#9807

AS BUILT

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

Washington State Department of Transportation
Olympia, Washington 98504

Scale: Horiz. 1 inch = feet Vert. 1 inch = feet
MP 172.16 to MP 174.59 Constructed Length (??) mile(s)
Contract No. 5334 F.A. No. NH-005-3(??) Contractor TOTEM ELECTRIC
Work Began 5-26- 1998 Work Completed 9-23 1999
Project Engineer J. SCANLON District Transportation Administrator J. OKAMOTO
Approved 1-7-1998

Secretary of Transportation

PLOT2 05 JAN 98 s:\412353\projects\ol2538\vicinity.dgn mcleodc

INDEX

INDEX (CONTINUED)

PLAN REFERENCE NO.
SHEET OF SHEETS

NOTE: ALL SHEET REFERENCES, FIRST NOS. OF STRUCTURE CODE DESIGNATIONS AND MATCH LINE SHEET REFERENCES, ETC., THROUGHOUT THE PLANS, REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.

FOR "AS CONSTRUCTED PLANS" ONLY

LORENA L. ... STATE OF WASHINGTON ... REGISTERED PROFESSIONAL ENGINEER

NORTHWEST REGION ... DEVELOPMENT

...ETS OF THESE PLANS SHALL ... DEEMED APPROVED BY THE ... SIGNATURE AND STAMP ON THIS SHEET

EXPIRES 4/6/99 — 1/7/98 APPROVED

DESIGNED BY M. WELAYE					
ENTERED BY M. WELAYE					
CHECKED BY R. SUAFOA					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-005-3(839)
JOB NUMBER 97W058		
CONTRACT NO.		

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

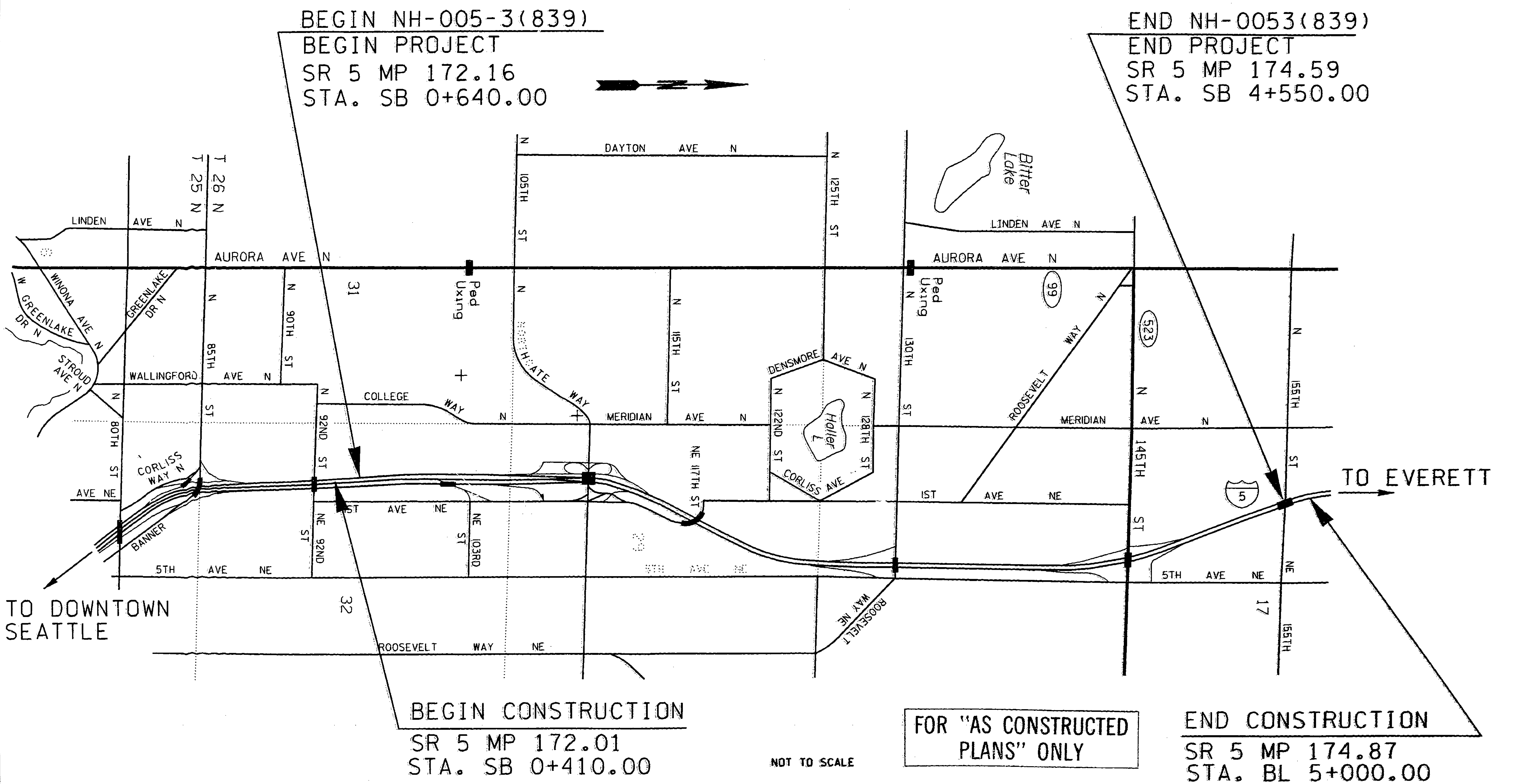
INDEX

I1

SHEET 1 OF 138 SHEETS

PLOT1 06 JAN 98 s:\412353\projects\ol2538\vicinity.dgn wujim

T.26N. R.4E. W.M.



DESIGNED BY M. WELAYE				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
ENTERED BY M. WELAYE				JOB NUMBER 97W058		
CHECKED BY R. SUAFOA				CONTRACT NO.		
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

VICINITY MAP

V1

SHEET 2 OF 138 SHEETS

SUMMARY OF QUANTITIES

97A078/20

PROJECT LIMITS
SR 5
MP 172.16 TO MP 174.59
STA SB 0+640 TO STA BL 4+550

ITEM NO.	TOTAL QUANTITY	STD. ITEM NO.	UNIT	ITEM	NH-005-3(839) STATE FUNDS / SR 5 / GROUP 1: MAINLINE SB 0+640 TO BL 4+550 CS 179200	GROUP 1: SBCD RAMP CS 179200	GROUP 2: THIRD PARTY DAMAGES CS 179200
				PREPARATION			
1	LUMP SUM	0001	L.S.	MOBILIZATION	L. S.	L. S.	L. S.
2	.79	0280	HA	CLEARING AND GRUBBING	.43	.36	
3	5	0048	EACH	REMOVING CATCH BASIN	5		
4	LUMP SUM	0050	L.S.	REMOVAL OF STRUCTURE AND OBSTRUCTION	L. S.	L. S.	
5	919	0595	M	REMOVING BEAM GUARDRAIL	775	144	
6	1,172	0901	M	REMOVING PLASTIC STRIPE	1,043	129	
7	1,079	0902	M	REMOVING PAINT STRIPE	945	134	
8	235	0908	M2	REMOVING PLASTIC TRAFFIC MARKING	209	26	
				GRADING			
9	768	2945	M3	ROADWAY EXCAVATION INCL. HAUL	592	176	
10	4,276	2979	T	GRAVEL BORROW INCL. HAUL	2,250	2,026	
11	1,944	2990	M3	EMBANKMENT COMPACTION	1,025	919	
12	350		M3	LOW PERMEABILITY FILL	350		
				DRAINAGE			
13	271	4476	M3	DITCH EXCAVATION INCL. HAUL	171	100	
14	2	1046	EACH	CONCRETE INLET	2		
15	2	1055	EACH	GRATE INLET TYPE 1 OR 2	2		
16	.24	4505	M3	HAND PLACED RIPRAP		.24	
17	26	4521	T	QUARRY SPALLS		26	
				STORM SEWER			
18	2	3091	EACH	CATCH BASIN TYPE 1	2		
19	4	5347	EACH	CATCH BASIN TYPE 2 1200 MM DIAM.	3	1	
20	1	3090	EACH	CATCH BASIN TYPE 2 1350 MM DIAM. WITH FLOW RESTRICTOR		1	
21	70.84	5352	M	TESTING STORM SEWER PIPE	58	12.84	
22	77.66	5364	M	PLAIN CONC. STORM SEWER PIPE 300 MM DIAM.	46.32	31.34	
23	6	5532	M	CL. V REINF. CONC. STORM SEWER PIPE 300 MM DIAM.	6		
24	7.01		M	SLOTTED DRAIN PIPE 300 MM DIAM.	7.01		
				STRUCTURE			
25	1	7800	EACH	DELETED ITEM			
				SURFACING			
26	107	8662	T	SHOULDER BALLAST	82	25	
27	914	8673	T	CRUSHED SURFACING BASE COURSE	512	402	
				LIQUID ASPHALT			
28	2.82	8722	T	ASPHALT FOR TACK COAT	2.25	.57	
29	EST. 1,010	5334	DOLLAR	ANTI-STRIPPING ADDITIVE	EST. 260	EST. 750	
				CEMENT CONCRETE PAVEMENT			
30	154.7	8790	M3	FURNISHING 14 DAY CONC. FOR CEMENT CONC. PAVEMENT	154.7		
31	671	8792	M2	CEMENT CONC. PAVEMENT	671		
32	1,386	5680	EACH	EPOXY-COATED TIE BAR WITH DRILL HOLE	1,386		
				ASPHALT CONCRETE PAVEMENT			
33	EST. 1,500	5703	DOLLAR	CRACK SEALING	EST. 1,500		
34	2,617	8840	M2	PLANING BITUMINOUS PAVEMENT	2,617		
35	2,204	8870	T	ASPHALT CONC. PAVEMENT CL. A	1,772	432	
36	CALC. 1,500	5835	DOLLAR	COMPACTION PRICE ADJUSTMENT	CAL1,200	CAL300	
				EROSION CONTROL AND PLANTING			
37	.79	9094	HA	SEEDING, FERTILIZING, AND MULCHING	.43	.36	
38	5,200	9142	M2	CLEAR PLASTIC COVERING	3,800	1,400	
39	EST. 13,000	6489	DOLLAR	TEMPORARY WATER POLLUTION/EROSION CONTROL	EST. 8,000	EST. 5,000	
40	36		EACH	STRAW BALE	30	6	
41	12		EACH	GEOTEX GRATE COVER	10	2	
				TRAFFIC			
42	577	9229	M	EXTRUDED CURB	444	133	
43	922	9260	M	BEAM GUARDRAIL TYPE 1	776	146	
44	1	9291	EACH	BEAM GUARDRAIL SRT TERMINAL		1	
45	2		EACH	PRECAST CONC. BARRIER TYPE 3 ANCHOR	2		
46	578	9308	M	TEMPORARY CONC. BARRIER	578		
47	1,226	9320	M	RESETTING CONC. BARRIER	1,226		
48	1	7440	EACH	TEMPORARY IMPACT ATTENUATOR	1		

NOTE: FOR SPECIAL FEATURES SEE SPECIAL PROVISIONS

PRELIMINARY QUANTITIES ONLY
FOR FINAL QUANTITIES SEE
CAPS LEDGER

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY
ENTERED BY
CHECKED BY
PROJ. ENGR.
DIST. ADM.

DATE	DATE	REVISION	BY
	1/19/98	DELETED 25	

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	NH-005-3(839)

JOB NUMBER 97WD58
CONTRACT NO. 005199

PROGRAM DEVELOPMENT DIVISION

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SUMMARY OF QUANTITIES

SQ1

SHEET 3 OF 135 SHEETS

SUMMARY OF QUANTITIES 97A078/20

NH-005-3(839) STATE FUNDS — SR 5

ITEM NO.	TOTAL QUANTITY	STD. ITEM NO.	UNIT	ITEM	GROUP 1: MAINLINE SB 0+640 TO BL 4+550 CS 179200	GROUP 1: SBCD RAMP CS 179200	GROUP 2: THIRD PARTY DAMAGES CS 179200
49	1	7442	EACH	PERMANENT IMPACT ATTENUATOR	1		
50	EST. 25,000	7444	DOLLAR	REPAIR IMPACT ATTENUATOR			EST. 25,000
51	3	7445	EACH	RESETTING IMPACT ATTENUATOR	3		
52	200		HOUR	TRUCK MOUNTED IMPACT ATTENUATOR	200		
53	100	7449	HOUR	OPERATION OF TRUCK MOUNTED IMPACT ATTENUATOR	100		
54	23	6832	EACH	FLEXIBLE GUIDE POST	19	4	
55	1,675	9249	M	PAINT STRIPE	1,540	135	
56	20	6819	EACH	PLASTIC DRAINAGE MARKING	16	4	
57	1,093	9257	M	PLASTIC GORE STRIPE	959	134	
58	1	6877	EACH	PLASTIC PREFERENTIAL LANE SYMBOL TYPE 1	1		
59	9.9	6882	HUND	RAISED PAVEMENT MARKER TYPE 1	9.9		
60	3.72	6884	HUND	RAISED PAVEMENT MARKER TYPE 2	3.72		
61	9,041	9310	M	TEMPORARY PAVEMENT MARKING	8,872	169	
62	LUMP SUM	6890	L.S.	PERMANENT SIGNING	L. S.		
63	LUMP SUM	6898	L.S.	CANTILEVER SIGN STRUCTURE NO. 1	L. S.		
64	LUMP SUM	6904	L.S.	ILLUMINATION SYSTEM SUA 671	L. S.		
65	LUMP SUM	6904	L.S.	ILLUMINATION SYSTEM SUA 674		L. S.	
66	LUMP SUM	6904	L.S.	ILLUMINATION SYSTEM SUA 3955	L. S.		
67	EST. 10,000	7715	DOLLAR	FORCE ACCOUNT ELECTRICAL SYSTEM REPAIR	EST. 10,000		
68	LUMP SUM		L.S.	TRAFFIC DATA ACCUMULATION AND RAMP METERING	L. S.		
69	LUMP SUM		L.S.	COMMUNICATION CABLES AND INTERFACES	L. S.		
~~70~~	~~LUMP SUM~~		~~L.S.~~	~~VARIABLE MESSAGE SIGN RETROFIT~~ DELETED C.O.#11	~~L. S.~~		
71	22		M	JACKING OR BORING 53MM CONDUIT	22		
72	183	6954	EACH	TRAFFIC SAFETY DRUM	151	32	
73	750	6956	HOUR	SEQUENTIAL ARROW SIGN	750		
74	3	6958	EACH	TYPE III BARRICADE		3	
75	LUMP SUM	9380	L.S.	TEMPORARY TRAFFIC CONTROL DEVICES	L. S.	L. S.	
76	1,000	6979	HOUR	TRAFFIC CONTROL LABOR	750	250	
77	100	6968	DAY	TRAFFIC CONTROL VEHICLE	75	25	
78	800	6972	HOUR	TRAFFIC CONTROL SUPERVISOR	600	200	
79	7.4	9398	M2	CONSTRUCTION SIGNS CLASS A	4.4	3	
				OTHER ITEMS			
80	112	9412	M3	STRUCTURE EXCAVATION CLASS B INCL. HAUL	80	32	
81	33	9416	M2	SHORING OR EXTRA EXCAVATION CLASS B	22	11	
82	27	9427	M3	GRAVEL BACKFILL FOR FOUNDATION CLASS B	23	4	
83	3.3	9445	M3	CONC. CLASS 20	3.3		
84	LUMP SUM	7036	L.S.	SURVEYING	L. S.	L. S.	
85	80	9502	M	CHAIN LINK FENCE TYPE 3		80	
86	3	7095	EACH	END, CORNER, AND PULL POST FOR CHAIN LINK FENCE		3	
87	1	3100	EACH	ADJUST CATCH BASIN	1		
88	1	3110	EACH	LOCKING SOLID METAL COVER AND FRAME FOR CATCH BASIN		1	
89	LUMP SUM	7350	L.S.	CLEANING EXISTING DRAINAGE STRUCTURE	L. S.		
90	EST. 3,000	7715	DOLLAR	FORCE ACCOUNT MODIFYING EXISTING UTILITIES	EST. 2,000	EST. 1,000	
91	EST. 5,000	7715	DOLLAR	FORCE ACCOUNT POTHOLING	EST. 2,500	EST. 2,500	
92	600	7400	HOUR	TRAINING	600		
93	EST. 1,000	7480	DOLLAR	ROADSIDE CLEANUP	EST. 700	EST. 300	
94	EST. 5,000	9597	DOLLAR	REIMBURSEMENT FOR THIRD PARTY DAMAGE			EST. 5,000
95	CALC. -1	7727	DOLLAR	CREDIT/DEBITS - MINOR CHANGES	CAL-1		
96	360	9738	M	CONSTRUCTION GEOTEXTILE FOR TEMPORARY SILT FENCE	180	180	
97	14.6		M	PRECAST NOISE BARRIER	14.6		
98	EST. 2,000	7715	DOLLAR	FORCE ACCOUNT REMOVING UNEXPECTED OBSTRUCTION	EST. 2,000		
99	LUMP SUM	6904	L.S.	ILLUMINATION SYSTEM SUA 2314	L. S.		
100	LUMP SUM		L.S.	C.O.3-NEW BRACKETS FOR SIGNING ON VMS			
101	LUMP SUM		L.S.	C.O.6-EXTENDED LUMINAIRE BASES			
102	LUMP SUM		L.S.	C.O.5-INSTALL SUA 674 IN FENCE LINE			
103	LUMP SUM		L.S.	C.O.4-INTERCEPT CONDUITS AT TO 5 164 AND 168			
104	EST. 4,500		DOLLAR	C.O.7-ADDED COSTS FOR UNSUITABLE EXCAVATION - F.A.			
105	230		T	C.O.7-GRAVEL BORROW INCL. HAUL - DOUBLE HANDLED			
106	335		M2	C.O.7-CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION			
107	80		M	C.O.9-CHAIN LINK FENCE TYPE 3			
108	LUMP SUM		L.S.	C.O.8-ADDED COSTS FOR CHANGES TO NOISE WALL			
109	1		EACH	C.O.10-PIPE COLLAR			
110	EST. 600		DOLLAR	C.O.10-MINOR DRAINAGE REVISIONS - F.A.			
111	LUMP SUM		L.S.	C.O.#11-VMS RETROFIT EXPENSES			
112	LUMP SUM		L.S.	C.O.12-RETROFIT CABINETS FOR SUA 3955 AND 674			
113	EST. 24,300		DOLLAR	C.O.13-ADDED WORK ON SC&DI - F.A.			
114	LUMP SUM		L.S.	ADDED COSTS AT THE 117TH ST BRIDGE			

NOTE: FOR SPECIAL FEATURES SEE SPECIAL PROVISIONS

PRELIMINARY QUANTITIES ONLY
FOR FINAL QUANTITIES SEE
CAPS LEDGER

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY			
ENTERED BY			
CHECKED BY			
PROJ.ENGR.			
DIST.ADM.		1/19/98	ADDED 97, 98, 99
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO. NH-005-3(839)
JOB NUMBER 97W058
CONTRACT NO. 5334

PROGRAM DEVELOPMENT DIVISION

Washington State Department of Transportation

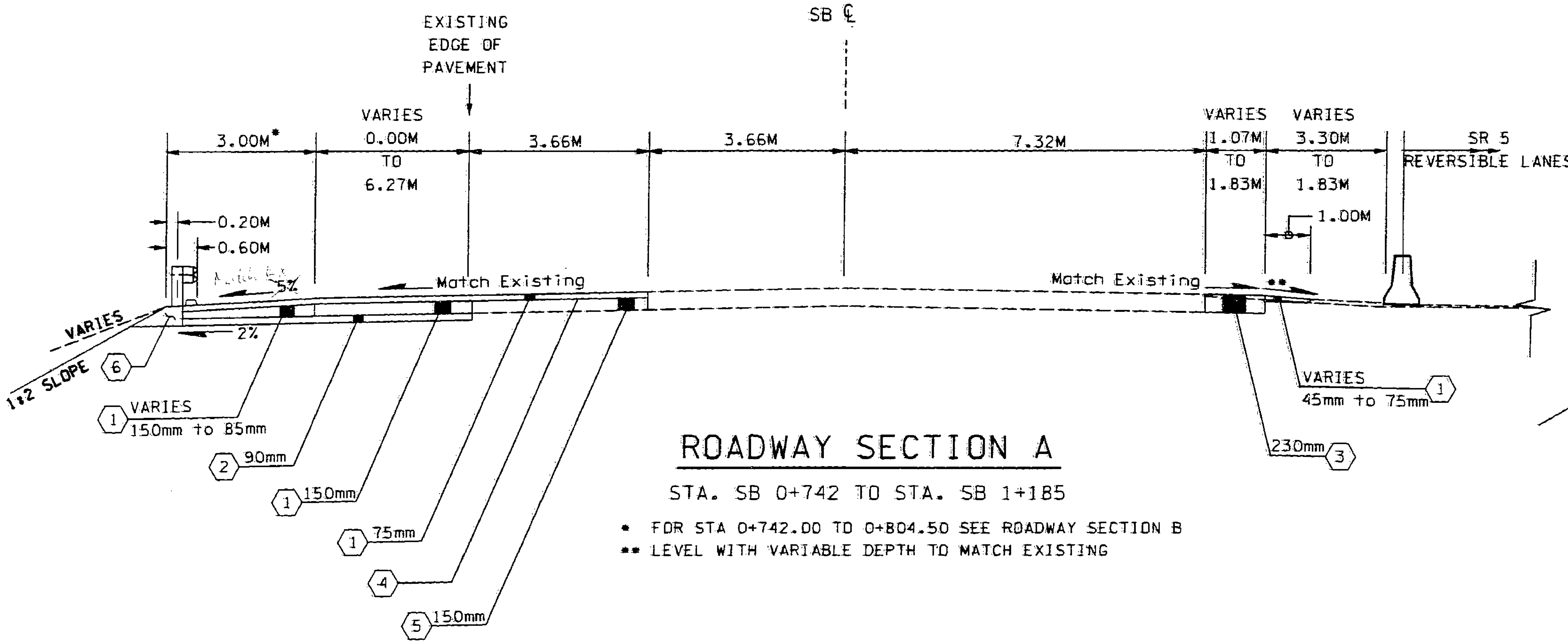
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SUMMARY OF QUANTITIES

