iparms see "How to create Iparms" Handout.

19. For my example, I have created a folder on my D:\ drive called Iparms



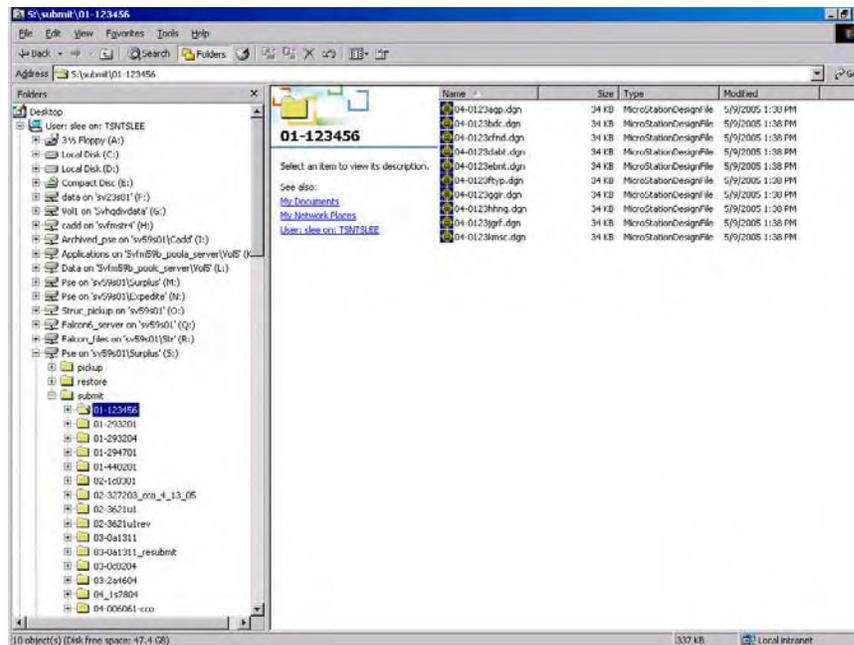
20. Right Click my computer and open up your D:\ drive

