EX. SIGNS TO BE RELOCATED (SHOWN AT FINAL LOCATION)

15 — Elm St 4600 Blk.

24 — Georgetown Branch Trail

MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

PROPOSED SIGNS

13,14 — R3-4 (36"x36")

16 — R3-1 (36"x36")

17 — ONE WAY R6-1(L) (36"x12")

18,19 — R3-18 (36"x36")

20 — ONLY R3-5(L) (30"x36")

22 — ONLY R3-5(R) (30"x36")

23 — DO NOT ENTER R5-1 (30"x30")

21 — SOUTH 355 NORTH M1-5(3) (78"x24")

25,27 — PUSH BUTTON TO CROSS WISCONSIN AVENUE; 1 START CROSSING WHEN WALK SIGNAL IS DISPLAYED; 2 WAIT 5 SECONDS FOR ACCELERATED CROSSING; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOTE IT IS DANGEROUS TO CROSS; STREET NAME SMALLER TYPE 2 — R10-3(1) 9" x 15"

26,28 — PUSH BUTTON TO CROSS WISCONSIN AVENUE; 1 START CROSSING WHEN WALK SIGNAL IS DISPLAYED; 2 WAIT 5 SECONDS FOR ACCELERATED CROSSING; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOTE IT IS DANGEROUS TO CROSS; STREET NAME SMALLER TYPE 2 — R10-3(1) 9" x 15"

29 — PUSH BUTTON TO CROSS ELM STREET; 1 START CROSSING WHEN WALK SIGNAL IS DISPLAYED; 2 WAIT 5 SECONDS FOR ACCELERATED CROSSING; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOTE IT IS DANGEROUS TO CROSS; STREET NAME SMALLER TYPE 2 — R10-3(1) 9" x 15"

30 — PUSH BUTTON TO CROSS ELM STREET; 1 START CROSSING WHEN WALK SIGNAL IS DISPLAYED; 2 WAIT 5 SECONDS FOR ACCELERATED CROSSING; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOTE IT IS DANGEROUS TO CROSS; STREET NAME SMALLER TYPE 2 — R10-3(1) 9" x 15"

PROPOSED SIGNALS

1-6 — R, Y, G — 12"

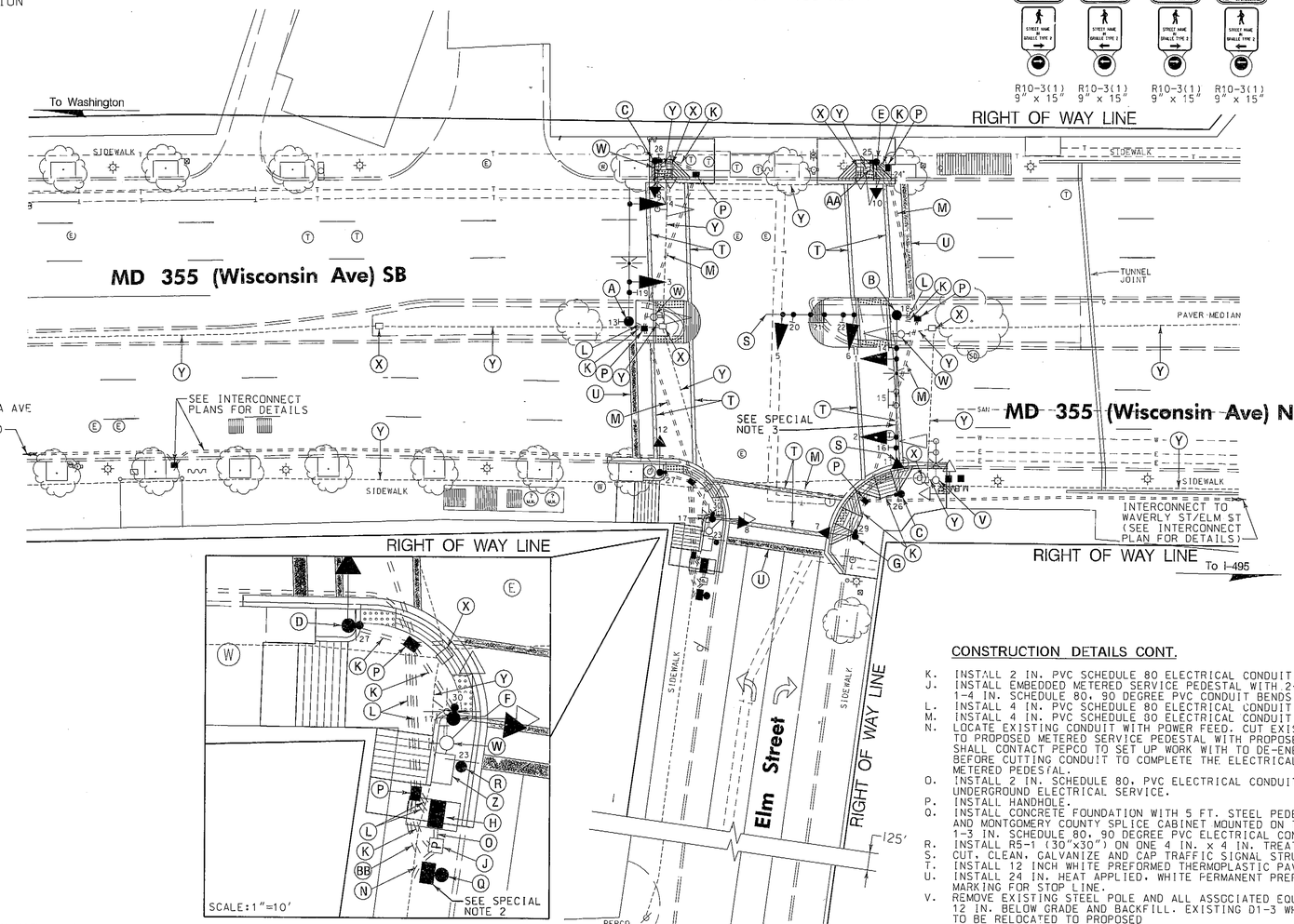
7-12 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