SQ2

SHEET 4 OF 138 SHEETS

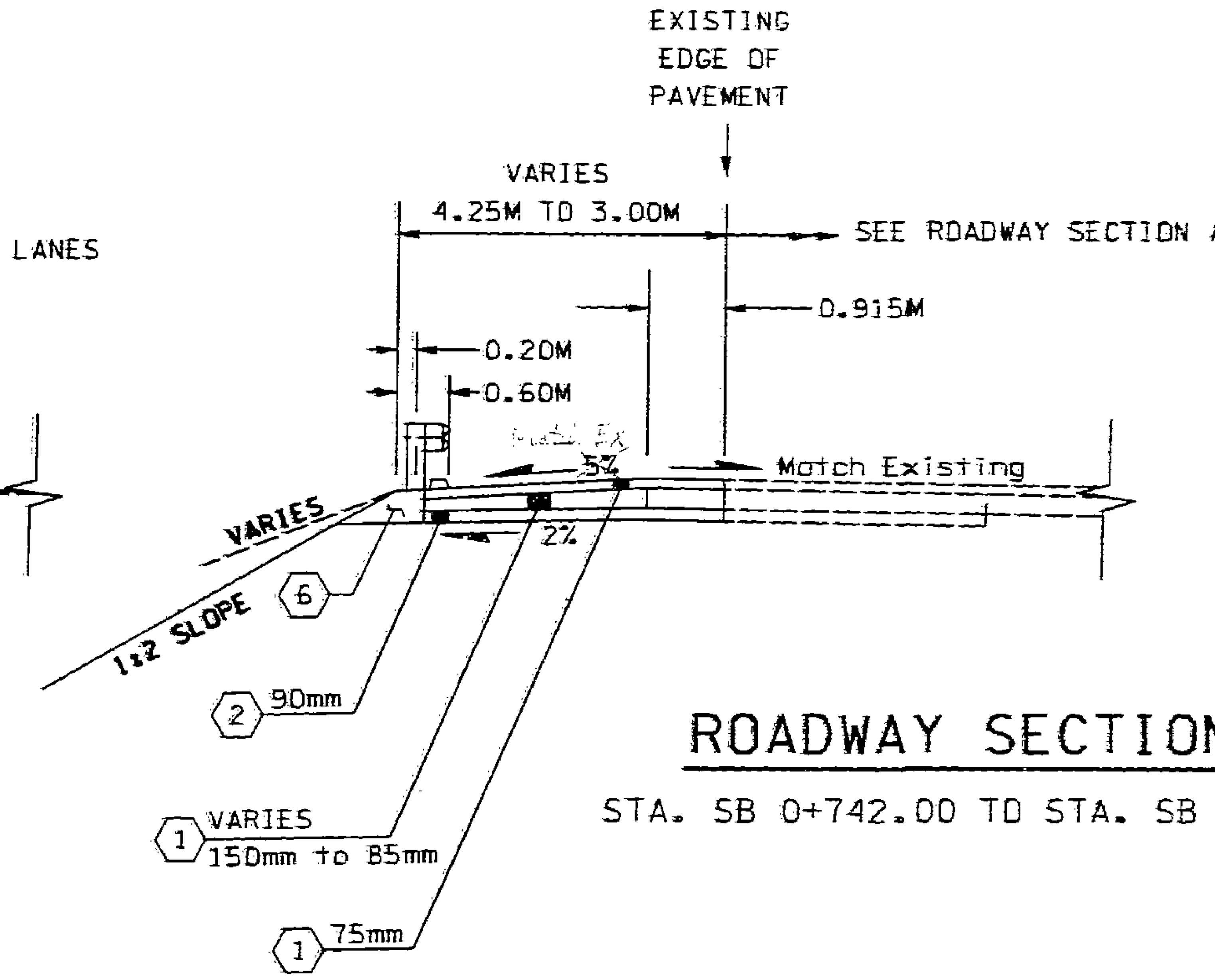
PLOT1 15 DEC 97 s:\412353\projects\ol2538\ol2538rs.dgn quintem



ROADWAY SECTION A

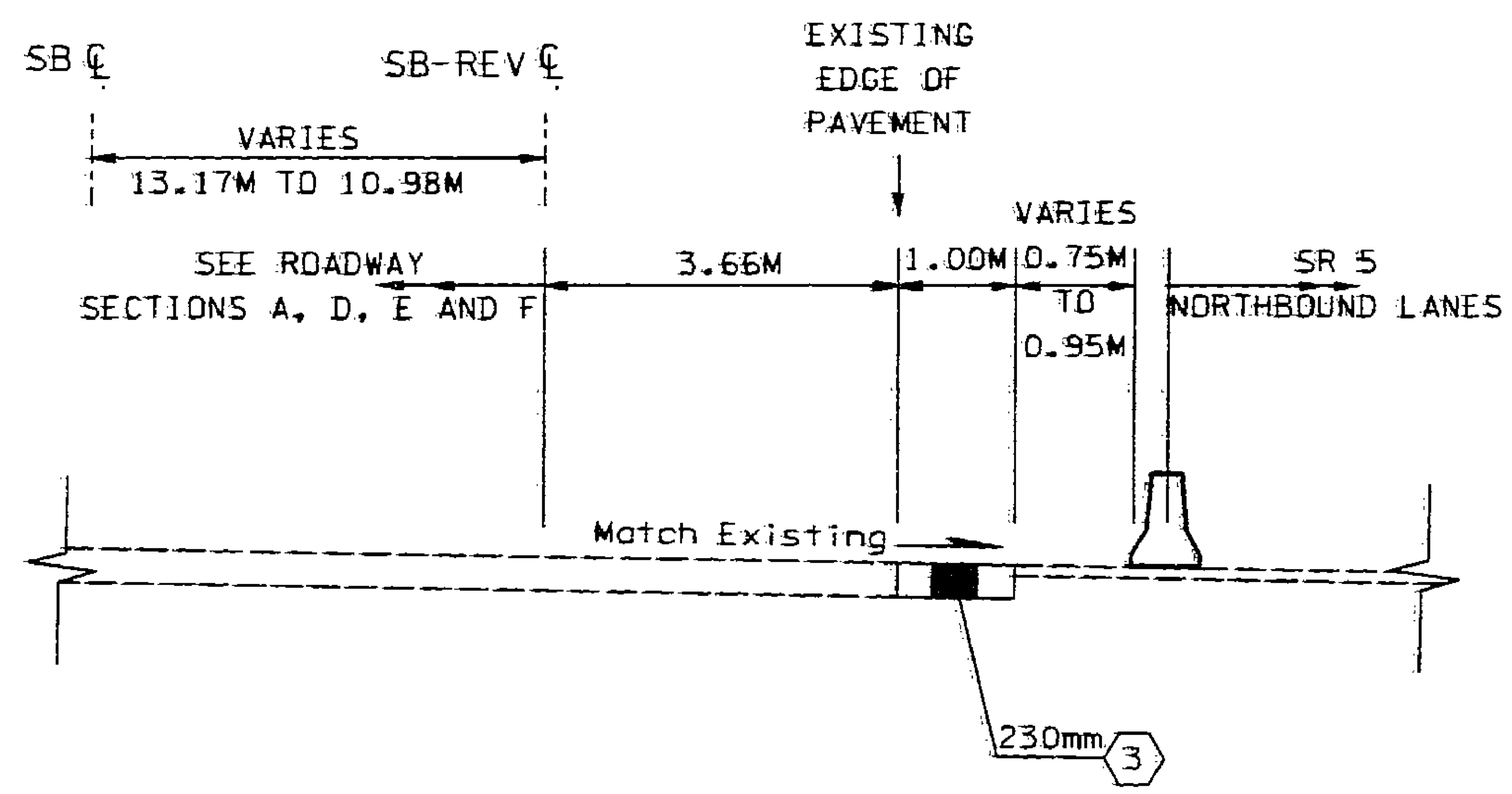
STA. SB 0+742 TO STA. SB 1+185

* FOR STA 0+742.00 TO 0+804.50 SEE ROADWAY SECTION B
** LEVEL WITH VARIABLE DEPTH TO MATCH EXISTING



ROADWAY SECTION B

STA. SB 0+742.00 TO STA. SB 0+804.50



ROADWAY SECTION C

STA. SB 1+158 TO STA. SB 1+358

LEGEND

1. ASPHALT CONC. PAVEMENT CL. A
2. CRUSHED SURFACING BASE COURSE
3. CEMENT CONC. PAVEMENT
4. CRACK SEALING
5. EXISTING UNFINISHED CEMENT CONC. PAVEMENT
6. SHOULDER BALLAST

NOTES:

1. ALL DEPTHS SHOWN ARE COMPACTED DEPTHS
2. SEE PAVING PLANS FOR MORE DETAILS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 98W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

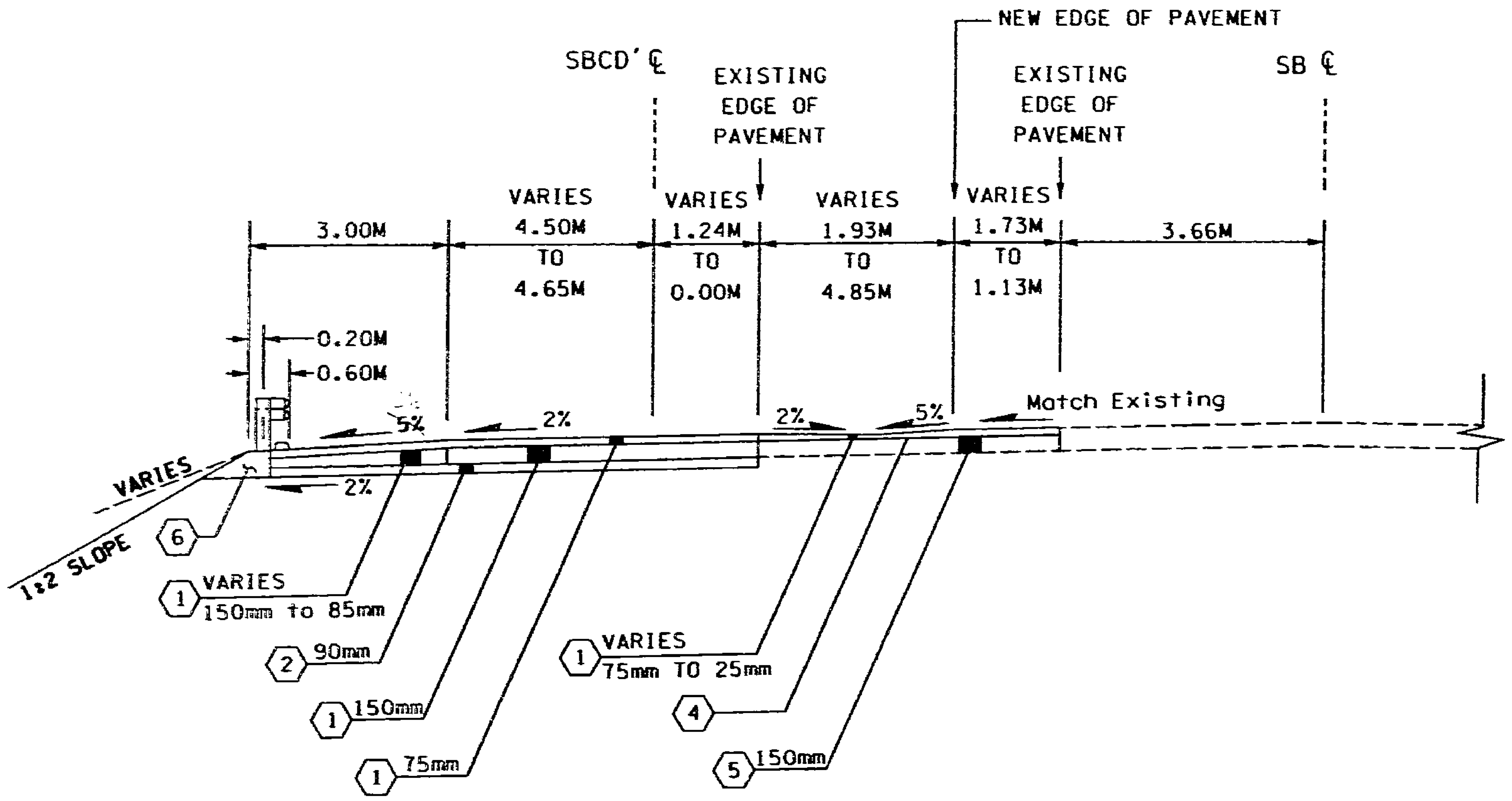
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ROADWAY SECTIONS

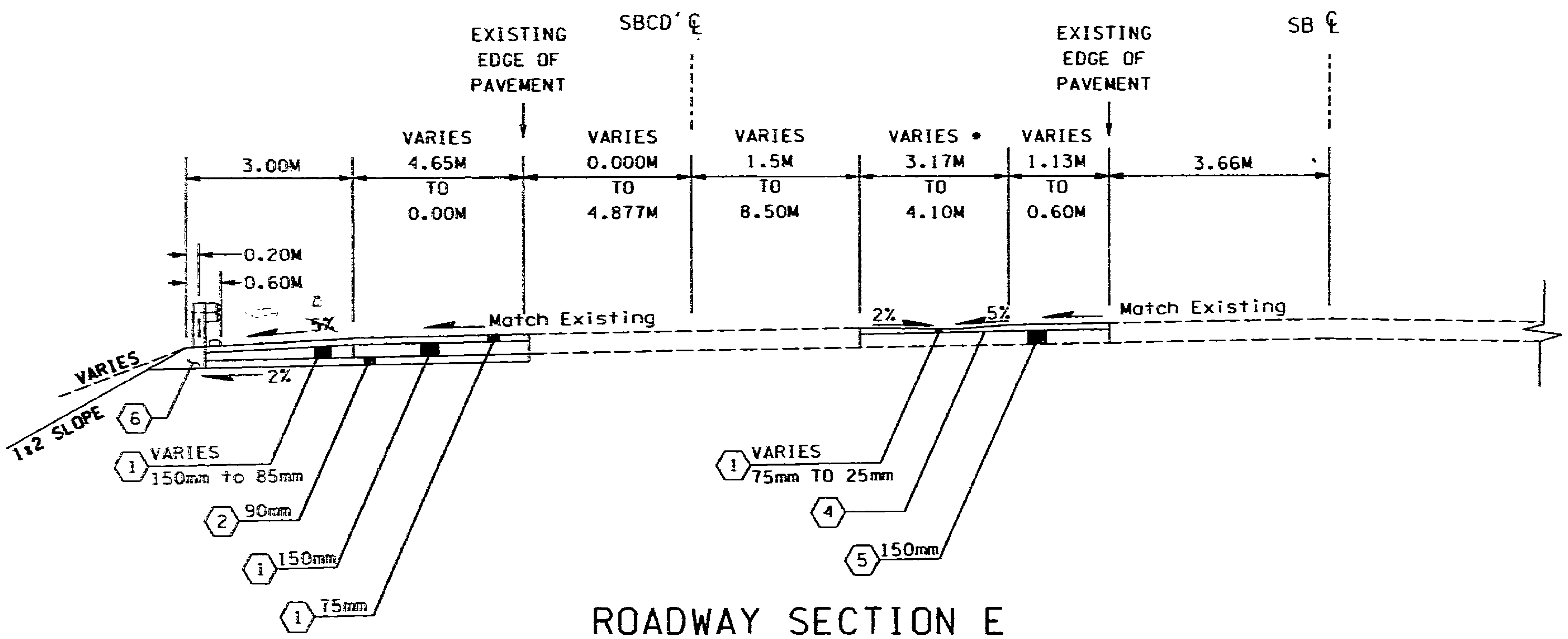
RS1

SHEET 5 OF 138 SHEETS



ROADWAY SECTION D

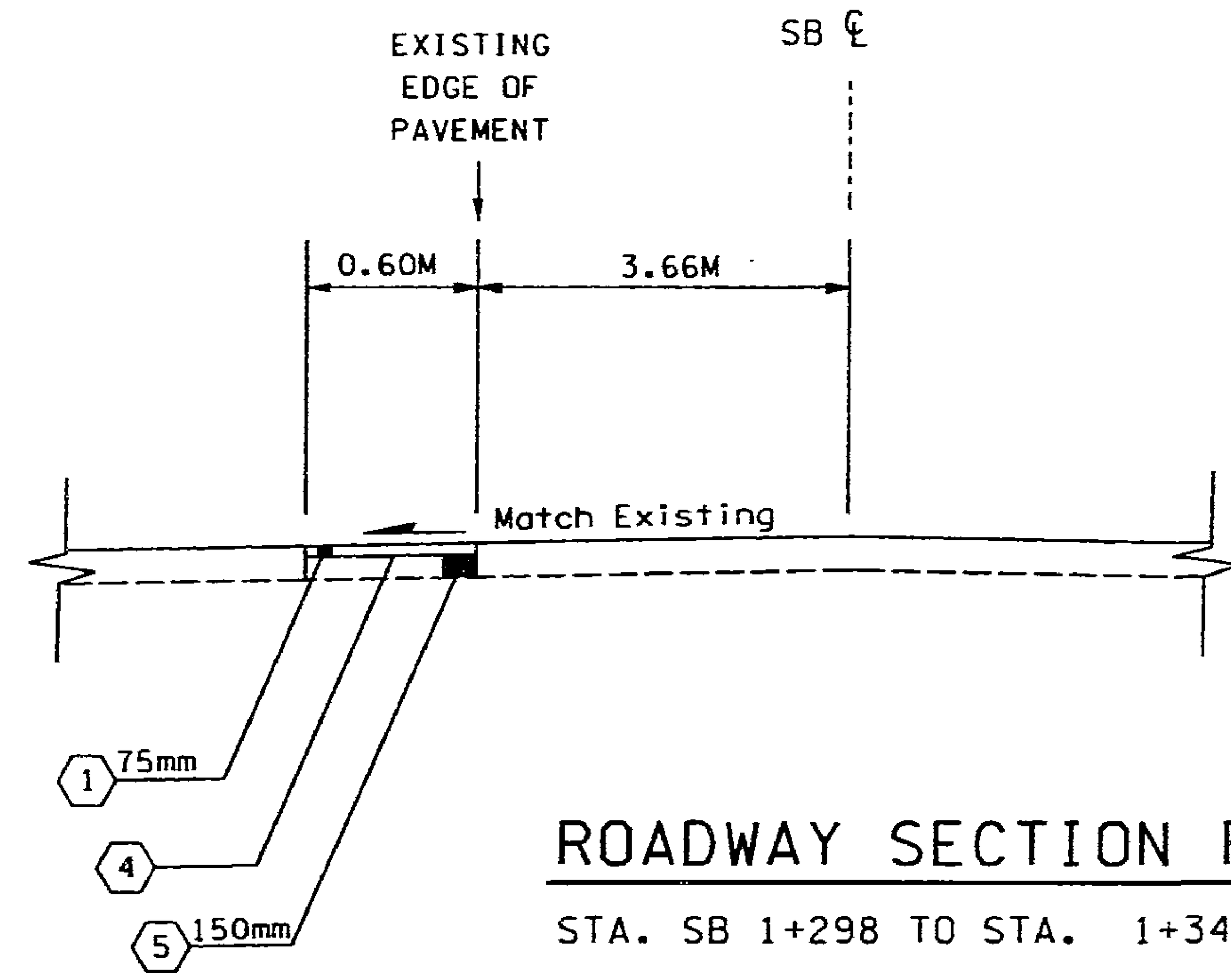
STA. SBCD' 1+185 TO STA. SB 1+235



ROADWAY SECTION E

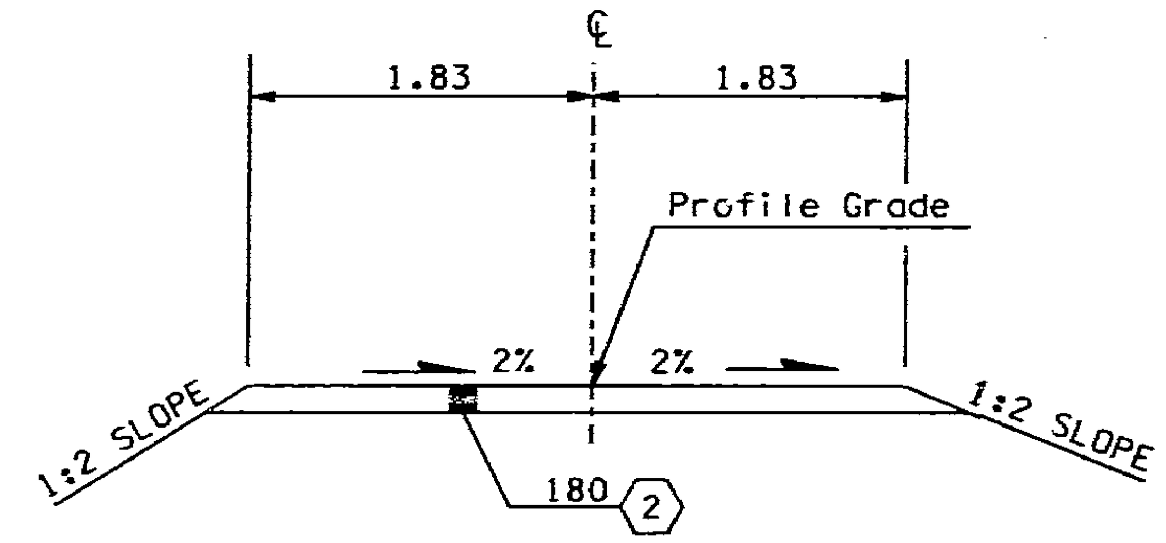
STA. SBCD' 1+235 TO STA. 1+318.800

* ONLY FROM STA. 1+235 TO STA.1+298



ROADWAY SECTION F

STA. SB 1+298 TO STA. 1+343



ROADWAY SECTION G

MAINTENANCE ACCESS ROAD
STA. 0+000 TO STA. 0+103.578

LEGEND

1 ASPHALT CONC. PAVEMENT CL. A
2 CRUSHED SURFACING BASE COURSE
3 CEMENT CONC. PAVEMENT
4 CRACK SEALING
5 EXISTING UNFINISHED CEMENT CONC. PAVEMENT
6 SHOULDER BALLAST