21. Navigate to your Iparms folder

22. You should see your ".i" Iparms

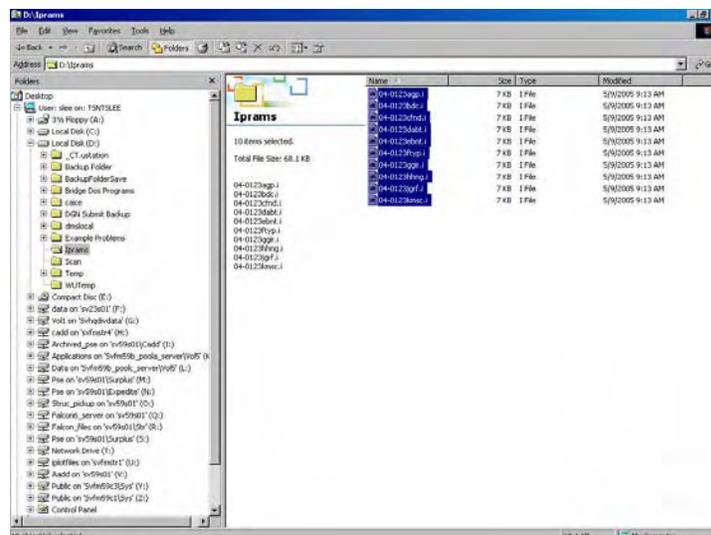


### ATTACHMENT 8



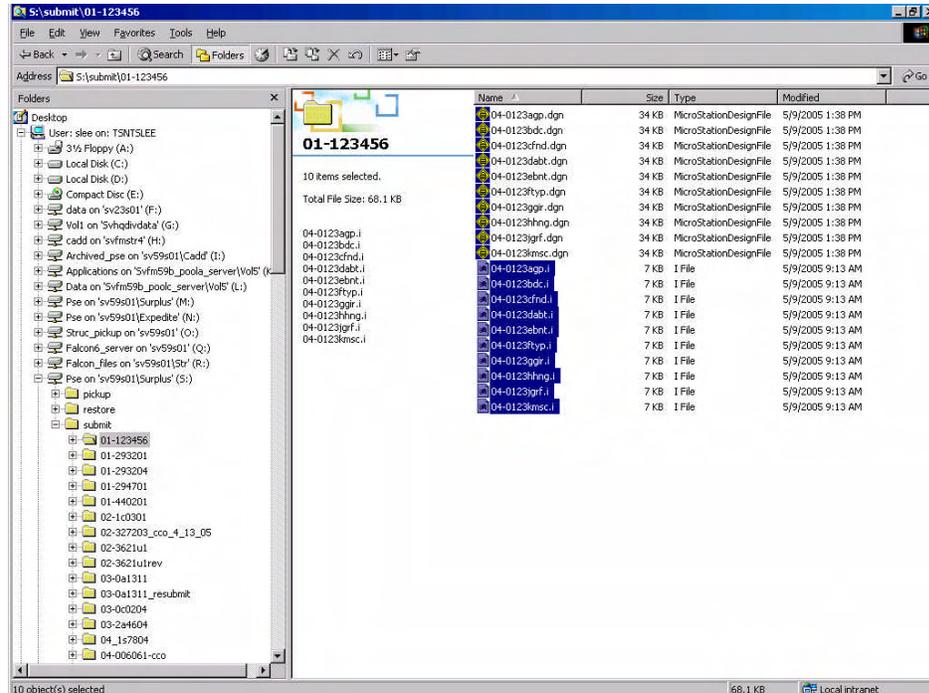
26. Click on SUBMIT \EA FOLDER

27. Open this EA folder by double clicking on it



Copy from your D:\lparms\-----

To the S:\ ~~~~~

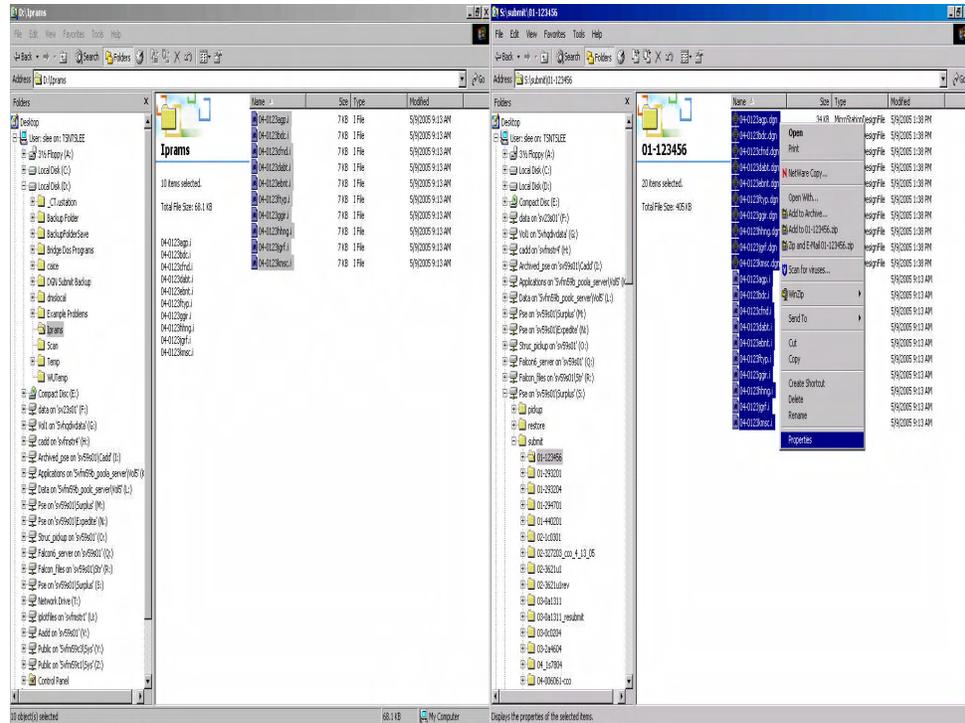


28. Now paste all the ".i" Iparms files selected from the D drive under the D:\ Iparms to the S drive under the district/ea (for example dist04\04-006061)

