PROJECT DESCRIPTION

I. GENERAL:

THIS PROJECT INVOLVES UPGRADING PEDESTRIAN SIGNALS TO APS/CPS AT THE EXISTING TRAFFIC SIGNALS AT THE INTERCHANGE OF MD 193 (GREENBELT ROAD) WITH MD 201 (KENILWORTH AVENUE) IN PRINCE GEORGE'S COUNTY.

MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION:

THE EXISTING TRAFFIC SIGNAL WILL CONTINUE TO OPERATE IN A FULLY ACTUATED MODE USING FOUR (4) NEMA PHASES.

MAINLINE MD 193 OPERATES CONCURRENTLY WITH LAGGING LEFT TURN PHASES FOR WESTBOUND TRAFFIC.
DURING THE SPLIT PHASE OPERATION OF THE RAMPS FROM MD 201 AN EASTBOUND LEFT TURN ONTO THE RAMP FOR NORTHBOUND MD 201 OPERATES. AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE WEST LEG OF THE INTERSECTION MAY OCCUR DURING THE SPLIT SERVING THE SOUTHBOUND MD 201 OFF-RAMP.

THIS INTERSECTION IS PART OF THE MD 193 INTERCONNECT SIGNAL SYSTEM.

THE EXISTING CABINETS AND CONTROLLERS IN USE WILL REMAIN. A NEW 2-WIRE CENTRAL CONTROL UNIT WILL BE INSTALLED IN THE SIGNAL CONTROLLER CABINET.

AUDIBLE PUSHBUTTON FUNCTION SHALL BE AS FOLLOWS:

1. WHEN A PEDESTRIAN PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

FOR NORTH LEG RAMP, "WAIT TO CROSS KENILWORTH RAMP AT GREENBELT, WAIT"

2. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL CONTINUE FOR THE DURATION OF THE "WALK" PHASE.

EQUIPMENT LIST "A"

A. NO EQUIPMENT WILL BE SUPPLIED BY THE ADMINISTRATION.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	QUANTITY		DESCRIPTION
201032	4	CY	CLASS 2 EXCAVATION
203030	1	CY	TEST PIT EXCAVATION
585412	306	LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
634300	75	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
648150	10	LF	MONOLITHIC CONCRETE MEDIAN 4 FEET 0 INCH WIDE TYPE A-3
655105	228	SF	5 INCH CONCRETE SIDEWALK
655120	20	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1	EA	2-WIRE CENTRAL CONTROL UNIT
800000	2	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	1	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
800000	1	EA	REMOVE AND DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
801004	0.2	CY	CONCRETE FOR SIGNAL FOUNDATION
801104	9	LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
801106	60	LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
801605	52	SF	SHEET ALUMINUM SIGNS CONSISTING OF: 2 EA. OM1-3 OBJECT MARKER (18"X 18") GROUND MOUNT 2 EA. W16-7p(R) RIGHT DIAGONAL ARROW (24"X 12") GROUND MOUNT 2 EA. W16-7p(L) LEFT DIAGONAL ARROW (24"X 12") GROUND MOUNT 4 EA. W11-2 PEDESTRIAN TRAFFIC (30"X 30") GROUND MOUNT 1 EA. R1-2 "YIELD" (36"X 36") GROUND MOUNT GUIDE SHIELD ASSEMBLY GROUND MOUNT CONSISTING OF: M3-2 "EAST" (24"X12") M1-5 "MARYLAND 193" (30"X24") M6-2(R)RIGHT DIAGONAL ARROW (21" X 15") 2 EA. R10-3(1) PUSHBUTTON SIGN (9"X 15") POLE MOUNT "TO CROSS MD 201 RAMP"
802501	30	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805115	200	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- BORED
805118	200	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- BORED
805125	5	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
805135	300	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	55	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805160	40	LF	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
810601	3	EA	NON INVASIVE DETECTOR, 500 FOOT LEAD IN CABLE
810605	3	EA	NON INVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE
811001	7	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
818004	1	EA	10 FOOT BREAKAWAY PEDESTAL POLE
861104	3500	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG ALUMINUM SHIELDED)
861105	1100	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	600	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
862101	1600	LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
862102	550	LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)

Williams Associates Engineers

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BY: mhusselbee -

PROJECT CONTACTS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

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ADDITIONAL INFORMATION

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR USING THE STANDARD PLATES FOR TRAFFIC CONTROL FROM SECTION MD 104.00 OF THE SHA BOOK OF STANDARDS FOR HIGHWAYS & INCIDENTAL STRUCTURES.