FOR "AS CONSTRUCTED PLANS" ONLY

NOTES:

1. ALL DEPTHS SHOWN ARE COMPACTED DEPTHS
2. SEE PAVING PLANS FOR MORE DETAILS

DESIGNED BY	M. WELAYE			
ENTERED BY	M. WELAYE			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 98W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ROADWAY SECTIONS

QUANTITY TABULATION

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.
THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION	CLEARING AND GRUBBING (HECTARE)		REMOVING IMPACT ATTENUATOR (FOR INFORMATION ONLY) (EACH)	REMOVING RAISED PAVEMENT MARKER (FOR INFORMATION ONLY) (HUNDRED)	REMOVING CHAIN LINK FENCE (FOR INFORMATION ONLY) (METER)		REMOVING BEAM GUARDRAIL (METER)	REMOVING PAINT STRIPE (METER)	REMOVING PLASTIC TRAFFIC MARKING (M2)		REMOVING CEMENT CONC. GUTTER (FOR INFORMATION ONLY) (METER)	REMOVING ASPHALT CONC. CURB (FOR INFORMATION ONLY) (METER)	ROADWAY EXCAVATION INCL. HAUL * (M3)	SAWCUTTING (FOR INFORMATION ONLY) (METER)		PLANING BITUMINOUS PAVEMENT (M2)	SEE GENERAL NOTES
SP-1	SB 0+642 TO 1+080 (3.660M LT.)				1.53													
SP-1	SB 0+642 TO 1+485 (0.000&3.660M RT.)				5.65													
SP-1	SB 0+642 TO 1+080 (7.32M RT.)																	
SP-1	SB 0+410.000 TO 1+185.000 (LT.)	0.10 ~~0.43~~						275					443	184.14				2
SP-1	SB 0+742 TO 1+343 (3.66M LT.)																1400	
SP-1	SB 0+742 (8.390M RT.) TO 1+175 (9.150M RT.)													52.80	433			1
SP-2	SB 1+080 TO 1+343 (3.660M LT.)	0.56																
SP-2	SB 1+080 TO 1+485 (7.320M RT.)																	
SP-2	SB 1+085			1														3
SP-2	SB 1+090 TO 1+185 (GORE AREA)				2.75													3
SP-2	SB 1+110 (14.960M RT.) TO 1+485 (10.980M RT.)																	
SP-2	SB 1+110 (18.710M RT.) TO 1+485 (14.640M RT.)																	
SP-2	SB 1+212 (3.660M LT.) TO SBCD 1+341 (7.900M RT.)																	
SP-2	SB 1+158 (17.830M RT.) TO 1+358 (15.640M RT.)													192.9	200			1
SP-2	SB 1+180 (30.000M LT.) TO SBCD' 1+260 (26.500M LT.)					79												3
SP-2	SBCD' 1+185 TO 1+318.802 (LT.)	0.11 ~~0.36~~										134		645.5				2
SP-2	SBCD' 1+185 TO 1+328.776 (LT.)							643.8										
SP-3	SBCD' 1+235 TO SB 1+343 (4.260M LT.)														112			1
SP-3	SB 1+353 TO 1+485 (3.660M LT.)								135									
	SHEET TOTAL	0.77		1	9.93	79		918.8	135	0		134	443	1075.34	745		1400	
	PROJECT TOTAL	0.77		1	9.93	79		918.8	135	0		134	443	1075.34	745		1400	

GENERAL NOTES:

1. SAWCUTTING QUANTITIES ARE LISTED FOR INFORMATION ONLY. SEE SPECIAL PROVISION "ROADWAY EXCAVATION AND EMBANKMENT"
2. REMOVING CEMENT CONC. GUTTER AND ASPHALT CONC. CURB QUANTITIES ARE LISTED FOR INFORMATION ONLY. SEE SPECIAL PROVISION "ROADWAY EXCAVATION AND EMBANKMENT"
3. SEE SPECIAL PROVISION " REMOVAL OF STRUCTURES AND OBSTRUCTIONS "

* FOR ADDITIONAL QUANTITIES SEE MAINTENANCE ACCESS ROAD PROFILE ON SHEET RP1.

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. WELAYE	REGION NO. 10	STATE WASH	FED. AID. PROJ. NO.	
ENTERED BY	M. WELAYE				
CHECKED BY	R. SUAFOA	JOB NUMBER 98W058			
PROJ. ENGR	J. JOHNSON	CONTRACT NO.			
REGION ADM.	J. OKAMOTO				
DATE	DATE	REVISION	BY		

ENVIRONMENTAL & ENGINEERING SERVICE CENTER

Washington State Department of Transportation

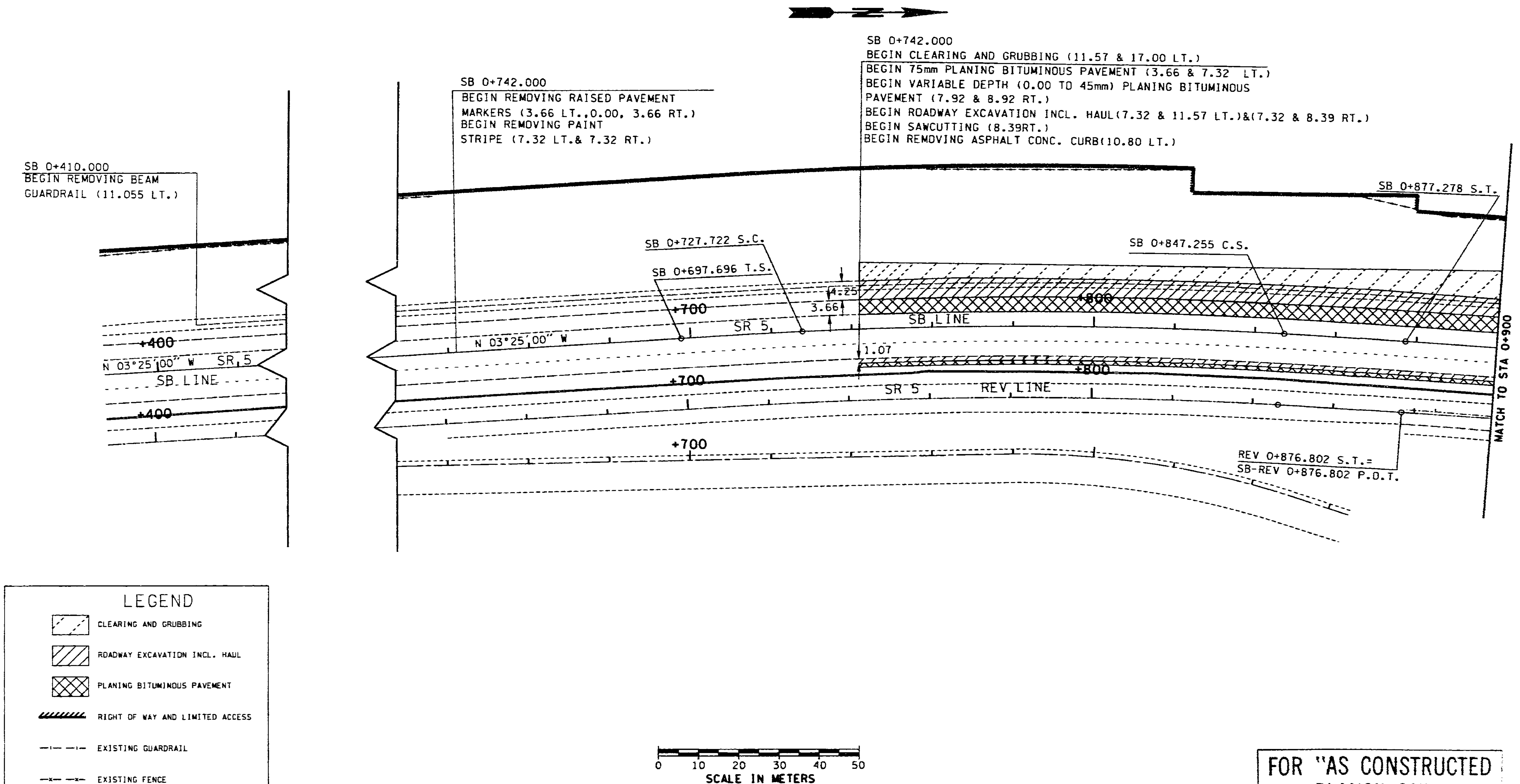
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

QUANTITY TABULATION - SITE PREPARATION

QTSP1

SHEET 7 OF 136 SHEETS

T. 26N. R. 4E. W. M.



LEGEND

- CLEARING AND GRUBBING
- ROADWAY EXCAVATION INCL. HAUL
- PLANING BITUMINOUS PAVEMENT
- RIGHT OF WAY AND LIMITED ACCESS
- EXISTING GUARDRAIL
- EXISTING FENCE

FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

DESIGNED BY M. WELAYE				
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CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

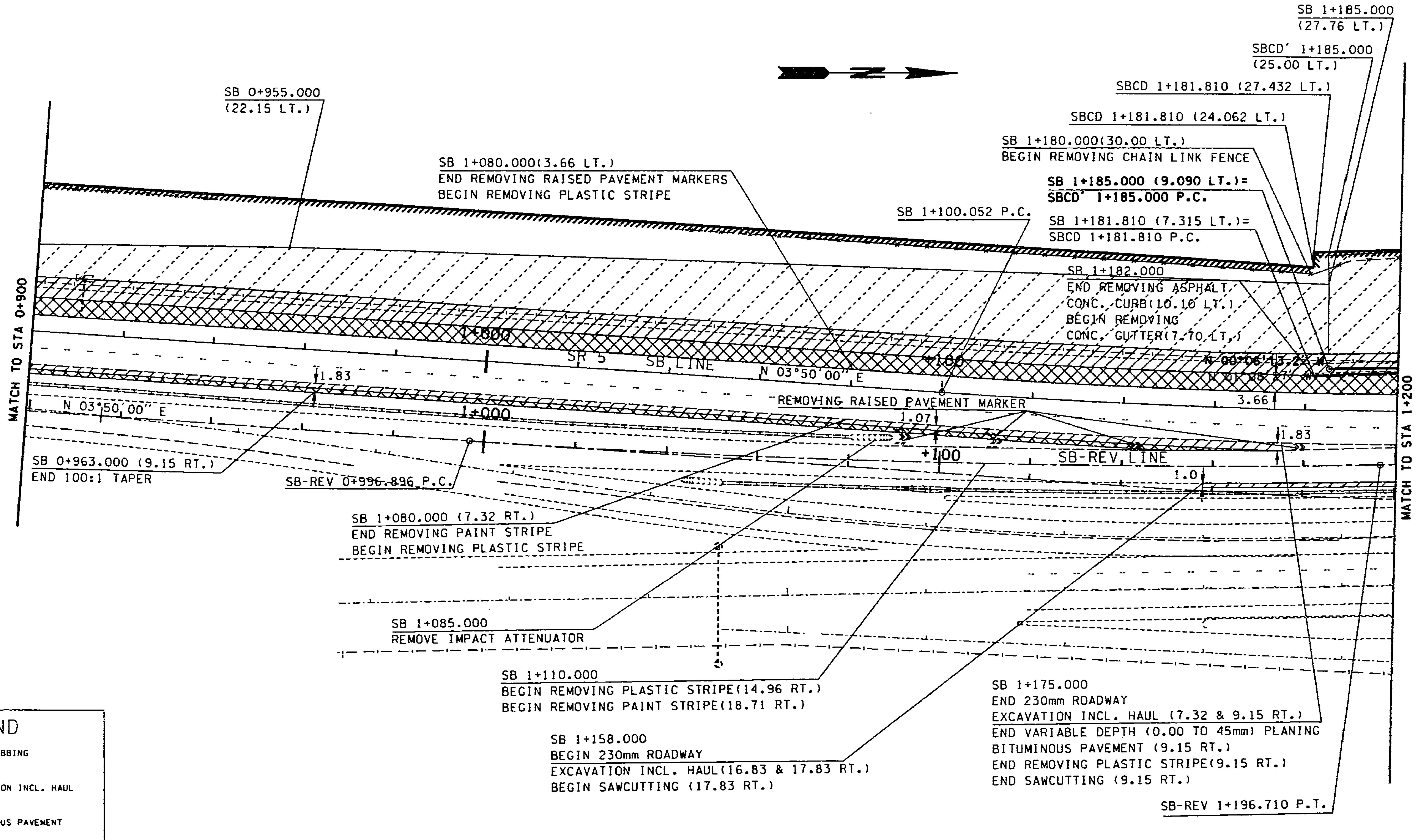
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SITE PREPARATION PLAN

SP1

SHEET 8 OF 138 SHEETS

T. 26N. R. 4E. W. M.



LEGEND

- CLEARING AND GRUBBING
- ROADWAY EXCAVATION INCL. HAUL
- PLANING BITUMINOUS PAVEMENT
- RIGHT OF WAY AND LIMITED ACCESS
- EXISTING GUARDRAIL
- EXISTING FENCE

0 10 20 30 40 50
SCALE IN METERS

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NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SITE PREPARATION PLAN

SP2

SHEET 9 OF 138 SHEETS

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PLOTS

NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SITE PREPARATION PLAN

SP3

SHEET 10 OF 138 SHEETS

STRUCTURE NOTES

NOTE:
THE FIRST NUMBER OF THE "CODE DESIGNATION" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE DRAINAGE FEATURE. THE SECOND NUMBER REFERS TO THE DRAINAGE FEATURE FOUND ON THAT SHEET.

CODE	LOCATION		REMOVING CATCH BASIN EACH	GRAVELBORROW INCL HAUL * TONNE	EMBANKMENT COMPACTION * M3	DITCH EXCAVATION INCL. HAUL M3		CONCRETE INLET TYPE 1 EACH	GRATE INLET TYPE 1 OR 2 EACH	HAND PLACED RIPRAP M3	QUARRY SPALLS TONNE		CATCH BASIN TYPE TYPE 1 EACH	CATCH BASIN TYPE 2 1200 MM DIAM. EACH	CATCH BASIN TYPE 2 1350 MM DIAM. WITH FLOW RESTRICTOR EACH	TESTING STORM SEWER PIPE M		SEE GENERAL NOTES
D1-1	SB 00+877.5 LT																	12
																		6,12
D2-1	~~SB 00+910.3 LT~~ 0+408.20 (11.09 LT)		1											1		~~0.6~~		12
D2-2	SB 0+975.82 (11.95LT)													1		~~1.2~~		6,12
D2-3	SB 0+975.82(10.44LT)		1															1,2,12,15
D2-4	SB 1+006.880(12.60LT)								1					1		29.7		4,5
D2-5	SB 1+097.282(10.455LT)		1															2,3,12,15
D2-6	SB 1+100.0 (14.29LT)								1							~~5~~		1,4,6
D2-7	SB 1+115.22(21LT) TO SB 1+176.86(22.1LT)					33.5												5,12
D2-8	SB ~~1+189.545(15.94LT)~~ 1+188.97 TO												1			~~8.71~~		6,14
D2-9	1+193.54 SB.		1					1					1	1		6.10		3,11,12,15
D2-10	SBCD' . 1+188.48 POND, MH										25.85 ~~26~~				1	~~7.63~~		7,8,9
D2-11	SBCD; . 1+200.00 outlet. Inlet	.T)		1210	551	31.6										~~5.2~~		6,7,8
D2-12	SB 1+059.378(21LT) TO 1+115.126(21.538LT)					22.6												5,12
D3-1	SB 1+225.023(4LT)		1															1,2,12,15
D3-2	SB 1+230.674(6.75LT)												1			~~6~~		10,12,13
D3-3	SB 1+236.54(6.75LT)							1										11,12
D3-4	SBCD 1241.2(14.62 LT) To 1+250.0 (3.5LT)													1		~~6~~		6,7,14
D3-5	SBCD'1+330.92(10.13LT) TO 1+344.44(12.42LT)																	5,8,12
D3-4A	SB 1+250.60 (17.36 LT)							1										
	SHEET TOTAL		5	1210	551	87.7		3 ~~2~~	2	0	35.85 ~~26~~		3 ~~2~~	5 ~~4~~	1	35.80		
	PROJECT TOTAL		5	1210	551	87.7		3 ~~2~~	2	0	35.85 ~~26~~		3 ~~2~~	5 ~~4~~	1	35.80		

GENERAL NOTES:

1. CONNECT TO EXISTING PIPE
2. SEE CONCRETE PIPE COLLAR DETAIL SHEET DD3
3. CONNECT EXISTING STORM SEWER PIPE TO NEW CATCH BASIN OR MANHOLE.
4. USE GRATE B WITH BOLT DOWN CAPACITY PER DETAIL SHEET DD-2.
5. SEE BIO-FILTRATION SWALE AND DITCH CROSS SECTION DETAIL SHEET DD-3.
6. ACCEPTABLE ALTERNATES FOR STORM SEWER PIPE ARE:

GALVANIZED STEEL STORM SEWER PIPE:
-TR. 5, 1.6MM THICK.
-TR. 2 WITH WELDED OR GASKETED LONGITUDINAL SEAMS, 1.6MM THICK. DIAMETER 76.2MM LARGER THAN SPECIFIED.

ALUMINIZED STEEL STORM SEWER PIPE:
-TR. 5, 1.6MM THICK.
-PLAIN WITH GASKETED OR WELDED AND REMETALIZED LONGITUDINAL SEAMS., 1.6MM THICK, DIAMETER 76.2MM LARGER THAN SPECIFIED.
SEE TABLE 8-9.2 OF HYDRAULICS MANUAL.

ALUMINUM STORM SEWER PIPE:
-TR.5, 76.MM THICK.
-PLAIN WITH GASKETED LONGITUDINAL SEAMS 76.2MM THICK, DIAMETER 75MM LARGER THAN SPECIFIED.

(CONTINUED ON NEXT SHEET)

*FOR ADDITIONAL QUANTITIES SEE PAVING QUANTITY TAB AND MAINTENANCE ACCESS ROAD PROFILE.

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REGION ADM.	J. OKAMOTO				
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CONTRACT NO.		

ENVIRONMENTAL & ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR-5
VIC NORTHGATE WAY TO VIC NE 145TH ST

STRUCTURE NOTES

SN-1

SHEET 11 OF 138 SHEETS

STRUCTURE NOTES

NOTE:
THE FIRST NUMBER OF THE "CODE DESIGNATION" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE DRAINAGE FEATURE. THE SECOND NUMBER REFERS TO THE DRAINAGE FEATURE FOUND ON THAT SHEET.