29. Once you have all your files copied to the S:\ SUBMIT\dist \ ea ~~ you can set permissions on your files.

30. Navigate to the S\ drive SUBMIT FOLDER to the proper location for your district and ea.

### ATTACHMENT 8

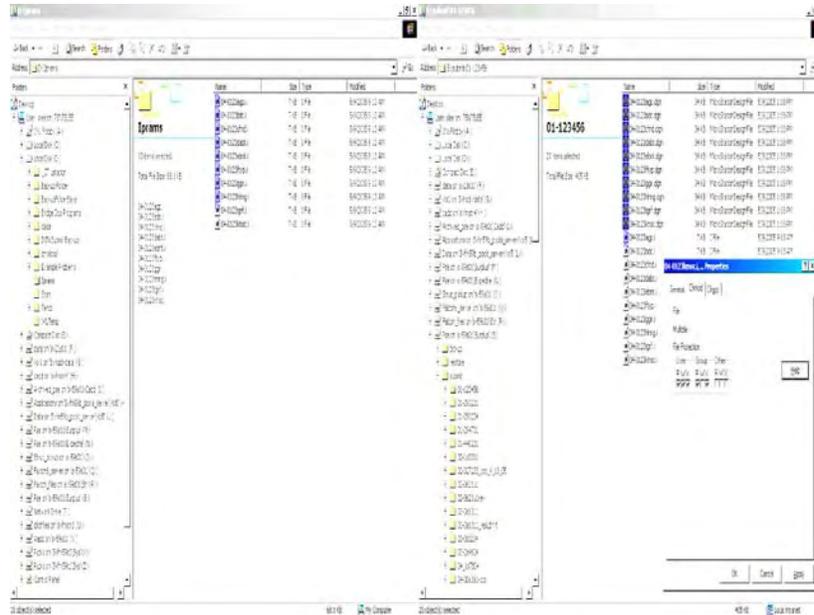


31. Select all files and Click \ File \ Properties

32. Select the CHMOD tab

## ATTACHMENT 8

33. Set the file protections ... as follows ...



34. Click Apply

35. Click OK

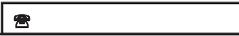
Now that the files are copied here, REFER TO **ATTACHMENT 11** (page 39) TO FINISH EXPEDITE PROCESS.



ATTACHMENT 9

THIS FORM SHALL BE FILLED OUT BY ONLY THE DESIGNATED DRAFTING REVIEWER

**District or Structures Drafting Plan Review Checklist**

District Plans:       Structure Plans:       English       Metric  
 Project ID \_\_\_\_\_ Source / EA \_\_\_\_\_  
 Date Reviewed \_\_\_\_\_ Project Engineer \_\_\_\_\_   
 Draft. Reviewer \_\_\_\_\_ District OE \_\_\_\_\_   
 IS THIS A CONSULTANT JOB ...       YES       NO  
 TYPE OF PLANS     CADD       CONV       MIX  
 TOTAL SHEETS     CADD       CONV       OTHER

DRAFTING REVIEW CHECK RECOMMENDS...

SEND PLANS TO DES WITH PS&E PACKAGE

RETURN PLANS TO PE FOR ADDITIONAL DRAFTING

**TITLE SHEETS**

Seal / Signature  
 Design Oversight Approval for Consultant Projects lower left (Printed Name, Signature, Registration No., Date of Signature) and PS&E Note  
 North Arrow / Bar Scale or No Scale  
 Correct Contractor's Note (lower left)  
 Location Map indicating the appropriate county outlined / crosshatched  
 Description in accordance with Article 2-2.1 (B) of the Drafting and Plans manual  
 Leave Sheet Index blank  
 Check all lettering (14 pts.)  
 All features in Project Title must be identified on Strip Map  
 Project EA in lower right border  
 District / County and disclaimer  
 Show destinations w/arrows on Strip Map  
 Show City or County limits on Strip Map  
 Show City Names of incorporated /unincorporated areas (caps / upper / lower respectively )  
 Bridge shown by symbol, also show bridge name, type (O.C. or U.C.) and number if structure plans are included  
 Label waterways / Railroads and all relevant street names  
 Identify all signed routes on Strip Map ( use no shields)  
 Show construction limits or location of construction including stationing and kilopost

**PLANS SHEETS**

Check all sheets for proper drafting material (use no diazo mylar)  
 Standard Plans list (if applicable)  
 Seal / Signature  
 North arrow (use appropriate size)  
 Scale (if applicable)  
 Proper sheet identification in lower right corner including the correct sheet identification code / plan number  
 Use standard line symbology (drop-out where applicable)  
 Lettering or text (14 pts. min., drop out where applicable)  
 Drainage / profile grids (should be in drop-out)  
 Check details for reduction suitability  
 Aerial photos must be legible (remove background as necessary)  
 No link in K.P.s, sheet numbers or dates on Plan Approval line (date for engineer's completion located after their signature) and add Disclaimer Note  
 Other

**IMPORTANT**

Plot verification ..... \_\_\_\_\_ (initials)

Electronic Date / Time Stamp indicated on plans

COMMENTS:

---



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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**FINAL STRUCTURES PS&E CADD SUBMITTAL**

Date: \_\_\_\_\_

SM&I CADD SUBMITTAL FORM (1-26-05)

This is a....	<input type="checkbox"/> Original Submittal	<input type="checkbox"/> Revised or Additional Submittal	<input type="checkbox"/> Addenda Submittal
District/Source/EA	District/County/Route		
Post Mile or Kilometer Post			
Structure Project Engineer	Phone	Structure Branch Chief	Phone
Structure CADD Contact Person		Public/Calnet/Fax	E Mail Address

Check One	
<input type="checkbox"/> English	<input type="checkbox"/> Metric

**PROJECT IDENTIFICATION**

Node ID/Address/File Name:	S:Drive/submit/	
Directory Size (Blocks/Bytes):	Total No. Files:	Total CADD Sheets:

**PS&E DIRECTORY CHECKLIST**

<input type="checkbox"/> Place Proper Signatures <input type="checkbox"/> Place Registration Seal Information <input type="checkbox"/> Follow Leveling Convention (As per Manual) <input type="checkbox"/> Follow Electronic File Naming Convention <input type="checkbox"/> Remove Extraneous Information <input type="checkbox"/> Place All Files in PS&E Directory <input type="checkbox"/> Display Correct Levels in Design Files <input type="checkbox"/> Check for Current Time/Date Stamp <input type="checkbox"/> Prints Created on Current Plotting System	<input type="checkbox"/> Establish Plot View for All Design Files <input type="checkbox"/> File Design <input type="checkbox"/> Delete Unused Named Views <input type="checkbox"/> Directory/File Protection for DES-OE Access <input type="checkbox"/> Plot Files Rotated 0 or 90 Degrees <input type="checkbox"/> Plot Files Generated From Fenced Cut-lines <input type="checkbox"/> Display Properly <input type="checkbox"/> Specially Added Files (list)
---	---

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DES Engineer's Revised Submittal Approval  
 (Initials)

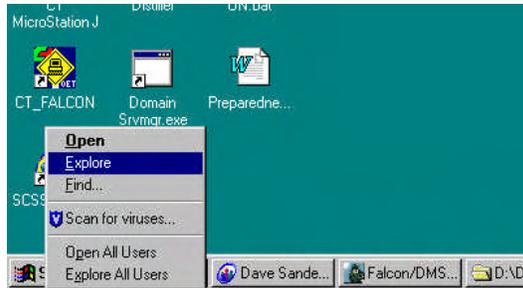
Special Instructions :

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

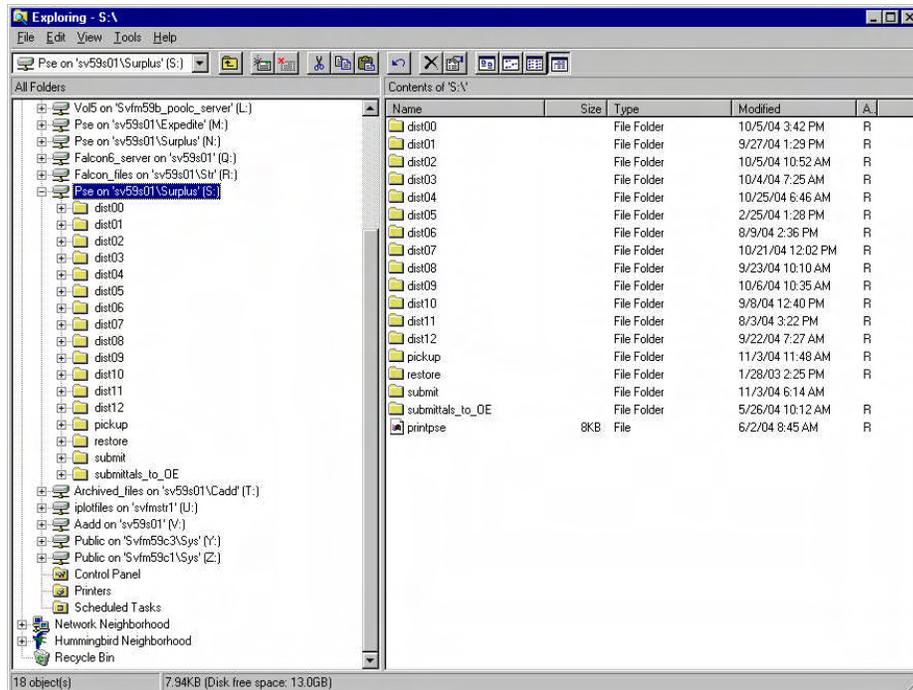
For DES Project Plans Use Only	
To: _____	
_____ Date in	_____ Date out