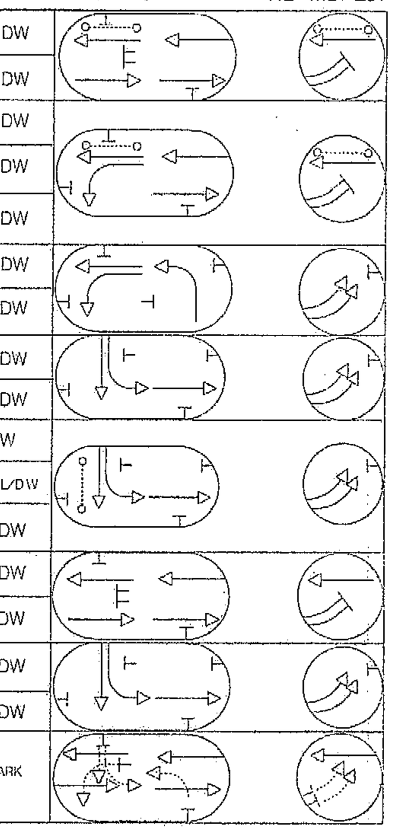
EQUIPMENT LIST "C"

ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

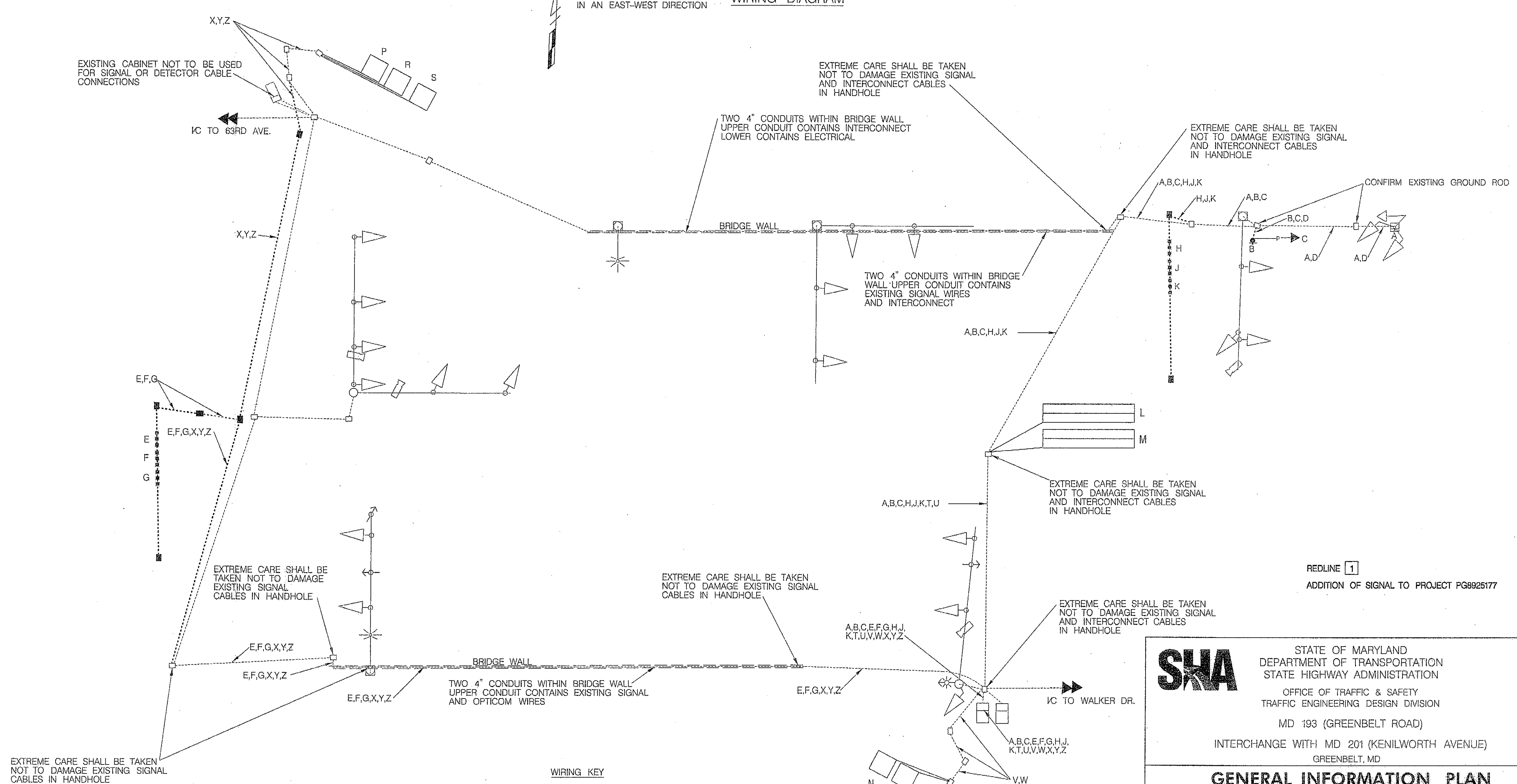
PHASE CHART

MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
PHASE 1	G	G	G	G	G	G	G	G	R	R	G	G	R	R	R	R	R	◁R—	◁R—	R	R	W	W	W	W	DW	DW	DW	DW
PHASE 1 CHANGE	Y	Y	G	G	G	G	G	G	R	R	G	G	R	R	R	R	R	◁R—	◁R—	R	R	W	W	W	W	DW	DW	DW	DW
PHASE 2	R	R	G	G	G	G	G	G	G	G	G	G	R	R	R	R	R	◁R—	◁R—	R	R	W	W	W	W	DW	DW	DW	DW
PED CLEAR & COUNTDOWN	R	R	G	G	G	G	G	G	G	G	G	G	R	R	R	R	R	◁R—	◁R—	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 2 CHANGE	R	R	Y	Y	Y	Y	Y	Y	G	G	G	G	R	R	R	R	R	◁R—	◁R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	G	G	G	G	G	G	G	G	G	◁G—	◁G—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	G	G	◁G—	◁G—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	G	G	◁G—	◁G—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	Y	Y	◁Y—	◁Y—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	G	G	◁G—	◁G—	G	G	DW	DW	DW	DW	W	W	W	W
PED CLEAR & COUNTDOWN	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	G	G	◁G—	◁G—	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 4 ALT CHANGE	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	Y	Y	◁Y—	◁Y—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PREEMPTION #1	G	G	G	G	G	G	G	G	R	R	G	G	R	R	R	R	R	◁R—	◁R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PREEMPTION #1 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	R	R	Y	Y	R	R	R	R	R	◁R—	◁R—	