CODE	LOCATION	PLAIN CONC. STORM SEWER PIPE 300 MM DIAM.	CLASS V REINFORCE CONC. STORM SEWER PIPE 300MM DIAM.	SLOTTED DRAIN PIPE 300MM DIAM.		STRUCTURE EXCAVATION CLASS B INCL. HAUL	SHORING OR EXTRA EXCAVATION CLASS B	GRAVEL BACKFILL FOR FOUNDATION CLASS B		CONC. CLASS 20	ADJUST CATCH BASIN	LOCKING SOLID METAL COVER AND FRAME FOR CATCH BASIN	CLEANING EXISTING DRAINAGE STRUCTURE (FOR INFORMATION ONLY)		CONCRETE PIPE COLLAR (FOR INFORMATION ONLY)			SEE GENERAL NOTES
		M	M	M		M3	~~M3~~ m²	M3		M3	EACH	EACH	EACH		EACH			
D1-1	SB 00+877.5 LT										~~1~~		1					12
																		6,12
D2-1	SB ~~00+910.3 LT~~ 0+908.20 (11.09 LT)	1.8 ~~0.6~~				5.9 ~~4~~	~~4~~	~~4~~					1					12
D2-2	SB 0+975.82 (11.95LT)	~~1.5~~				~~8~~	~~4~~	~~4~~					1					6,12
D2-3	SB 0+975.82(10.44LT)														1			1,2,12,15
D2-4	SB 1+006.880(12.60LT)	32.2				40.8	14.48	~~7~~										4,5
D2-5	SB 1+097.282(10.455LT)												~~1~~		1			2,3,12,15
D2-6	SB 1+100.0 (14.29LT)	5.9 ~~5~~				~~10~~ 9.9	~~3~~	~~2~~					~~1~~					1,4,6
D2-7	SB 1+115.22(21LT) TO SB 1+176.86(22.1LT)																	5,12
D2-8	SB ~~1+189.545(15.94LT)~~ 1+188.97 TO	6.10				1.2 ~~10~~	~~2~~	~~2~~					1					6,14
D2-9	1+193.54 S.B.			4.57		10.2 ~~7~~	~~4~~	~~1~~					1					3,11,12,15
D2-10	1+188.48 POND. MH	13.4				167 ~~17~~	17.58	~~2~~				~~1~~						7,8,9
D2-11	1+200.00 OUTLET, INLET (SBCD)					1.0		~~1~~										6,7,8
D2-12	SB 1+059.378(21LT) TO 1+115.126(21.538LT)																	5,12
D3-1	SB 1+225.023(4LT)												1					1,2,12,15
D3-2	SB 1+230.674(6.75LT)		6			2.6 ~~7~~	~~2~~	~~2~~		~~3.3~~			1		1			10,12,13
D3-3	SB 1+236.54(6.75LT)			6.4		4.04												11,12
D3-4	SBCD' 1241.2 (14.62LT) TO 1+250.6 (3.5LT)	~~6~~ 8.8				10.7 ~~15~~	7.98 ~~5~~	~~2~~										6,7,14
D3-5	SBCD'1+330.92(10.13LT) TO 1+344.44(12.4	17.7				12.7												5,8,12
D3-4A	SB 1+250.6 (17.36 LT)	2.3				2.3												
	SHEET TOTAL	88.2	6	10.97		118.04	40.04	~~27~~		~~3.3~~	~~1~~	~~1~~	9		3			
	PROJECT TOTAL	88.2	6	10.97		118.04	40.04	~~27~~		~~3.3~~	~~1~~	~~1~~	9		3			

GENERAL NOTES:

6. (CONTINUED FROM PREVIOUS SHEET)

SPIRAL RIB STORM SEWER PIPE:
- -PLAIN ALUMINUM OR PLAIN NARROW PITCH ALUMINUM, 76.2 MM THICK.
- -PLAIN ALUMINIZED STEEL OR PLAIN NARROW PITCH ALUMINIZED STEEL, 76.2MM THICK.

SEE TABLE 8-9.9 OF HYDRAULICS MANUAL.

THERMOPLASTIC STORM SEWER PIPE CONFORMING TO SECTION 9-05.19 OF THE STANDARD SPECIFICATIONS. SIZE NOT TO EXCEED 900MM, COVER NOT TO EXCEED 4.5M.

7. SEE "RIPRAP OUTFALL PROTECTION DETAIL", SHEET DD-3.
8. BEVELED END SECTION RQUIRED. SEE STANDARD PLAN B-7a.
9. SEE DETENTION POND DRAINAGE DETAILS SHEET DD-1.
10. USE SPECIFIED PIPE MATERIAL. ALTERNATIVES NOT ACCEPTABLE.
11. SEE SLOTTED DRAIN DETAILS SHEET DD-1.
12. ALL ELEVATIONS SHOWN ON PROFILE SHEETS ARE BASED ON SURVEY INFORMATION AND SHALL BE FIELD VERIFIED.
13. SEE SHALLOW COVER DESIGN B DETAIL SHEET DD-3.
14. SEE SC&DI PLANS FOR FIBER OPTICS LOCATION.
15. REMOVING CATCH BASIN - SEE SPECIAL PROVISION "REMOVAL OF STRUCTURES AND OBSTRUCTIONS"

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CHECKED BY	R. SUAFOA			
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REGION ADM.	J. OKAMOTO			
		DATE	DATE	REVISION / BY

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Washington State Department of Transportation

SR-5
VIC NORTHGATE WAY TO VIC NE 145TH ST

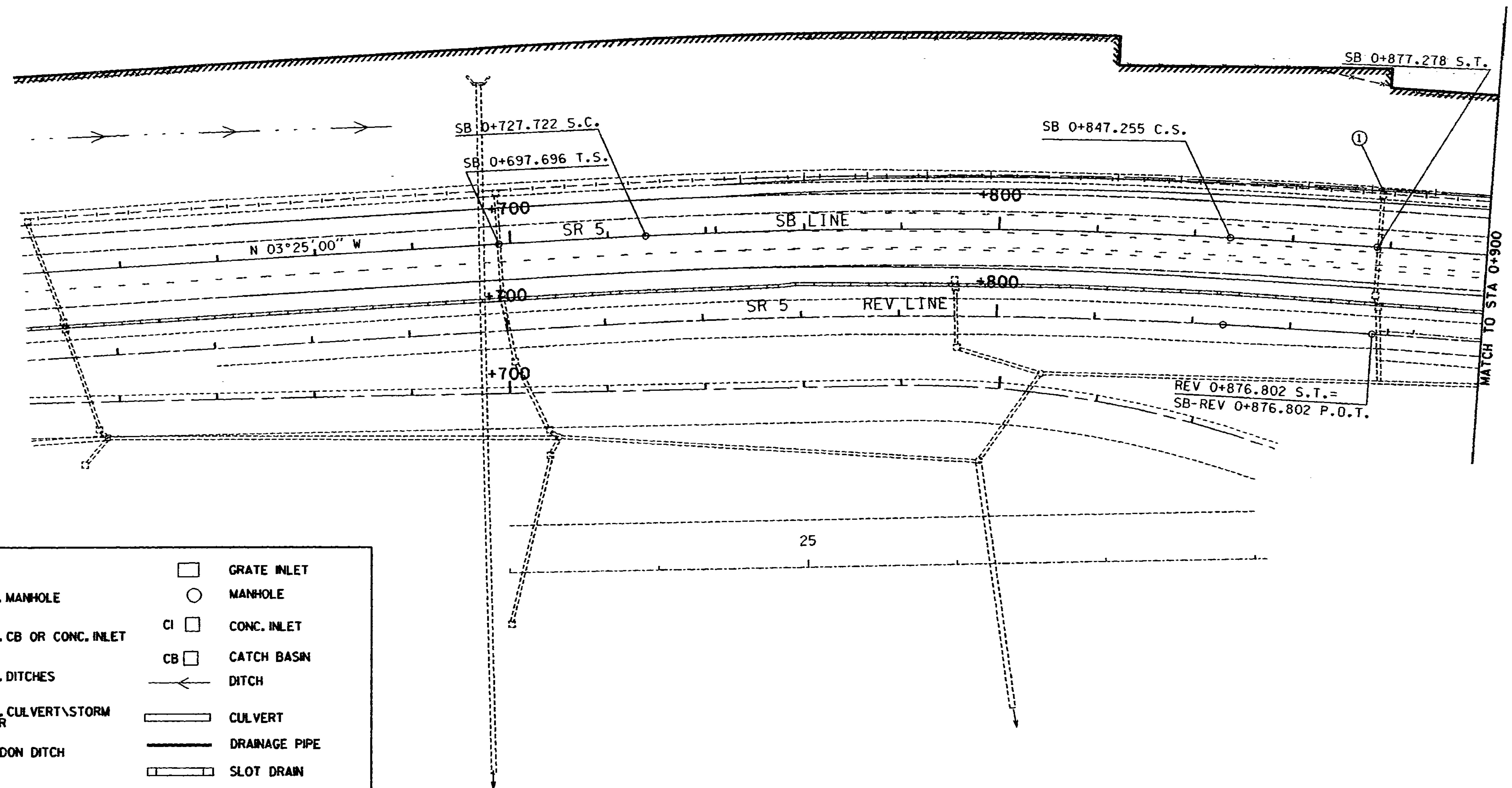
STRUCTURE NOTES

SN-2

SHEET 12 OF 138 SHEETS

$$USERNAME$$ $$$$$$$$DESIGNFILENAME$$$$$$$ $$$$DATE$$$ PLOT3

T. 26N. R. 4E. W. M.



LEGEND

	EXST. MANHOLE		GRATE INLET
	EXST. CB OR CONC. INLET		MANHOLE
	EXST. DITCHES	CI	CONC. INLET
	EXST. CULVERT\STORM SEWER	CB	CATCH BASIN
	ABANDON DITCH		DITCH
	DETENTION POND		CULVERT
			DRAINAGE PIPE
			SLOT DRAIN
			BIOSWALE

0 10 20 30 40 50
SCALE IN METERS

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

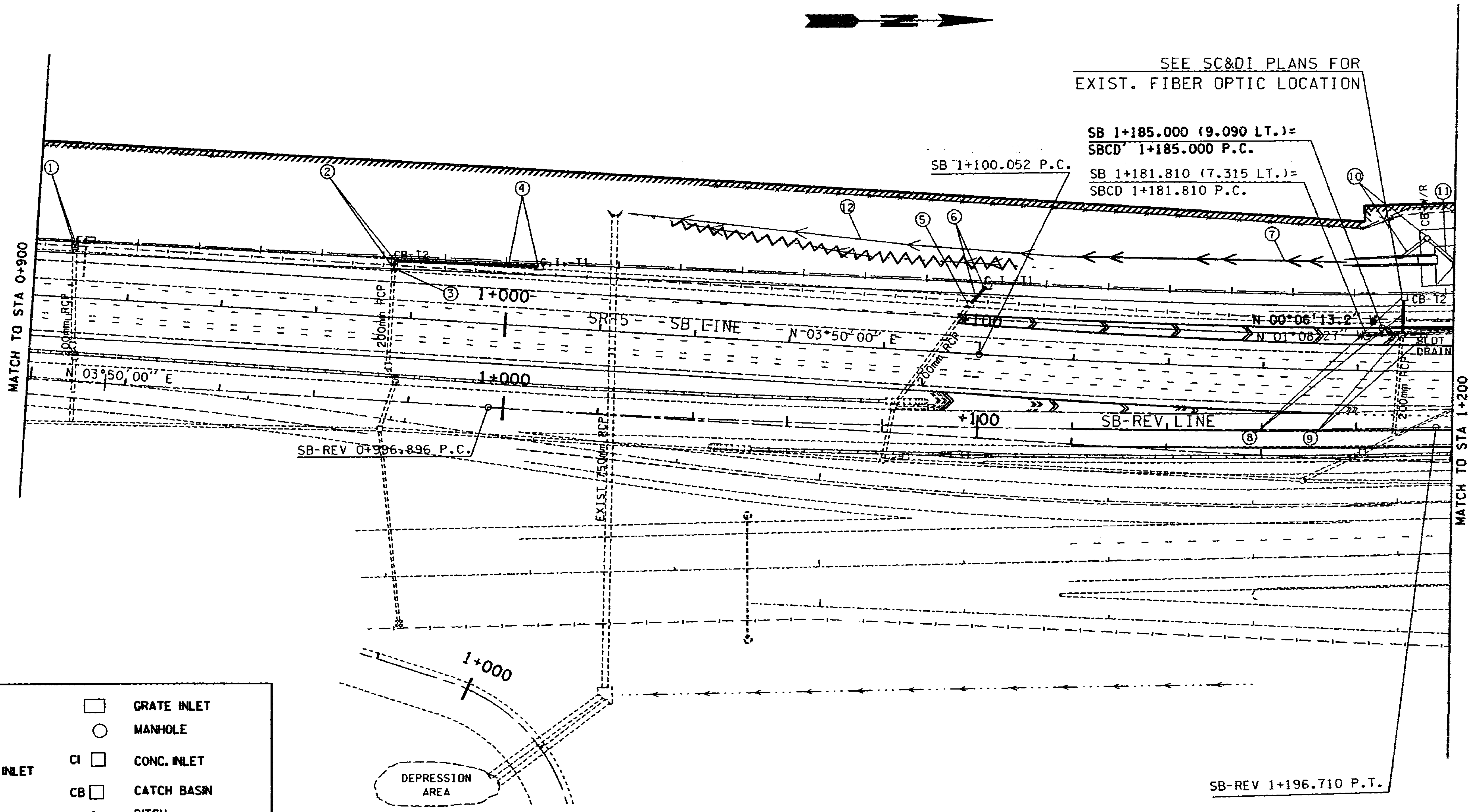
DRAINAGE PLAN

D1

SHEET 13 OF 138 SHEETS

$$USERNAME$$ $$$$$$$$DESIGNFILENAME$$$$$$$ $$$$DATE$$$ PLOT4

T. 26N. R. 4E. W. M.



LEGEND

◌	EXST. MANHOLE	☐	GRATE INLET
⌜⌟	EXST. CB OR CONC. INLET	○	MANHOLE
· · →	EXST. DITCHES	CI ☐	CONC. INLET
========	EXST. CULVERT\STORM SEWER	CB ☐	CATCH BASIN
╱╲╱╲	ABANDON DITCH	←	DITCH
	DETENTION POND		CULVERT
			DRAINAGE PIPE
			SLOT DRAIN
		←←	BIOSWALE

0 10 20 30 40 50
SCALE IN METERS

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE PLAN

D2

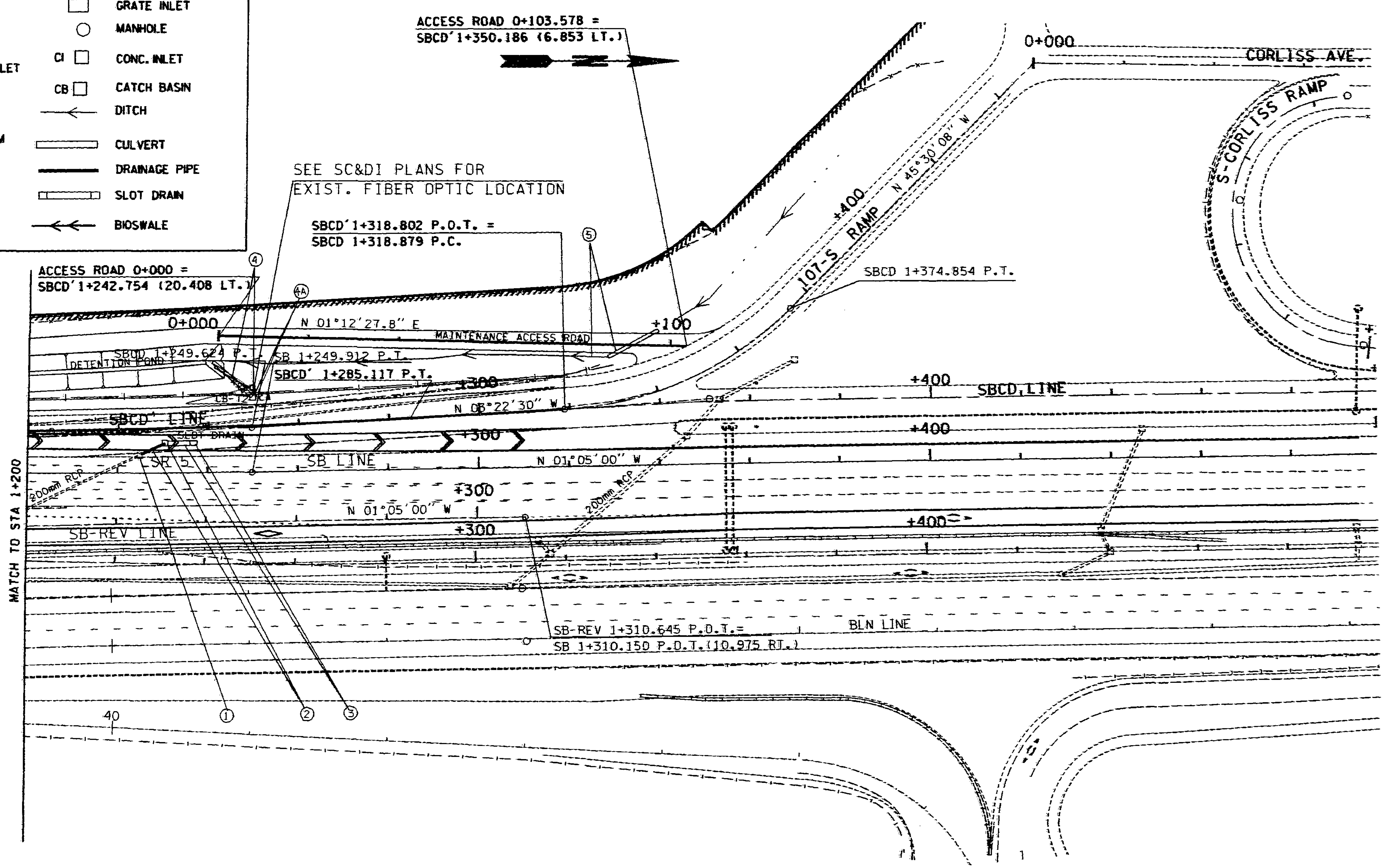
SHEET 14 OF 138 SHEETS

$$USERNAME$$ $$$$$$$$$DESIGNFILENAME$$$$$$ $$$$DATE$$$ PLOT5

LEGEND

			GRATE INLET
	EXST. MANHOLE		MANHOLE
	EXST. CB OR CONC. INLET	CI	CONC. INLET
		CB	CATCH BASIN
	EXST. DITCHES		DITCH
	EXST. CULVERT\STORM SEWER		CULVERT
	ABANDON DITCH		DRAINAGE PIPE
			SLOT DRAIN
	DETENTION POND		BIOSWALE

T. 26N. R. 4E. W. M.



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0 10 20 30 40 50
SCALE IN METERS

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REGIONAL ADM.	J. OKAMOTO			
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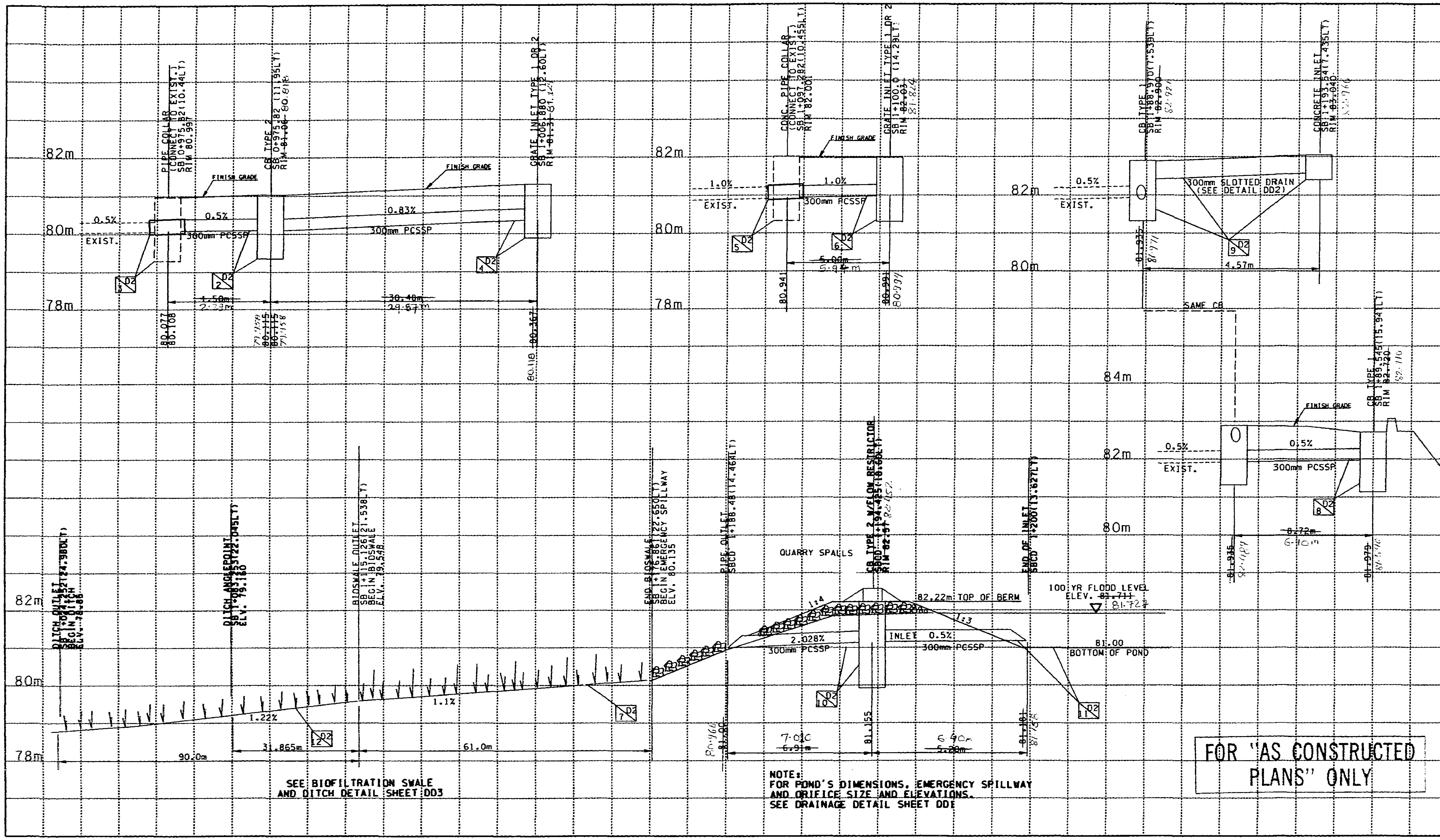
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE PLAN