TO GET BLOCK SIZE ON THE PC

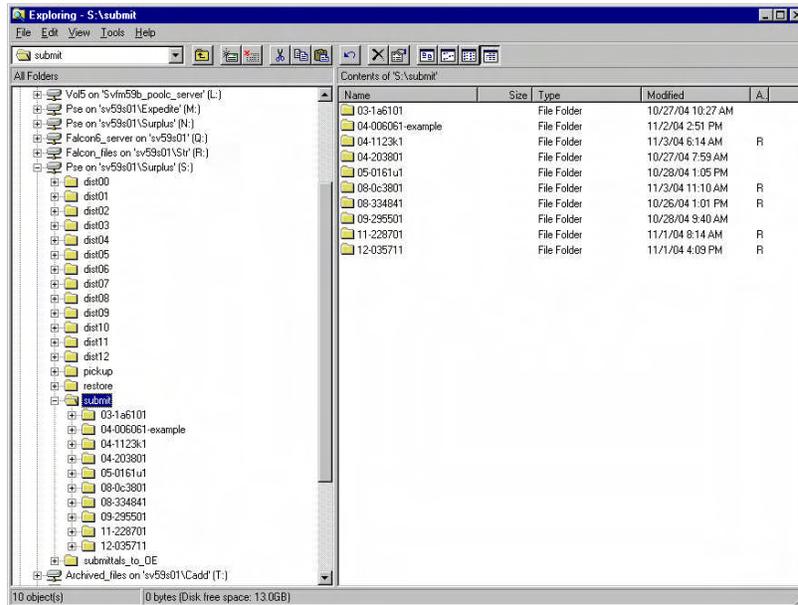
Note: All .dgn and .i files files must be in the pse directory ready to expedite.



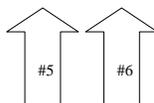
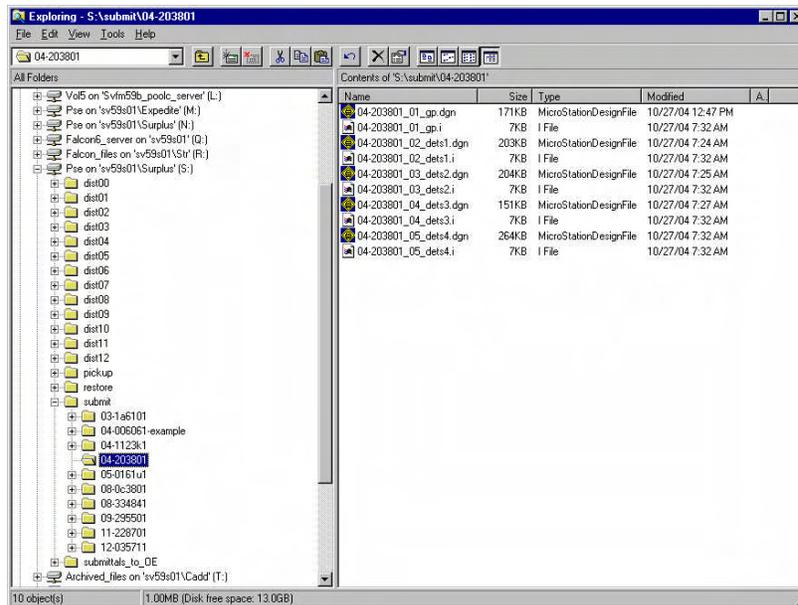
1. Open a Windows Explorer Window  
Right-Click on the "Start Button", Left-Click on "Explore"