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PREEMPTION #2	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	G	G	◁G—	◁G—	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PREEMPTION #2 CHANGE	R	R	Y	Y	R	R	R	R	R	R	R	R	R	R	R	Y	Y	◁Y—	◁Y—	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/ ◁R—	FL/ ◁R—	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK



WIRING DIAGRAM



WIRING KEY

A,B —	2-CONDUCTOR NO. 14 AWG ELECTRICAL CABLE
C —	5-CONDUCTOR NO. 14 AWG ELECTRICAL CABLE
D —	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
E,F,G, H,J,K	NON-INVASIVE MICRO LOOP PROBE LEAD
L,M,N,O, P,R,S	LOOP WIRE ENCASED IN FLEXIBLE TUBING (CONNECT TO EXISTING LEAD IN CABLE)
T,U,V,W, X,Y,Z	LOOP WIRE LEAD IN CABLE - 2 CONDUCTOR ALUMINUM SHIELDED NO. 14 AWG
⌖ —	GROUND ROD (3/4" DIA. X 10 FT. LENGTH)

REDLINE 1

ADDITION OF SIGNAL TO PROJECT PG8925177

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 193 (GREENBELT ROAD)

INTERCHANGE WITH MD 201 (KENILWORTH AVENUE)

GREENBELT, MD

GENERAL INFORMATION PLAN

SCALE NONE ADVERTISED DATE 11/12/12 CONTRACT NO. PG8925177

DESIGNED BY	PMH	COUNTY	PRINCE GEORGE'S
DRAWN BY	PMH	LOGMILE	16019305.83
CHECKED BY	W5 /AF	TIMS NO.	L274
F.A.P. NO.		TOD NO.	

TS NO. 1931 E | DRAWING GG-1 OF 1 | SHEET NO. 15 OF 26

PLOTTED: Monday, March 12, 2012 AT 02:18 PM
FILE: \\Server02\wae files\01_Project\061_TEDD-BA\01_Task Work\061_0105_Task05 - MD 193 at MD 201\061_010502_Analysis\CADD\pSG-P004_MD193_MD201.dgn