D3

SHEET 15 OF 138 SHEETS

PLOT1 05 JAN 98 s:\412353\projects\ol2538\drainpr.dgn wujim



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PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMATO				
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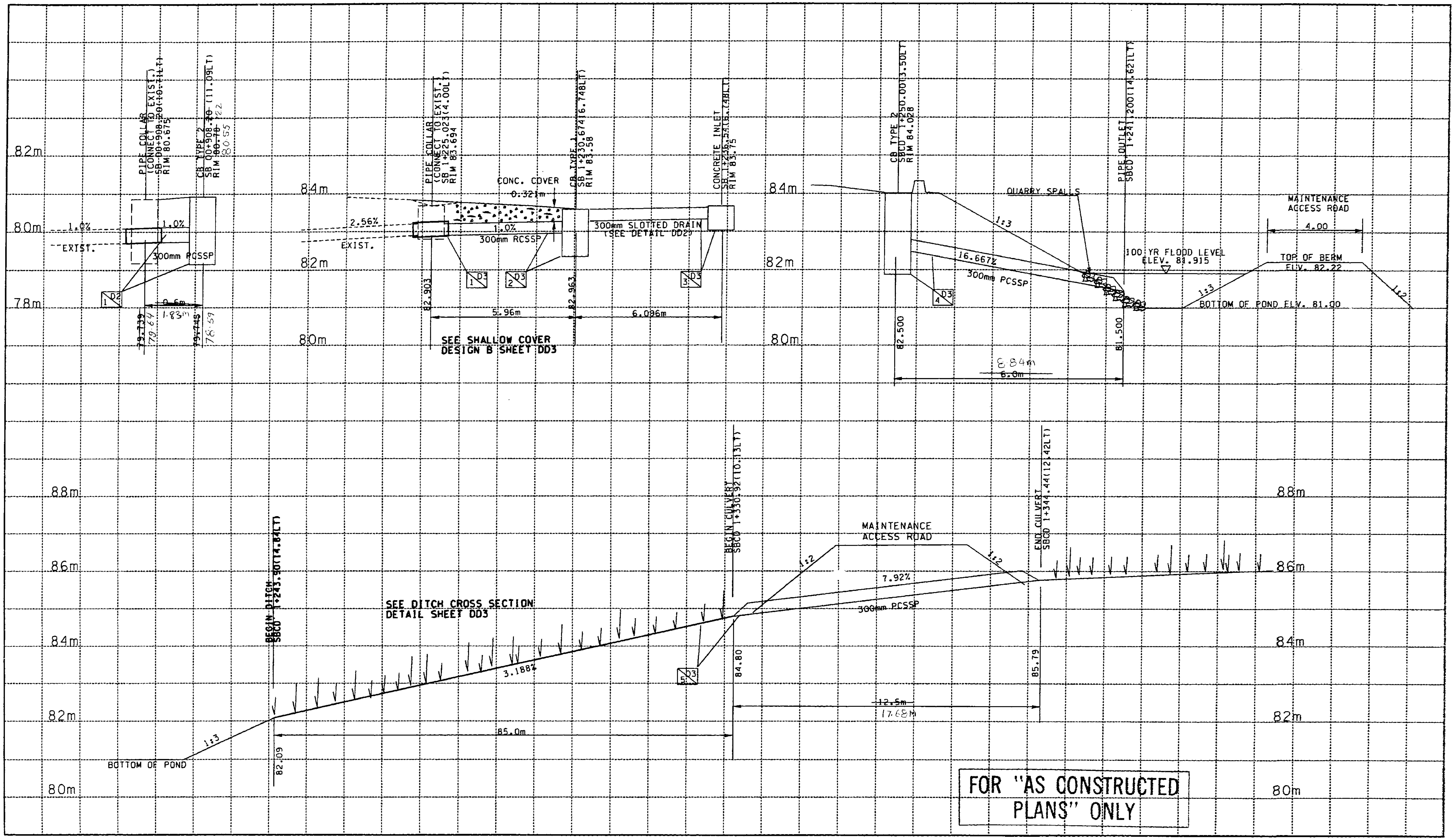
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE PROFILE

DP1

SHEET 16 OF 138 SHEETS

PLOT2 05 JAN 98 s:\412353\projects\ol2538\drainpr.dgn wujim



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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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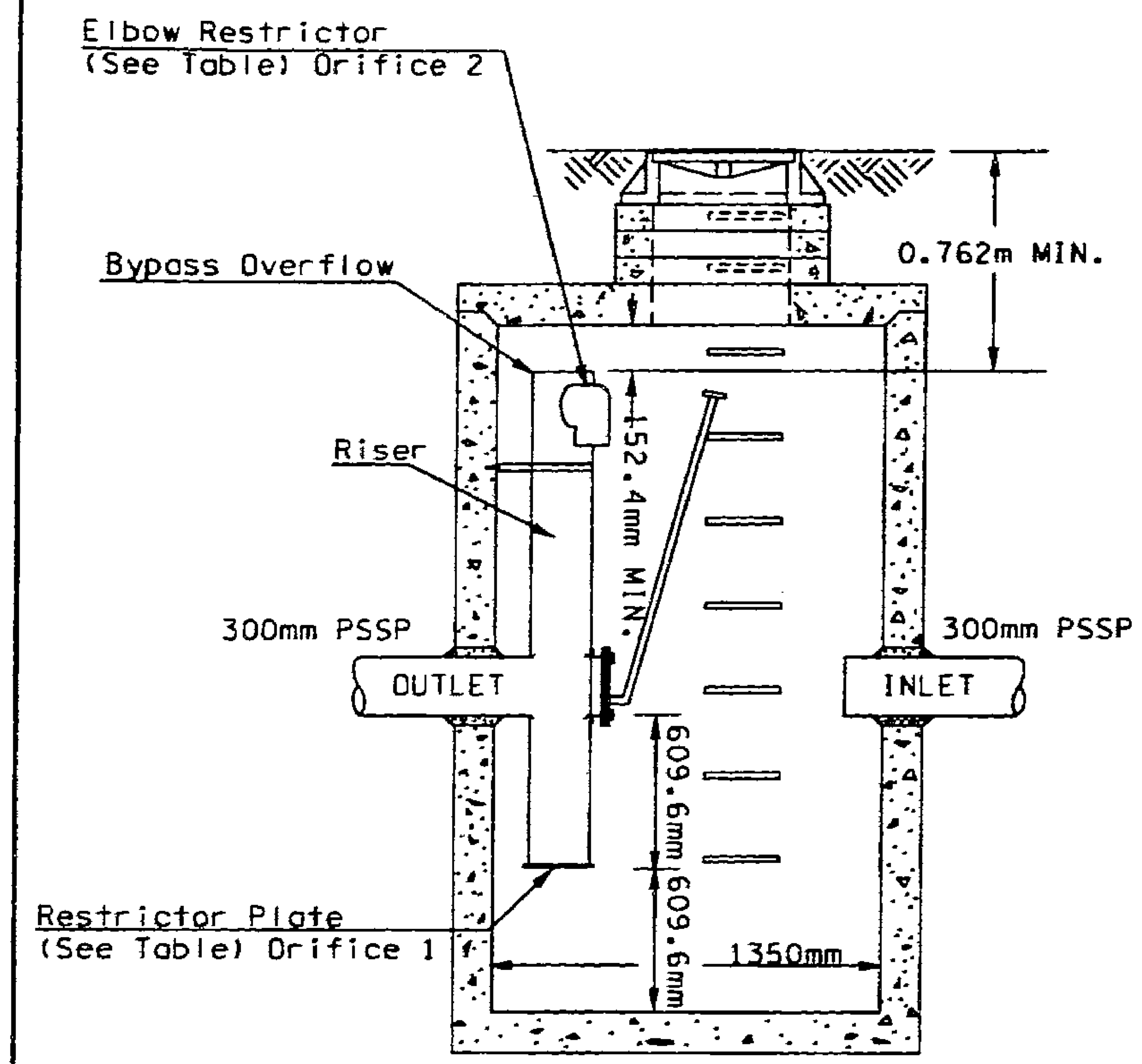
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE PROFILE

DP2

SHEET 17 of 138 SHEETS

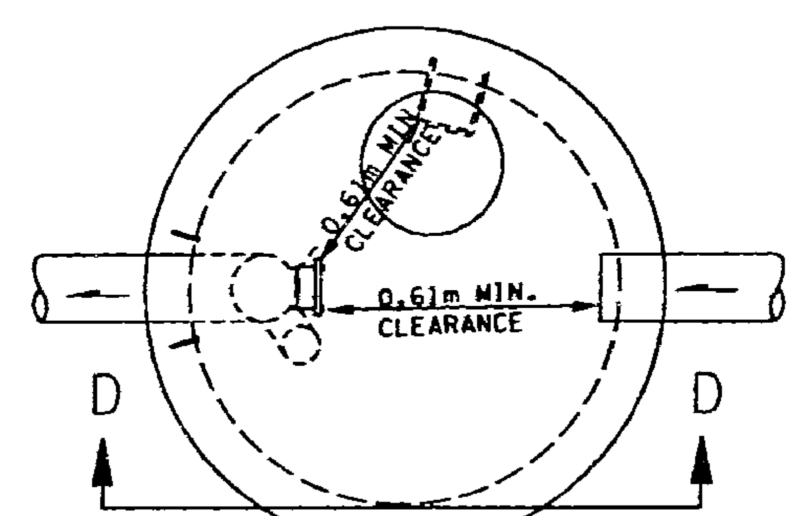


SECTION D-D

NOT TO SCALE

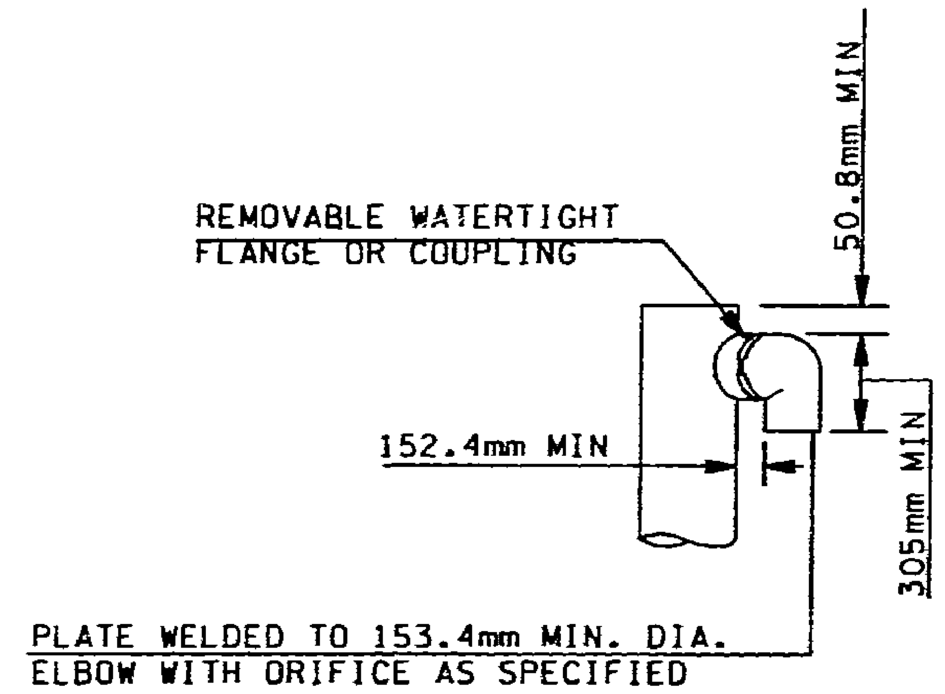
FLOW RESTRICTOR TABLE

STRUCTURE NOTE	LOCATION	ORIFICE 1 DIA. mm	ORIFICE 1 ELEV. meter	ORIFICE 2 DIA. mm	ORIFICE 2 ELEV. meter	OVER-FLOW ELEV.	RIM ELEV.	OUTLET F.L.
D2-10	SBCD'1+194.425(18.60 LT)	102.87	81.576	203.20	81.759	81.813	82.57	81.155



CATCH BASIN TYPE 2 1350mm DIAM. W/ FLOW RESTRICTOR FOR POND OUTLET

NOT TO SCALE



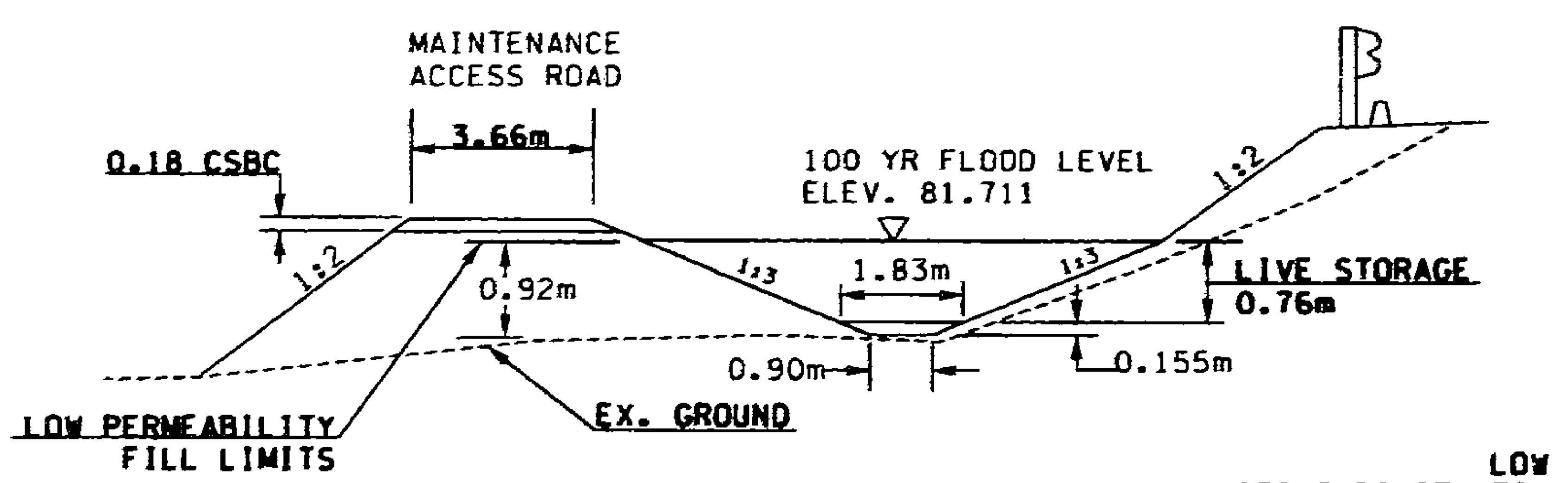
ELBOW DETAIL

NOT TO SCALE

DETENTION POND LAYOUT TABLE

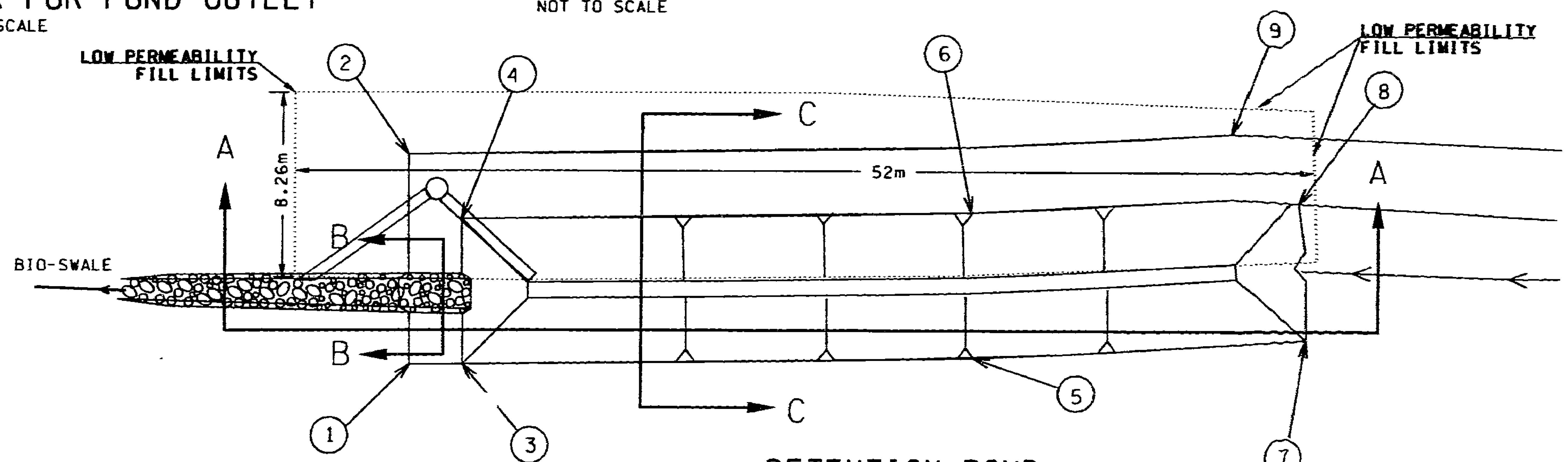
No.	STATION	OFFSET	ELEV.	SLOPE
1	SBCD' 1+193.383	8.574 LT	82.22	1:4
2	SBCD' 1+192.968	20.444 LT	82.22	1:2
3	SBCD' 1+196.349	8.683 LT	82.22	1:3
4	SBCD' 1+196.062	16.898 LT	82.22	1:3
5	SBCD' 1+224.978	9.623 LT	82.22	1:3
6	SBCD' 1+224.693	17.855 LT	82.22	1:2
7	SBCD' 1+243.638	10.819 LT	82.22	1:3
8	SBCD' 1+242.754	18.608 LT	82.22	1:3
9	SBCD' 1+239.923	22.443 LT	82.22	1:2

NOTE:
Except as shown or noted, units shall be constructed in accordance with the requirements for Catch Basin Type 2 with Flow Restrictor - Oil Separator.



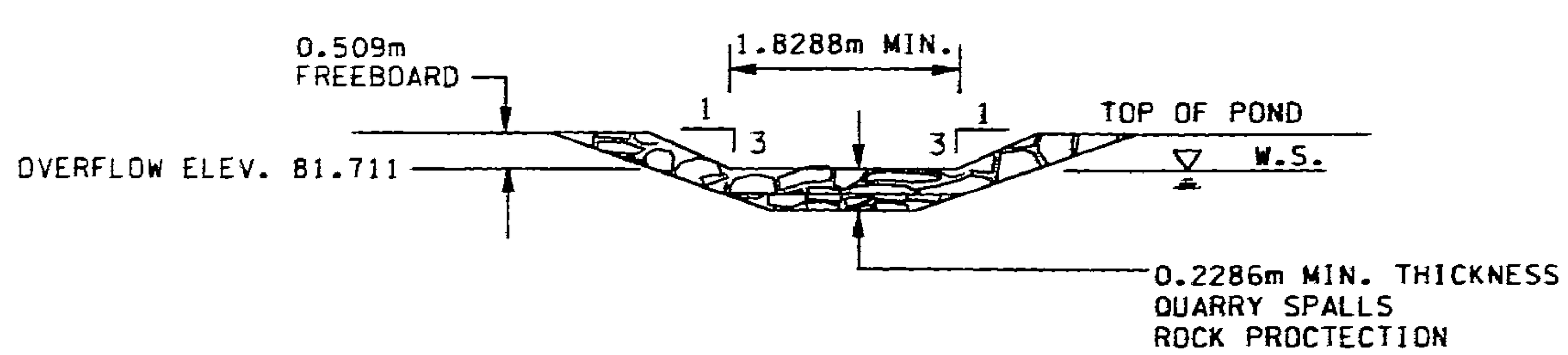
SECTION C-C

NOT TO SCALE



DETENTION POND

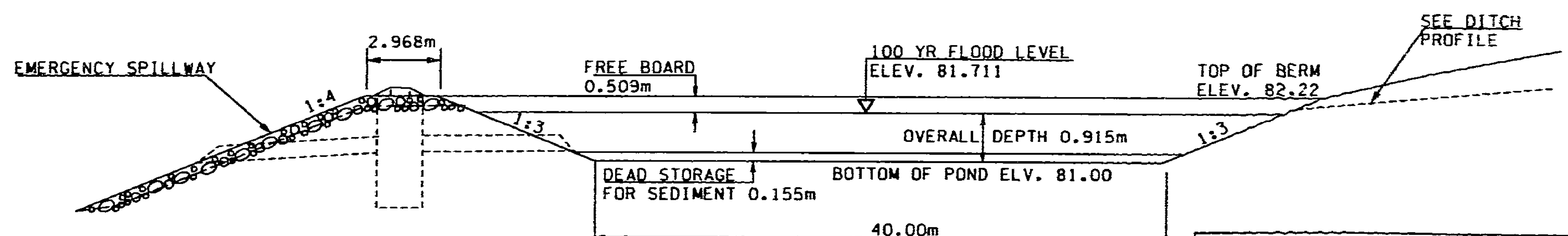
NOT TO SCALE



SECTION B-B

EMERGENCY OVERFLOW SPILLWAY

NOT TO SCALE



SECTION A-A

NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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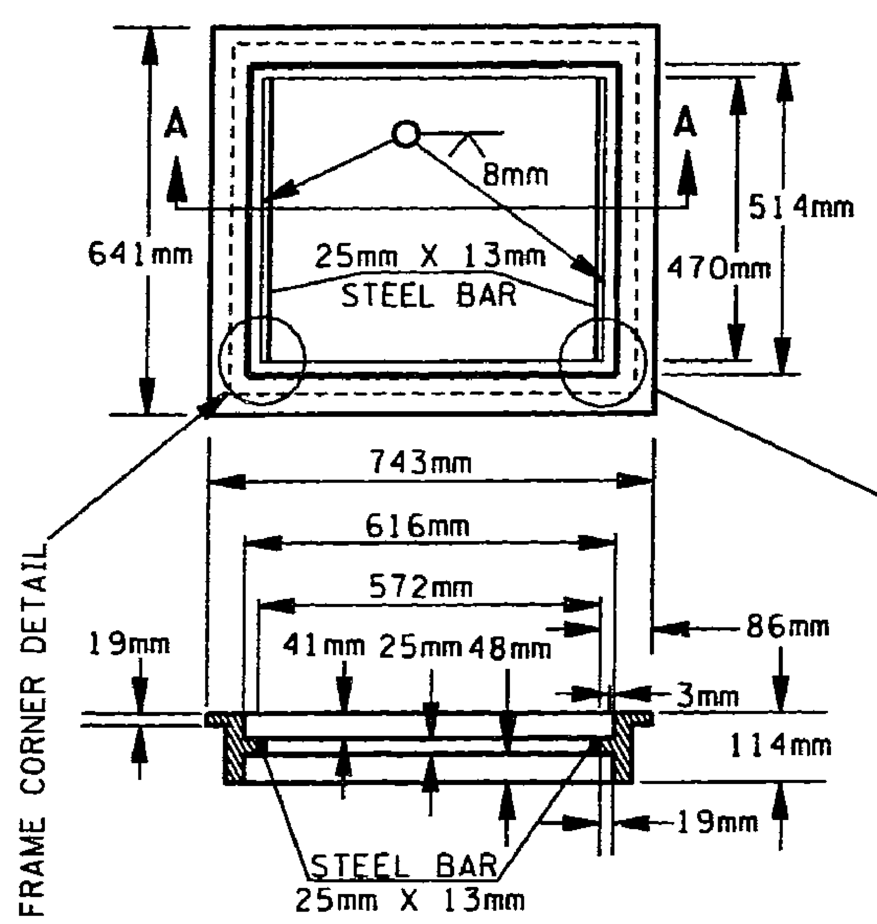
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE DETAILS