2. Double-Click on the S:\Drive



### 3. Double-Click on the "submit" folder



### 4. Double-Click on the appropriate District-EA folder

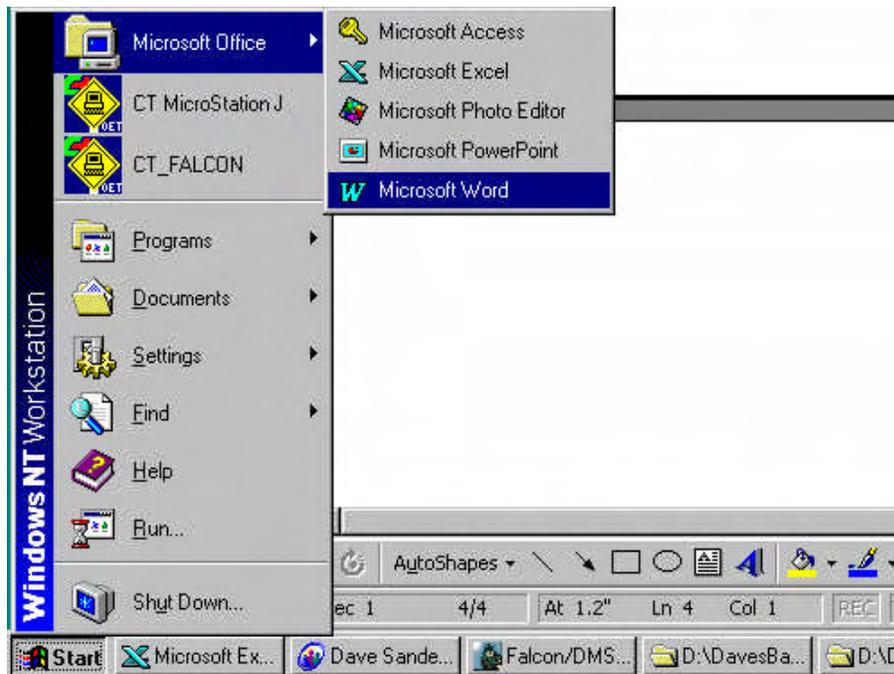
ATTACHMENT 11

5. this is the total number of files

---

6. This is the number for block size. So for this example record "1.00MB".

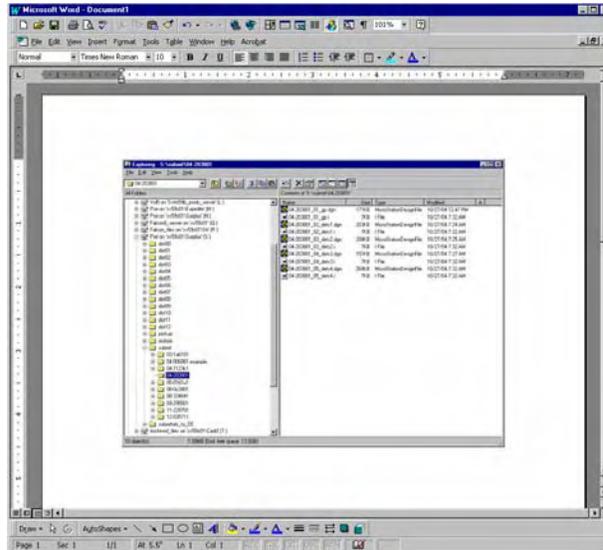
---



7. To capture a screen print. Simultaneously click the Alt Key and the "Print Screen" key to copy. Then open up Word, by clicking on the "Start" button and selecting "Microsoft Office" and then "Microsoft Word"

---

## ATTACHMENT 11



8. Word should open up as shown. Just click in the page then simultaneously click the "Control" key and the "V" key to paste. This should paste the screen shot into a word document.

---

9. Print this document. This replaces the "printpse" printout. Submit this printout with your expedite forms.

---



ATTACHMENT 12

PS & E CADD SUBMITTAL  
FIRST NOTICE

THE FOLLOWING CADD SUBMITTAL PROJECT HAS BEEN SUCCESSFULLY COPIED INTO  
H.Q. PROJECT PLANS

DIST:	EA:	COUNTY/RTE:	PROJECT ENGINEER:	TOTAL FILES:	# OF SHEETS:
04	245411	Son 101, 12	Fred Witteborn	347	169

Original submittal:       Revise/replace:       Additional:       Addenda:

**In Order to Maintain District File Space, You May Remove the Above Listed CADD Files From  
Your PS&E Directory, Upon Receipt of this Message. Please Inform Your  
CADD Drafter/Contact Person.**

Attention: Structure CADD Software Support      District: 04

This submittal processed by: Cynthia Pierce      District copied from: 04      Copied from Structures:

Date of processing: 5-2-05

**IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT THE PERSON LISTED BELOW**

Martin F. Tomas	Calnet: 8-498-6277 Commercial: 916-227-6277 E-mail: martin_f_tomas@dot.ca.gov	ENGINEERING SERVICE CENTER OFFICE ENGINEER PROJECT PLANS UNIT
-----------------	---	---

**Note / Problems:**





PLEASE INFORM YOUR CADD DRAFTER

\*\*\*\*\*

SECOND NOTICE

DATE:

3-22-01

\*\*\*\*\*

DISTRICT:

01

OTHER RESPONSIBLE DISTRICT:

str

ATTENTION:

John Sanchez

Final Changes have been made for the following project.