NEMA PHASING

THE EXISTING INTERSECTION OPERATION WILL REMAIN THE SAME

Ø2 Ø4 Ø5 Ø4 ALT. FLASHING OPERATION

NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.



GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03. MD 818.01. MD 818.02. MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
5. ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
7. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
8. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
9. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
10. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON. NOT CENTER TO CENTER OF POLE.
11. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
12. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E-2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
13. FOR FINAL PAVEMENT MARKINGS REFER TO THE PAVEMENT MARKING PLANS, OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.
14. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
15. REFER TO SHEET TSP-8 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.
16. RELOCATION OF EXISTING SIGNS SHALL BE MEASURED AND PAID AS ITEM 813015-INSTALL OVERHEAD SIGN.
17. CALL MONTGOMERY COUNTY TRANSPORTATION MANAGEMENT CENTER (TMC) 72 HOURS PRIOR TO ANY DIGGING TO MARK THE EXISTING TRAFFIC SIGNAL EQUIPMENT.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING THE SIGNAL CABINET VIDEO INTERFACE EQUIPMENT TO THE MONTGOMERY COUNTY SIGNAL SHOP. CONTRACTOR SHALL DELIVER APS PUSHBUTTONS AND CENTRAL CONTROL UNIT TO MR. ROBERT RICKETTS AT MONTGOMERY COUNTY TECHNICAL CENTER AT 1283 SEVEN LOCKS ROAD, ROCKVILLE, MD 20854 AT LEAST 3 WEEKS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL HAVE THE APS MESSAGES PROGRAMMED FROM THE FACTORY AND DELIVER THE APS WAVE FILES TO MR. ROBERT RICKETTS.

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A 38 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS AND 15 FT. STREET LIGHTING ARM WITH A LED LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
B. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A TWIN 50 FT. (CUT TO 37 FT.)/50 FT. (CUT TO 41 FT.) MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS AND 15 FT. STREET LIGHTING ARM WITH A LED LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
C. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS WISCONSIN AVE"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
D. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS WISCONSIN AVE"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
E. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, RELOCATED "GEORGETOWN TRAIL" SIGN, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS WISCONSIN AVE"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
F. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ELM STREET"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
G. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STANDARD NO. MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ELM STREET"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
H. INSTALL NEMA SIZE "S" BASE MOUNTED CABINET AND CONTROLLER WITH SIZE "S" FOUNDATION STANDARD NO. MD 816.07. (INSTALL 3-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.). EXISTING BRICK PAVER SIDEWALK TO BE USED IN LIEU OF CONCRETE PADS.

CONSTRUCTION DETAILS CONT.

K. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
J. INSTALL EMBEDDED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.
L. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
M. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
N. LOCATE EXISTING CONDUIT WITH POWER FEED. CUT EXISTING CONDUIT AND CONNECT TO PROPOSED METERED SERVICE PEDESTAL WITH PROPOSED CONDUIT. NOTE: CONTRACTOR SHALL CONTACT PEPCO TO SET UP WORK WITH TO DE-ENERGIZE ELECTRICAL SERVICE BEFORE CUTTING CONDUIT TO COMPLETE THE ELECTRICAL CONNECTION TO PROPOSED METERED PEDESTAL.
O. INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
P. INSTALL HANDHOLE.
Q. INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE AND MONTGOMERY COUNTY SPLICE CABINET MOUNTED ON TOP OF PEDESTAL POLE. (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
R. INSTALL R5-1 (30"x30") ON ONE 4 IN. x 4 IN. TREATED WOOD SUPPORT. (L=15')
S. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
T. INSTALL 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR CROSSWALKS.
U. INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
V. REMOVE EXISTING STEEL POLE AND ALL ASSOCIATED EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. EXISTING D1-3 WHITE ON BLUE STREET NAME SIGN TO BE RELOCATED TO PROPOSED MAST ARM POLE AS SHOWN.
W. REMOVE EXISTING STEEL POLE AND ALL ASSOCIATED EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
X. REMOVE EXISTING HANDHOLE.
Y. CAP AND ABANDON EXISTING CONDUIT.
Z. REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. SHA SIGNAL SHOP SHALL BE NOTIFIED TO REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET.
AA. REMOVE EXISTING STEEL POLE AND ALL ASSOCIATED EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. EXISTING "GEORGETOWN TRAIL" SIGN TO BE RELOCATED TO PROPOSED PEDESTAL POLE AS SHOWN.
BB. REMOVE EXISTING BRICK PAVERS AND CONCRETE SIDEWALK PAVER BASE AND INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. REPLACE 5 INCH CONCRETE SIDEWALK AND PAVERS.

SPECIAL NOTES:

1. ALL EXISTING HANDHOLES, CONDUIT AND INTERCONNECT CABLE TO BE REMOVED OR ABANDONED SHALL REMAIN IN PLACE UNTIL TURN ON OF PROPOSED SIGNAL. CONTRACTOR SHALL COORDINATE WITH MONTGOMERY COUNTY FORCES.
2. THE CONTRACTOR SHOULD TERMINATE ALL CABLES EXCLUDING INTERCONNECT CABLE. ALL DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES.
3. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF MAST ARM. IF NEW MAST ARM CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATIONS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
4. CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
5. THE CONTRACTOR SHALL COORDINATE WITH SHA TRAFFIC OPERATION DIVISION TO CONTACT LOCAL POWER COMPANY TO SET-UP WORK WITH TO DISCONNECT THE EXISTING ELECTRICAL SERVICE AND HAVE THE NEW SERVICE ENERGIZED.
6. ALL SIGNAL STRUCTURES AND PEDESTRIAN PEDESTAL POLES SHALL BE PAINTED USING FEDERAL BROWN NUMBER 595a-20040.

GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
SD — STORM DRAIN
G — GAS MAIN
W — WATER MAIN
S — SEWER MAIN
E — ELECTRIC CABLES
A — AERIAL CABLES
T — TELEPHONE CABLES
F — FIBER-OPTIC

WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

APPROVALS
TEAM LEADER
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR
ORIGINAL ON FILE

REVISIONS
(A) REBUILD TRAFFIC SIGNAL AND ADDED APS. TIMS# L488
SHA NO. MD1175177 3/05/2013
SRB TMM HO JR RDB CSW

PLOTTED: March 11, 2013
FILE: N:\31699-235\CADD\pSG-P007_md355.dgn

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (Wisconsin Street) and Elm Street (South)
Bethesda, Maryland

TRAFFIC SIGNALIZATION PLAN

SCALE 1" = 20' ADVERTISED DATE 8/14/1989 CONTRACT NO. BW 340-802-312

DESIGNED BY R.R. Zacherl COUNTY Montgomery
DRAWN BY B.K. Miller LOGMILE 15035501.54
CHECKED BY TIMS NO. N/A
F.A.F. NO. SEE TITLE SHEET TOD NO.

TS NO. 2581 A | DRAWING TSP-7 OF 20 | SHEET NO. ### OF ###

BY: sbloss