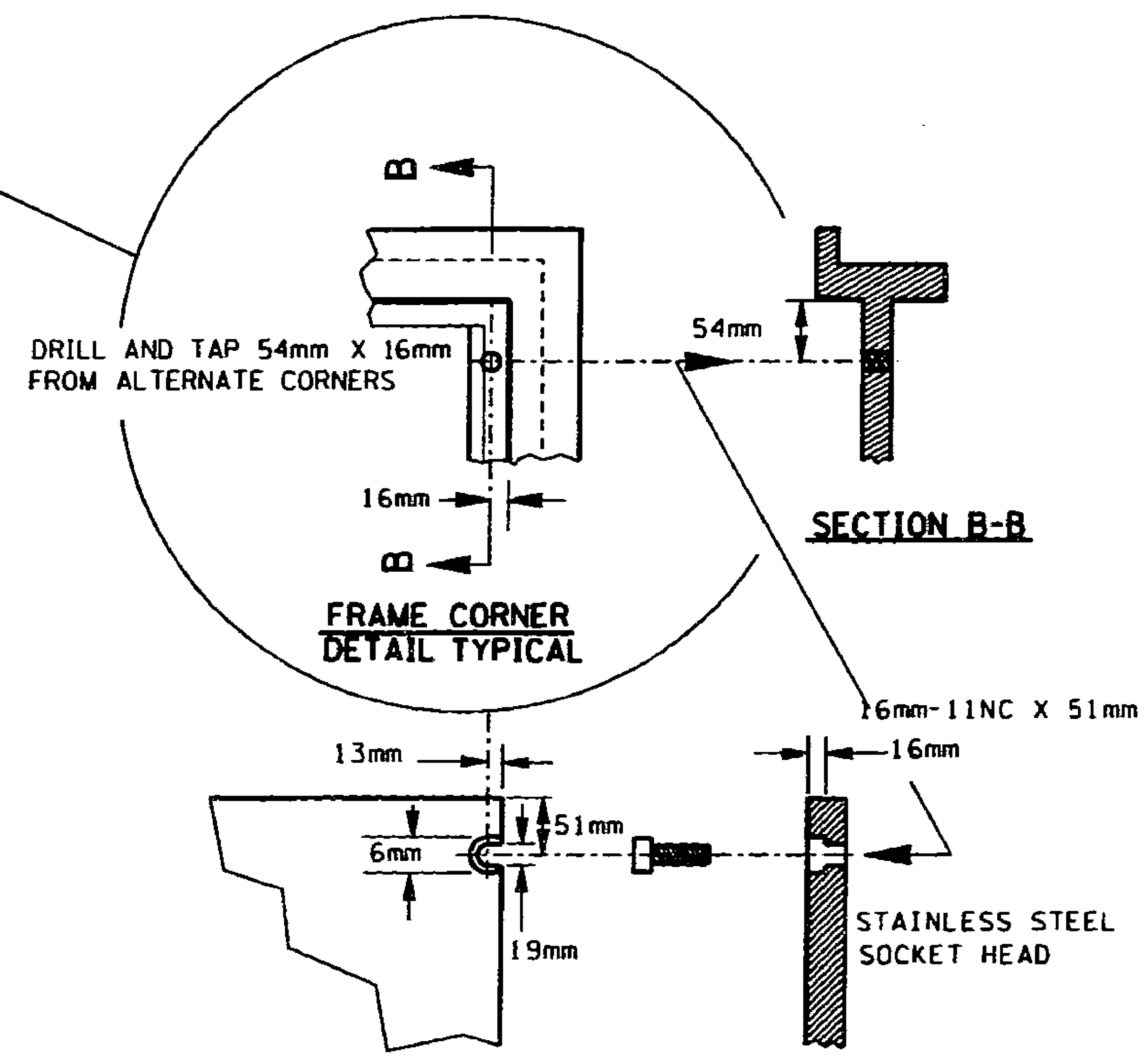
DD1

SHEET 18 OF 138 SHEETS

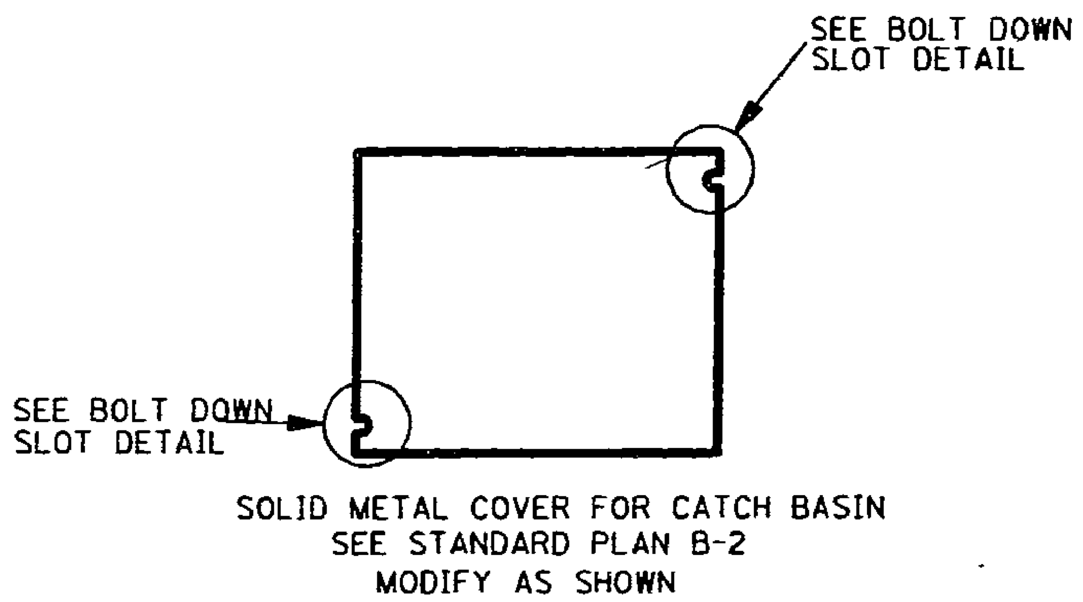
PLOT4 05 JAN 98 s:\412353\projects\ol2538\drainpr.dgn wujim



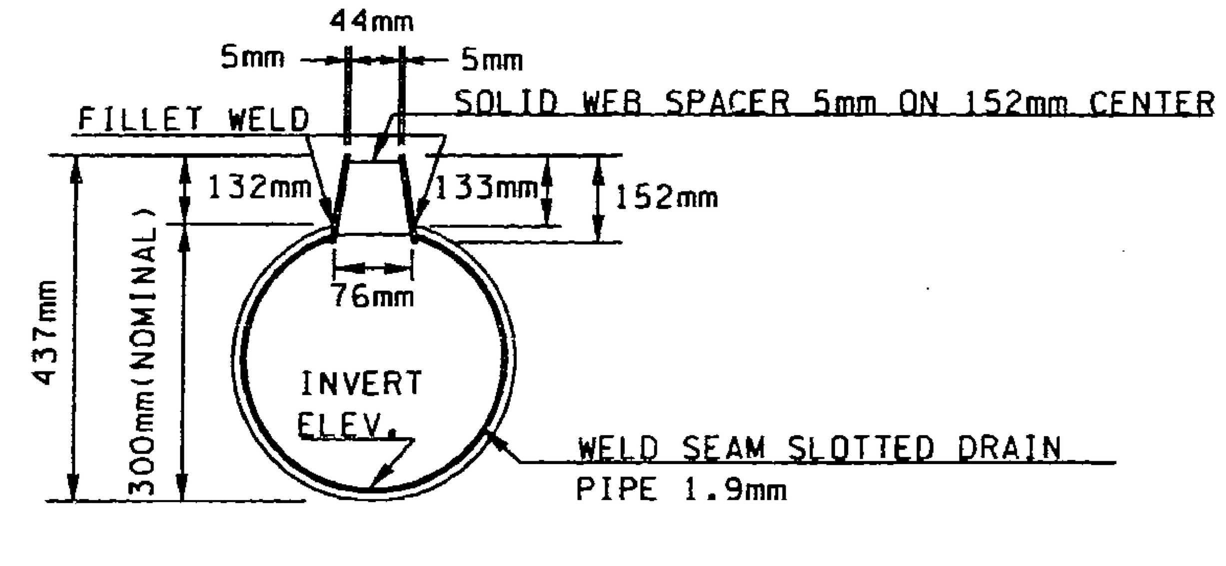
SECTION A-A
NOT TO SCALE



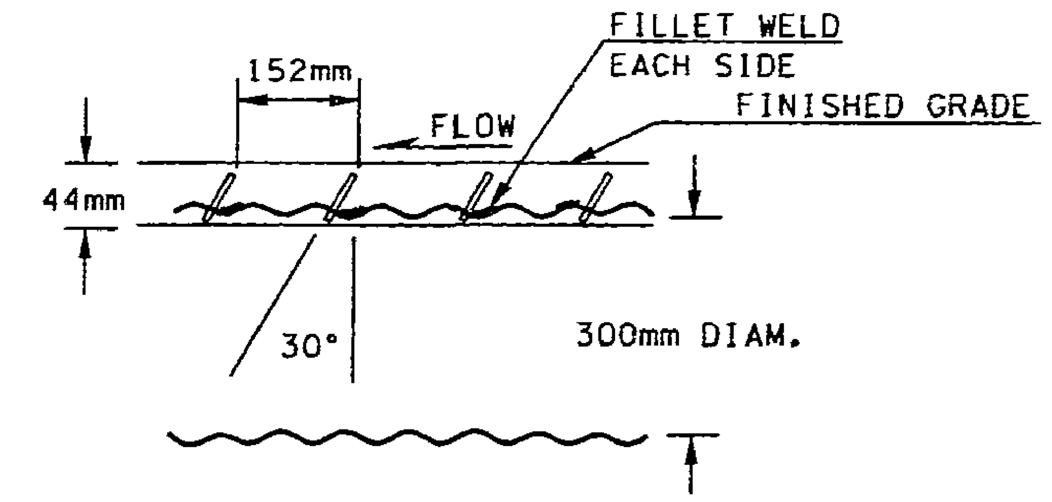
BOLT DOWN
TYPICAL SLOT DETAIL
NOT TO SCALE



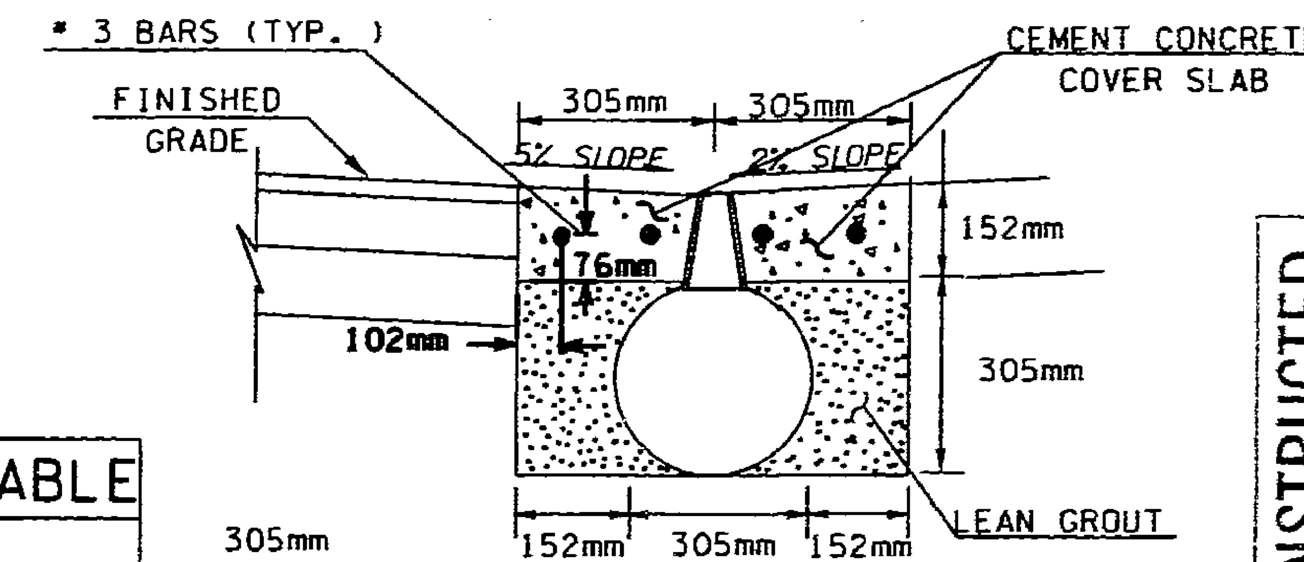
LOCKING FRAME AND SOLID METAL
COVER FOR CATCH BASIN
NOT TO SCALE



CROSS SECTION
SLOTTED DRAIN PIPE 300mm DIAM.
NOT TO SCALE



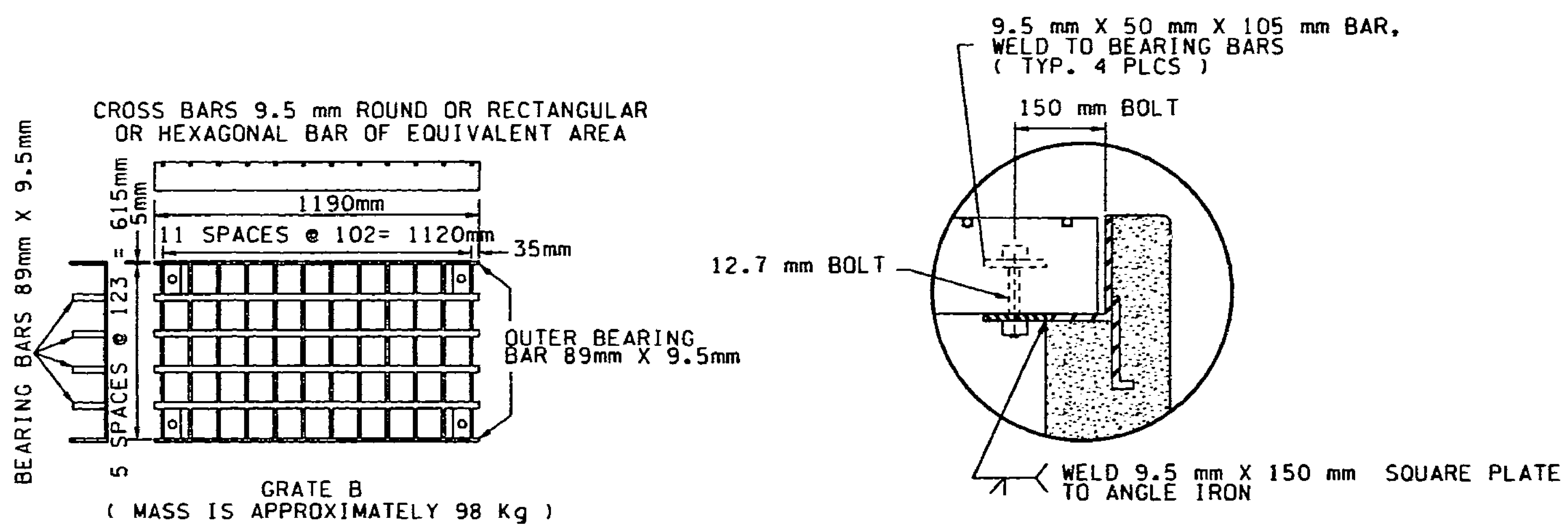
ELEVATION VIEW
NOT TO SCALE



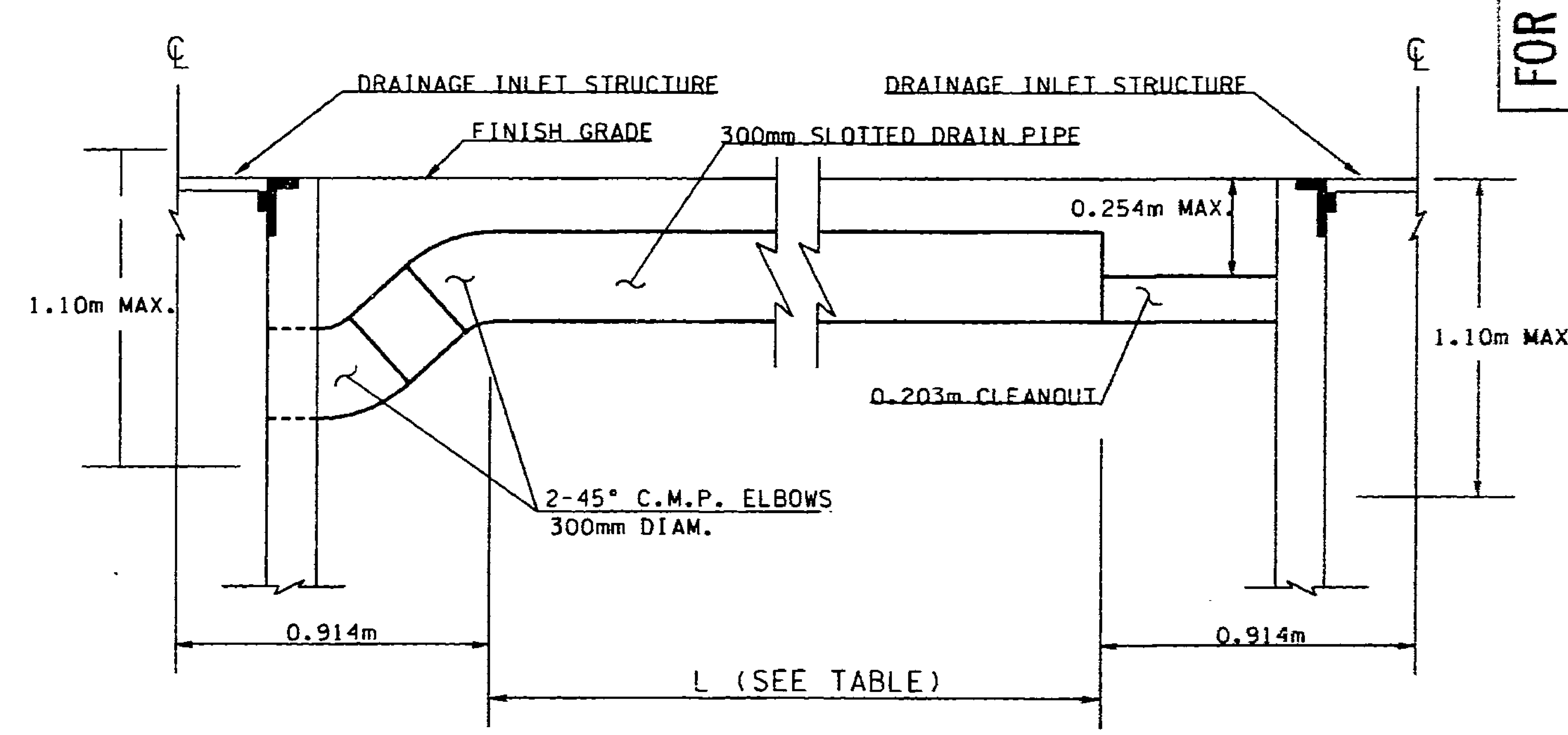
SLOTTED DRAIN PIPE
BEDDING DETAIL
NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