Dist:	EA:	COUNTY / RTE:	PROJECT ENGINEER:	FILES:	TOTAL BYTES:	TOTAL
01	123456	Don-1	John Doe	50	30.5 MB	

PROJECT  
LOCATION:

\\svfms01\01\doe\PSEPickup

\*\*\*\*\*

FOR CONSULTANT JOBS ONLY: Hard copy title sheets may contain changes to oversight Engineer's Signature, Registration Number, and the Date, as necessary. These changes may not have been made to the Electronic File.

\*\*\*\*\*

Electronic files are ready to be copied back to the district for archival purposes and for use with AS-BUILT changes. We will delete all files associated with the above project from our directories (15) days from the SECOND NOTICE date (shown above), unless we are notified by the district staff to do otherwise. It is requested that the district acknowledge the receipt of all project material returned to the district, via electronic mail, or via telephone (listed below).

\*\*\*\*\*

\*\*\*\*\* NOTIFY \*\*\*\*\*

ENGINEERING SERVICE CENTER  
OFFICE ENGINEERS, FM3, 3RD Floor  
PROJECT PLANS UNIT

SEND MAIL TO:	Kathleen LeVenton@dot.ca.gov	CALNET:	COMMERCIAL:
OR:	Annda Thomas@dot.ca.gov	8-498-6371	916-227-6371
		8-498-6319	916-227-6319

\*\*\*\*\*



FINAL DRAFT

April 27, 2005

## SUBMISSION OF PLAN SETS (AS-BUILT) TO MICROFILM

Historically, As-built plan sets have been sent "hardcopy to the Reprographics/Microfilm unit for processing into microfilm or Aperture Card format. This is currently the State of California and GSA standard for long-term archival.

Within the last few years, equipment has been introduced in both the Reprographics Unit and the Microfilm Lab to process all electronic files into plans books. The Microfilm Aperture Card archives Archival of As Built information has become the most recent priority of both the Districts OE As-Built teams and the HQ Microfilm Lab due to the increased demand for searchable and recoverable As-Built information. This is valid from both a convenience and a legal point of view.

The Caltrans Microfilm Lab has taken the next step in providing an increase effort in this service by shifting the priority for the Microfilm work entirely into the arena of As-Built Plan and Document sets. In order to meet the goal of 100% Aperture Card archival of As-Built information, the Microfilm Lab has established the following standards in preparing the electronic deliverables:

### Electronic File Format - Project Plans

**File Format:** CCITT Group 4 Compressed Tiff (black and white 1 bit)  
All files must conform to the 22" X 34" border format. Scanned images must be cropped, deskewed and de-speckled prior to completion of deliverables.

**Naming:** dist(2- #s) contract #(6- #s) sheet #(4-#s).tif example: 041234540315.tif  
The sheet # referred to is the plan set sheet number, not the group sheet number..ie..sheet 3 of 15.

**Information File:** The information file is an ASCII format text file with a single set of information values contained therein. The Quintek Corporation Aperture Card creator front end, to populate the Holerith data on each of the Aperture card in the set will utilize this information. At present, the only "non-structured" value that is allowed is the actual sheet number in the set, which the front end extracts from the filename itself. Information regarding multiple bridge numbers, counties, routes etc. is restricted to the data space allocated in the Holerith data. All other information is truncated. The following example displays the format and the order of the data in the ASCII file:

**ASCII Data File:** Filename for this ASCII file should be **info.txt** The text file should be in the same directory as the .tif files.

DIST  
CONTRACT NUMBER (EA that ends in a "4")  
COUNTY(s)  
ROUTE(s)  
PM/KP  
TOTAL SHEETS (in contract)  
BRIDGE NUMBER(s)

FINAL DRAFT

April 27, 2005

**SUBMISSION OF PLAN SETS (AS-BUILT) TO MICROFILM cont.**

**Example:**           04  
                  123454  
                  A1a,CC  
                  10.1/10.6,R13.2/R15.1 (KP is Metric units and PM is English units)  
                  396  
                  35-0369,35-0370

The information as shown will be truncated to fit within the parameters as allowed in the Holerith data on the card.