SLOTTED DRAIN PIPE DATA TABLE		
SN	BEGIN STA.	LENGTH (L)
D2-9	SB 1+088.970(7.539LT)	2.74m
D3-3	SB 1+230.674(6.748LT)	4.27m



LOCK DETAIL FOR GRATE INLETS
NOT TO SCALE



SLOTTED DRAIN CONNECTION DETAIL
NOT TO SCALE

DESIGNED BY	M.QUINTEIRO			
ENTERED BY	M.QUINTEIRO			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

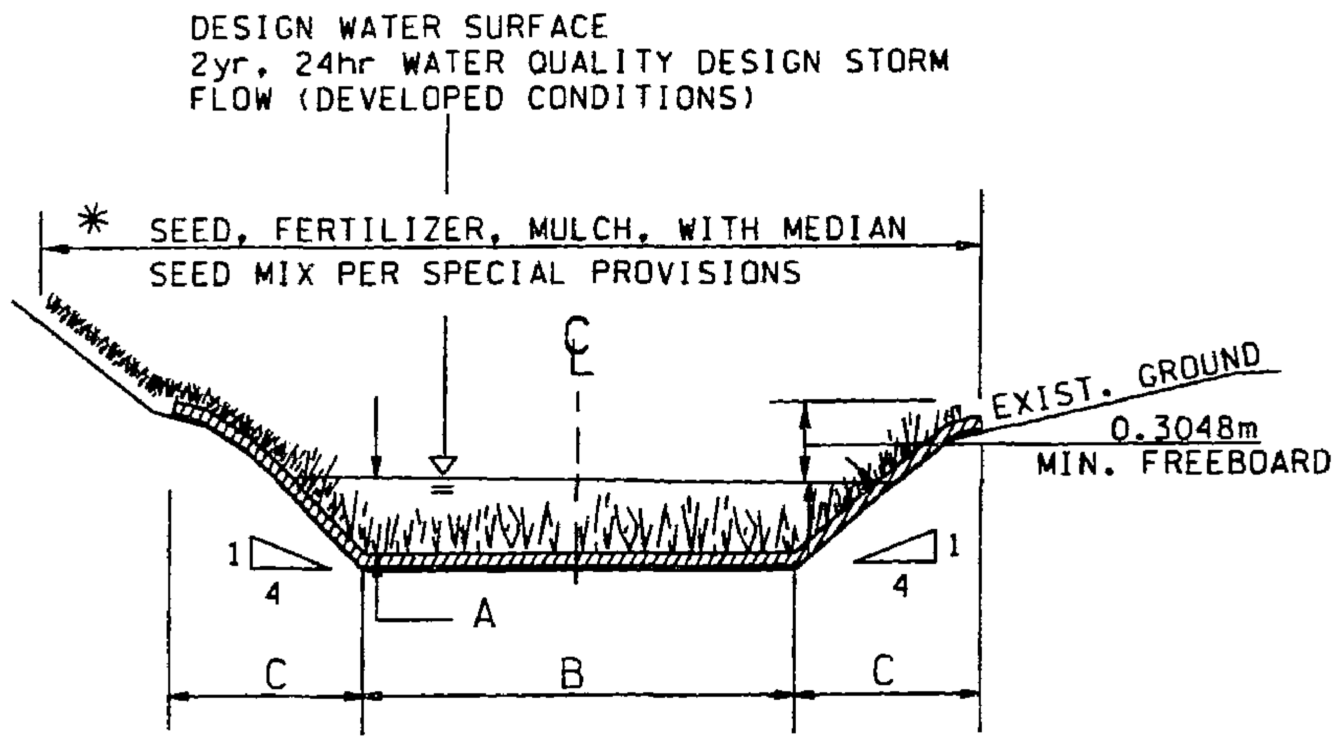
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE DETAILS

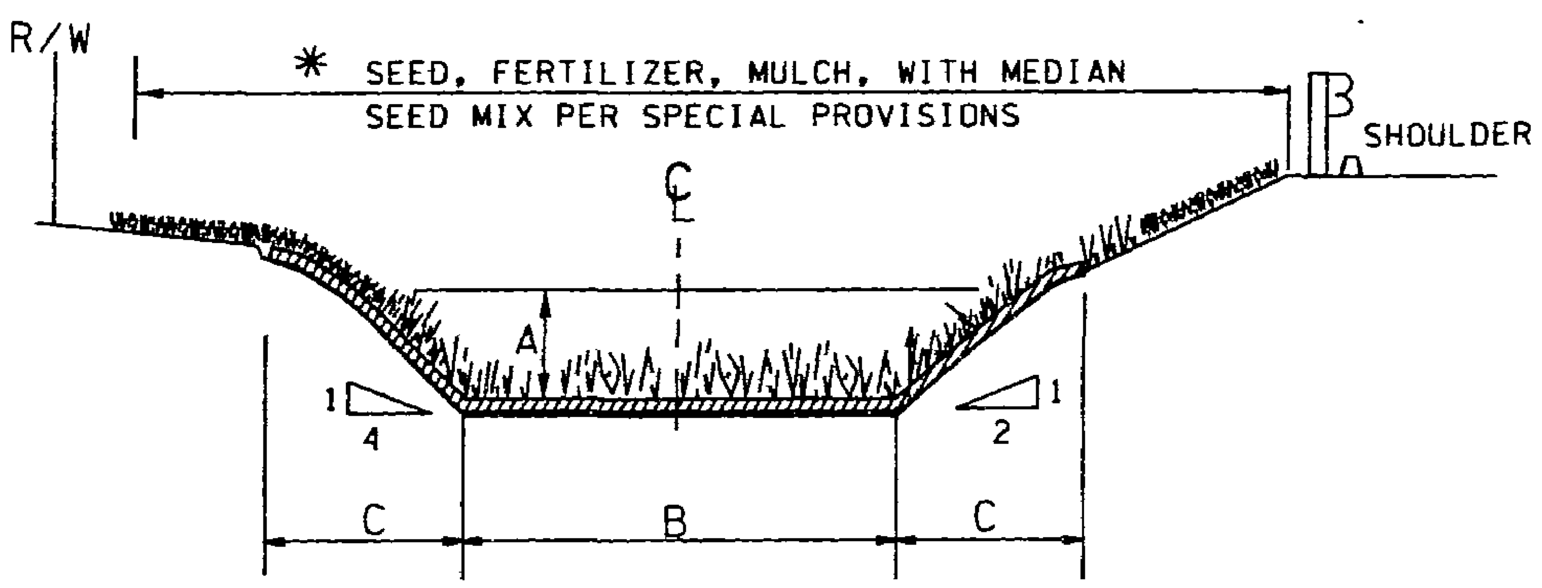
DD2

SHEET 19 OF 138 SHEETS

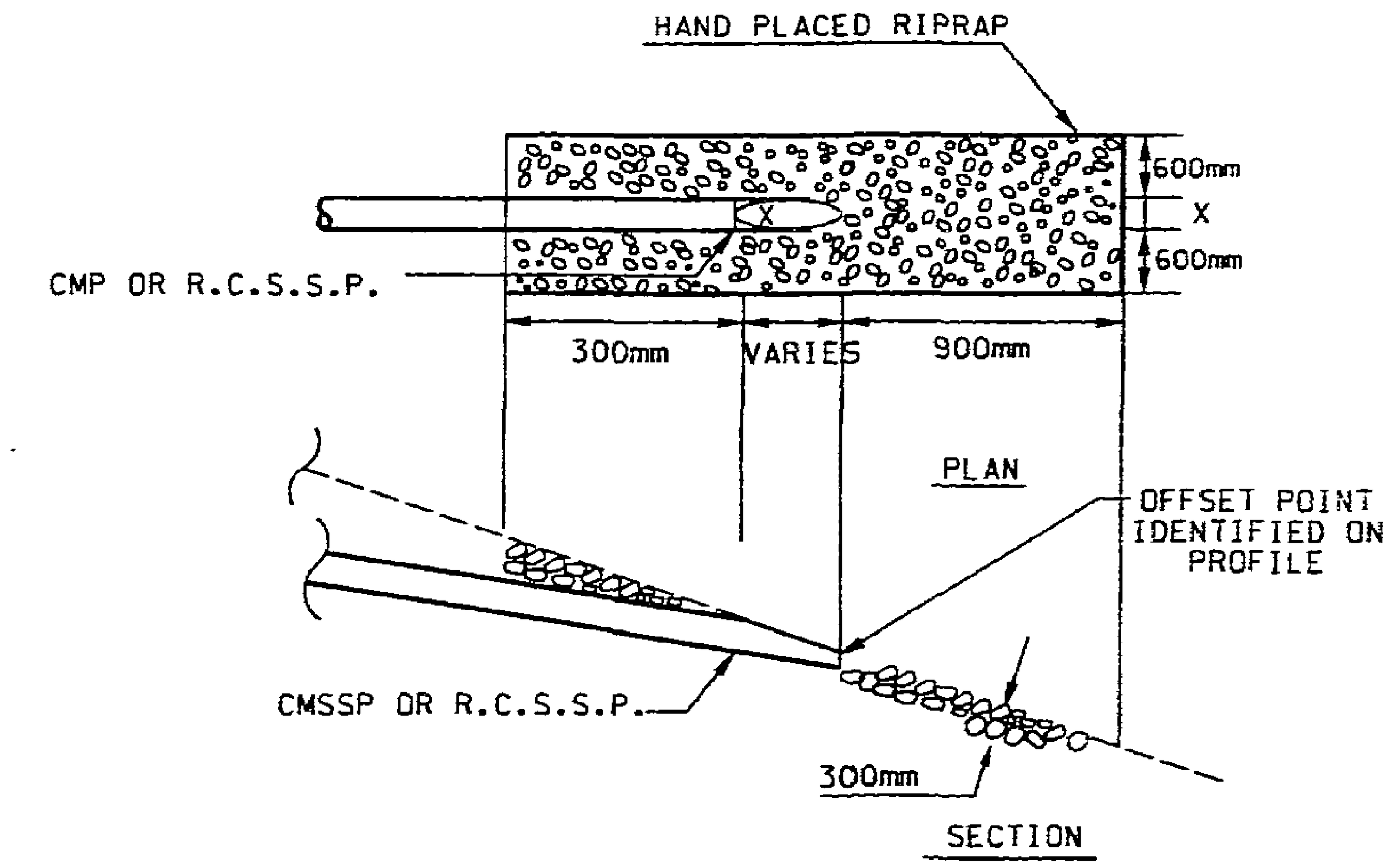
wujim   05 JAN 98 s:\412353\projects\o12538\drainpr.dgn   PLOT5



SECTION A-A
BIOFILTRATION SWALE SECTION
NOT TO SCALE



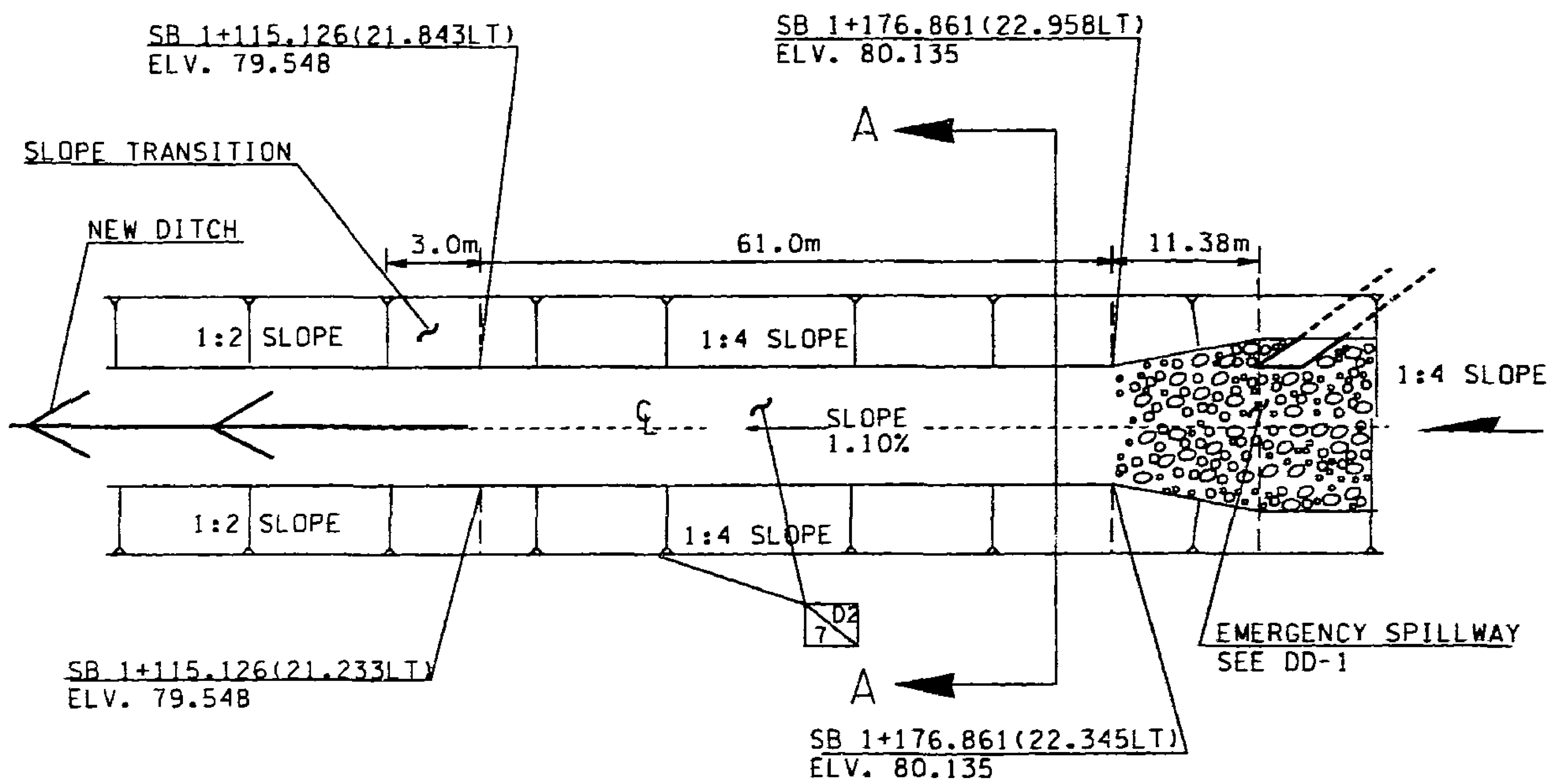
TYPICAL DITCH CROSS SECTION
NOT TO SCALE



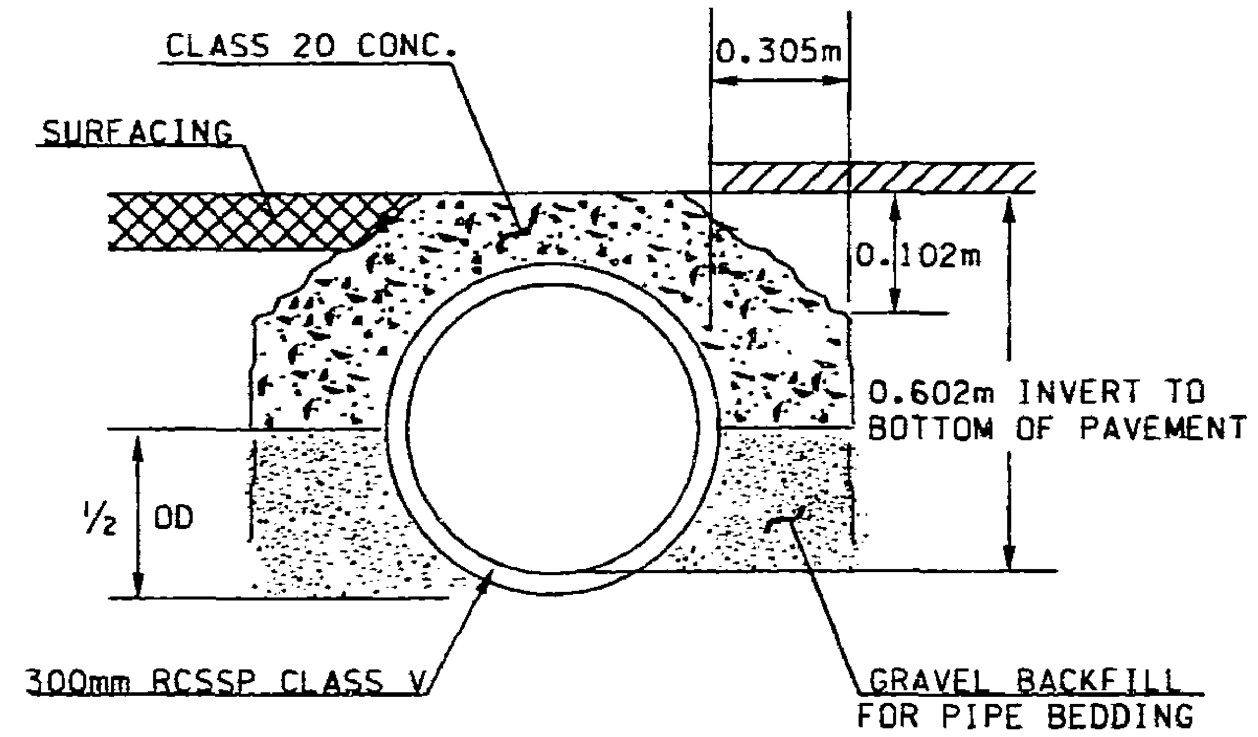
RIPRAP OUTFALL PROTECTION DETAIL
(TYPICAL)
NOT TO SCALE

BIO-SWALE & DITCH DIMENSION TABLE					
SN	LOCATION	A	B	C	Length
D2-7	SB 1+115.22 TO 1+176.861	0.152m	0.610m	1.829m	61.00m
D2-12	SB 1+059.378 (21.00 LT)	0.305m	0.610m	0.61m	90.00m
D3-5	**SBCD' 1+243.90(14.84 LT)**	0.305m	0.610m	0.61m	85.00m

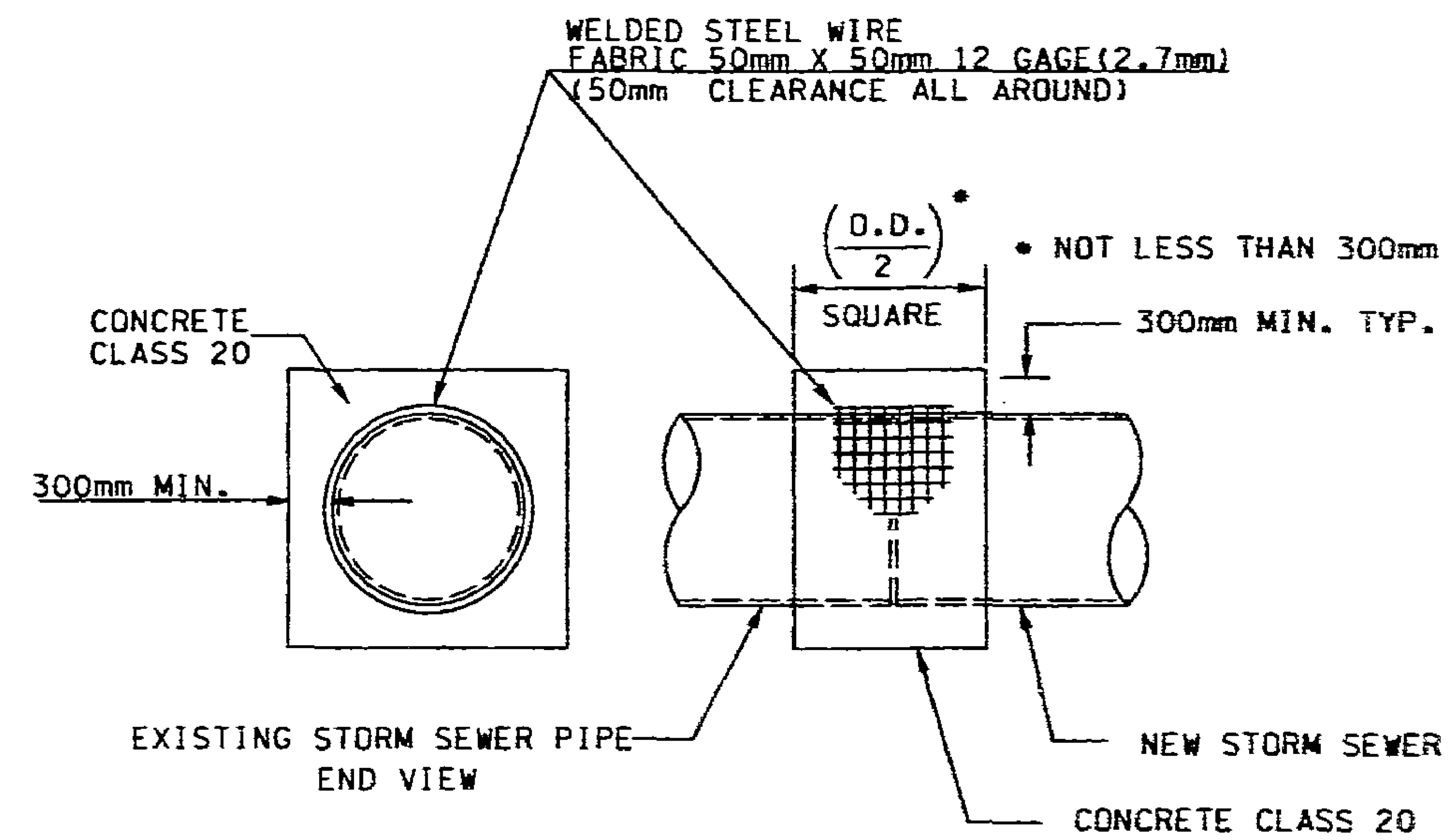
* FOR QUANTITIES OF SEED, FERTILIZER, AND MULCH, SEE SUMMARY OF QUANTITY



PLAN VIEW BIO-SWALE
SB 1+115.22 TO SB 1+176.861
NOT TO SCALE



SHALLOW COVER DESIGN B DETAIL
NOT TO SCALE
SEE STANDARD PLAN B-11
FOR OTHER DIMENSIONS



CONCRETE PIPE COLLAR DETAIL (TYPICAL)
NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

NOTE:
ALL DIMENSIONS, ELEVATIONS, STATIONS, AND CONTOUR LINES ARE IN METERS UNLESS OTHERWISE INDICATED.