**Label CD:**           **District-Contract #-As-Built**  
                          **Branch #, Branch Chief**  
                          **Phone # of Branch Chief**



Final Draft

March 22, 2005

## Structure Type Coding

(Bridge Design Aids - Pages 11-27 and 11-28)

The first character in the field identifies the major material used or the construction method:

C - Concrete	P - P/S, P/C
I - P/S, CIP	S - Steel
M - Masonry	T - Timber

The second and third characters describe the physical configuration of the main span:

AR- Arch	RB- Rolled Beam
B1- Single Box	SL- Slab
B2- Double Box	SS- Seal Slab
B3- Triple Box	SU- Suspensions
B4- Quadruple Box	T1- Type 1 Wall
B5- Quintuple Box	T2- Type 2 Wall
BG - Box Girder	T3- Type 3 Wall
BW- Bin Wall	T4- Type 4 Wall
DT- Double "T"	T5- Type 5 Wall
DU- Deck Units	TB- Truss Bascule
IG- "I" Girder	TC- Truss Cantilever
IT- Inverted "T"	TD- Truss Deck
IU- Inverted "U"	TG- "T" Girder
LS- Log Stringer	TL- Truss Lift
P1- Single Pipe	UG- "U" Girder
P2- Double Pipe	WG- Welded Girder
PA- Pipe, Arch	XX- None of the above

The fourth character indicates the function of the structure:

A- Undercrossing	M- Equestrian Undercrossing
B- Overcrossing	N- Cattle Pass Undercrossing
C- Separation	O- Culvert Undercrossing
D- Underpass	P- Pedestrian Bridge
E- Overhead	Q- Pedestrian Overcrossing
F- Bridge	R- Equestrian Overcrossing
G- Bridge and Overhead	S- Pipeline Overcrossing
H- Viaduct	T- Pump House
I- Sidehill Viaduct	U- Culvert
J- Double Deck Viaduct	W- Retaining Wall
K- Tunnel	X- SoundWall
L- Pedestrian Undercrossing	Z- None of the above

The fifth character identifies the nature of construction:

E- Extension	Q- Earthquake Retrofit
F- Repair/ Rehab	R- Raising Bridge
M- Modification	U- Rail Replacement (Upgrade Rail)
N- New	W- Widening



## Federal Construction Type Code

Bridge Type	
X- - -	The first digit (code X) indicates bridge
	The second digit indicates nature of structure
X0- -	Highway over waterway
X1- -	Highway over railroad
X2- -	Highway over highway
X3- -	Highway over waterway and railroad
X4- -	Highway over waterway and highway
X5- -	Highway over railroad and highway
X6- -	Highway under railroad
X7- -	Highway under highway
X8- -	Highway under railroad and highway
X9- -	Other combination, including Highway over waterway, RR and highway; also 3- and 4- level grade separations and miscellaneous
	The third digit identifies the material of principal supporting members of the span.
X-0-	Timber
X-1-	Masonry
X-2-	Concrete, not prestressed
X-3-	Steel
X-4-	Steel and concrete
X-5-	Timber and steel
X-6-	Timber and concrete
X-7-	Composite steel and concrete
X-8-	Concrete, prestressed
X-9-	Aluminum
	The fourth digit identifies type of span (identifies type if bridge comprises 2 or more span types)
X- -0	Slab
X- -1	Girder
X- -2	Truss
X- -3	Rigid frame
X- -4	Arch
X- -5	Cantilever truss
X- -6	Movable
X- -7	Suspension
X- -8	Box Culvert (bridge length)
X999	Highway tunnel
1/ First digit is alpha, remaining digits are numeric.	

## INSTRUCTIONS

This "readme" file will illustrate how to fill out the electronic "Federal Construction Type Code For Structures" form.

The name of the electronic file is fedcode.xls  
The form is in sheet Form.

Enter EA number for the project in cell D8. This cell is a text cell. Entry will be treated as text.

There is a maximum of 20 bridge entries.

Enter bridge name in column C of the appropriate row.

Enter bridge number in column H of the appropriate row. The cells are text cells.  
All entries will be treated as text.

Enter structure type code in column K of the appropriate row. A list of structure type code is in sheet Structure Code

Enter BB station in column N of the appropriate row.

Enter EB station in column P of the appropriate row.

Enter federal construction type code in column S of the appropriate row. A list of federal construction type code is in sheet Federal Code