DESIGNED BY	M.QUINTEIRO			
ENTERED BY	M.QUINTEIRO			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

DRAINAGE DETAILS

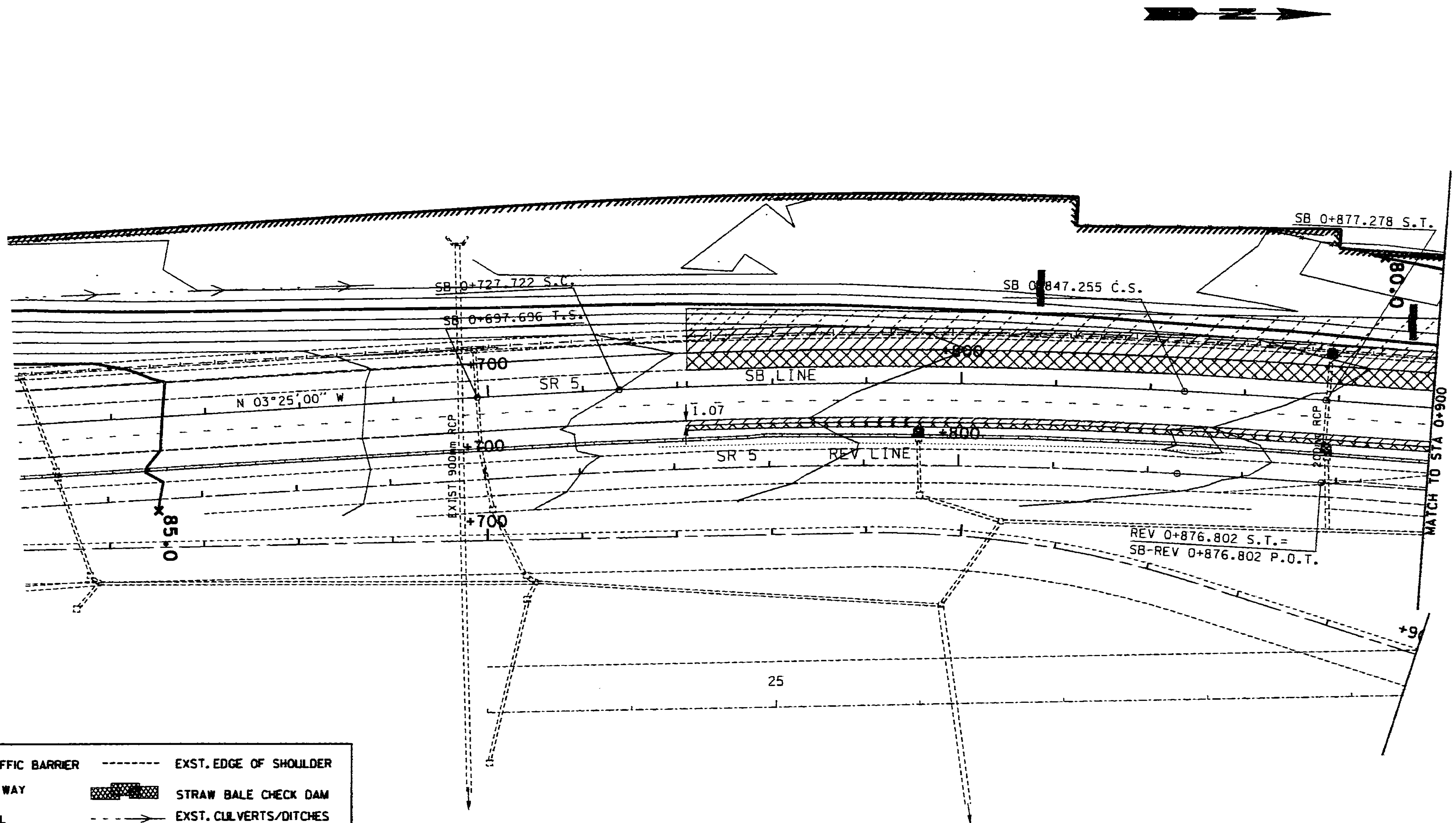
DD3

SHEET 20 OF 138 SHEETS

29 DEC 97 s:\412353\projects\o12538\o2538ssp.dgn quintem

PLOT3

T. 26N. R. 4E. W. M.



LEGEND

EXST. TRAFFIC BARRIER	EXST. EDGE OF SHOULDER
RIGHT OF WAY	STRAW BALE CHECK DAM
EXST. WALL	EXST. CULVERTS/DITCHES
POND	CULVERTS/DITCHES
	BIOSWALE
CLEARING LIMITS	EXST. CULVERT
REMOVE PAVEMENT	PCSSP
	GEOTEXT COVERED GRATE
CONSTRUCTION ACCESS	SILT FENCE
NEW PAVEMENT	PROPOSED CULVERT
	EXISTING CHAIN LINK FENCE

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M.QUINTEIRO				
ENTERED BY	M.QUINTEIRO				
CHECKED BY	R. SUAFOA				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

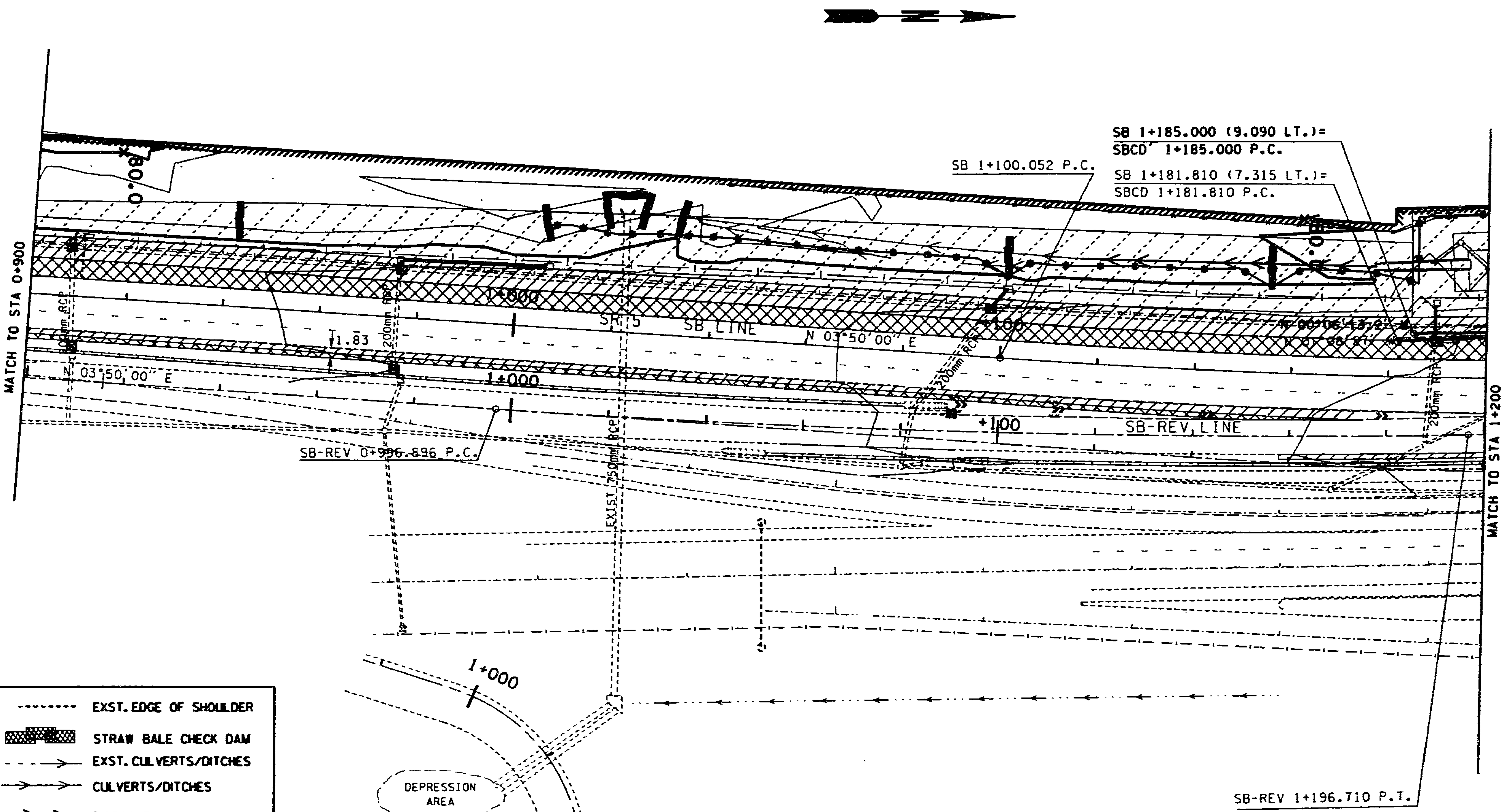
TEMPORARY EROSION & SEDIMENT CONTROL

SW1

SHEET 21 OF 138 SHEETS

PLOT4 29 DEC 97 s:\412353\projects\o12538\o2538ssp.dgn quintem

T. 26N. R. 4E. W. M.



LEGEND

- EXST. TRAFFIC BARRIER
- RIGHT OF WAY
- EXST. WALL
- POND
- CLEARING LIMITS
- REMOVE PAVEMENT
- CONSTRUCTION ACCESS
- NEW PAVEMENT
- EXST. EDGE OF SHOULDER
- STRAW BALE CHECK DAM
- EXST. CULVERTS/DITCHES
- CULVERTS/DITCHES
- BIOSWALE
- EXST. CULVERT
- PCSSP
- GEOTEXT COVERED GRATE
- SILT FENCE
- PROPOSED CULVERT
- EXISTING CHAIN LINK FENCE

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. QUINTEIR					REGION NO. 10	STATE WASH
ENTERED BY M. QUINTEIR					JOB NUMBER 97W058	FED.AID PROJ.NO.
CHECKED BY R. SUAFOA					CONTRACT NO.	
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TEMPORARY EROSION & SEDIMENT CONTROL

SW2

SHEET 22 OF 138 SHEETS

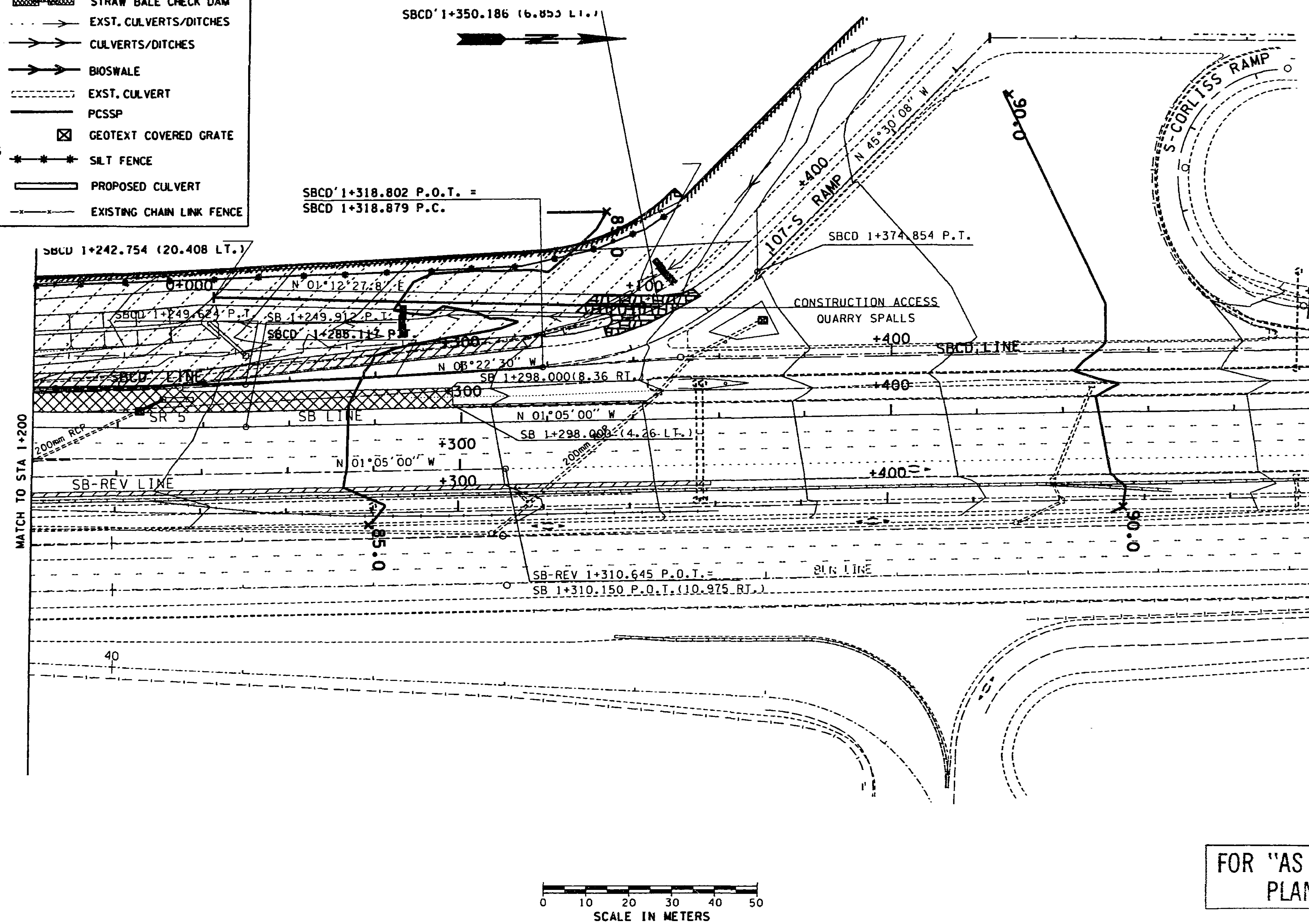
15 DEC 97 s:\412353\projects\o12538\o2538ssp.dgn 412353

PLOT5

T. 26N. R. 4E. W. M.

LEGEND

- EXST. TRAFFIC BARRIER
- RIGHT OF WAY
- EXST. WALL
- POND
- CLEARING LIMITS
- REMOVE PAVEMENT
- CONSTRUCTION ACCESS
- NEW PAVEMENT
- EXST. EDGE OF SHOULDER
- STRAW BALE CHECK DAM
- EXST. CULVERTS/DITCHES
- CULVERTS/DITCHES
- BIOSWALE
- EXST. CULVERT
- PCSSP
- GEOTEXT COVERED GRATE
- SILT FENCE
- PROPOSED CULVERT
- EXISTING CHAIN LINK FENCE



FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M.QUINTEIRO				
ENTERED BY M.QUINTEIRO				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TEMPORARY EROSION & SEDIMENT CONTROL

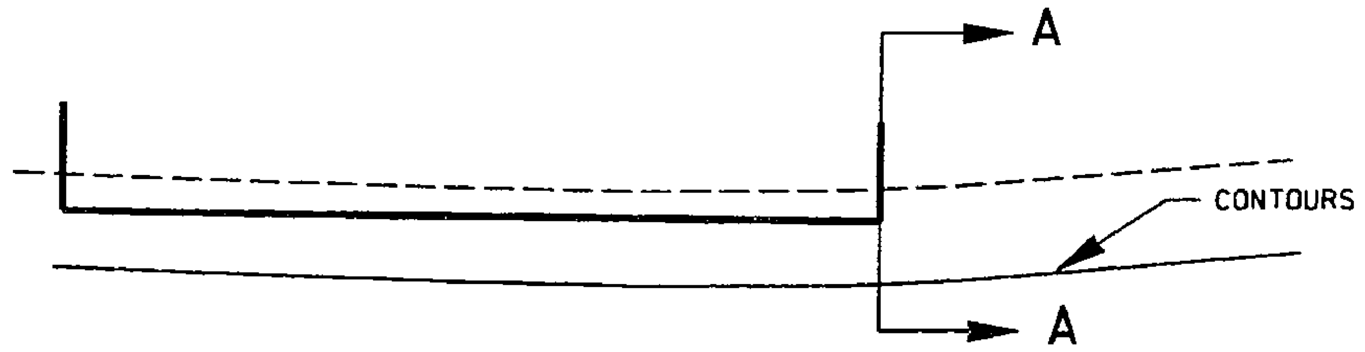
SW3

SHEET 23 OF 138 SHEETS

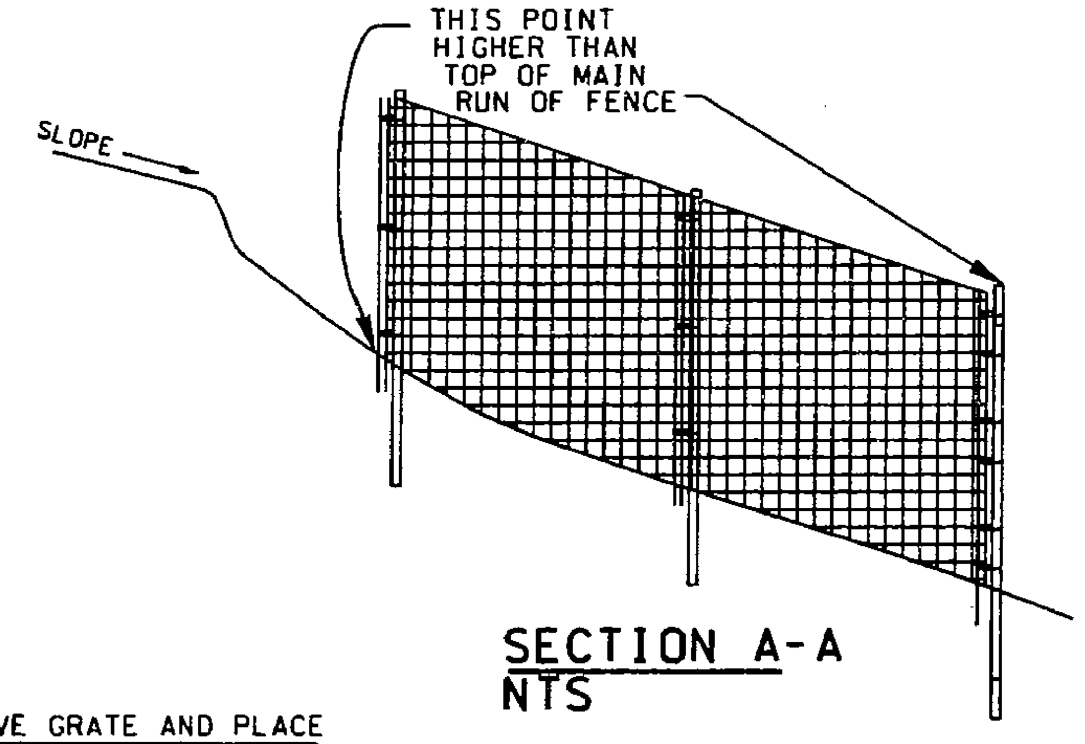
wujim

29 DEC 97 s:\412353\projects\o12538\o2538ssp.dgn

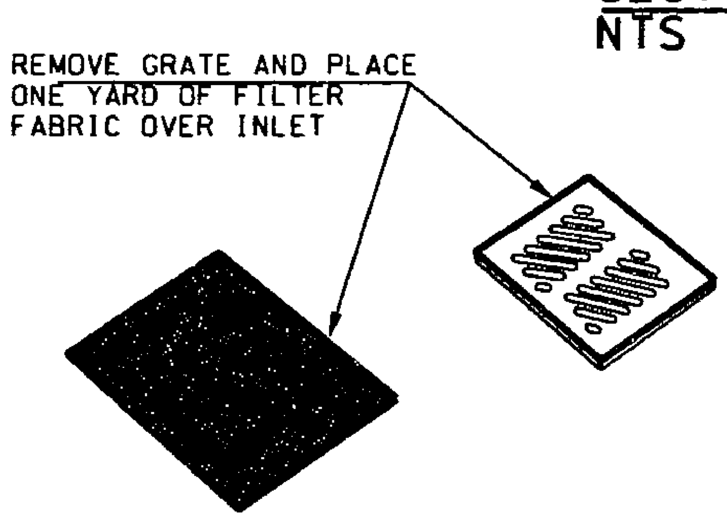
PLOT2



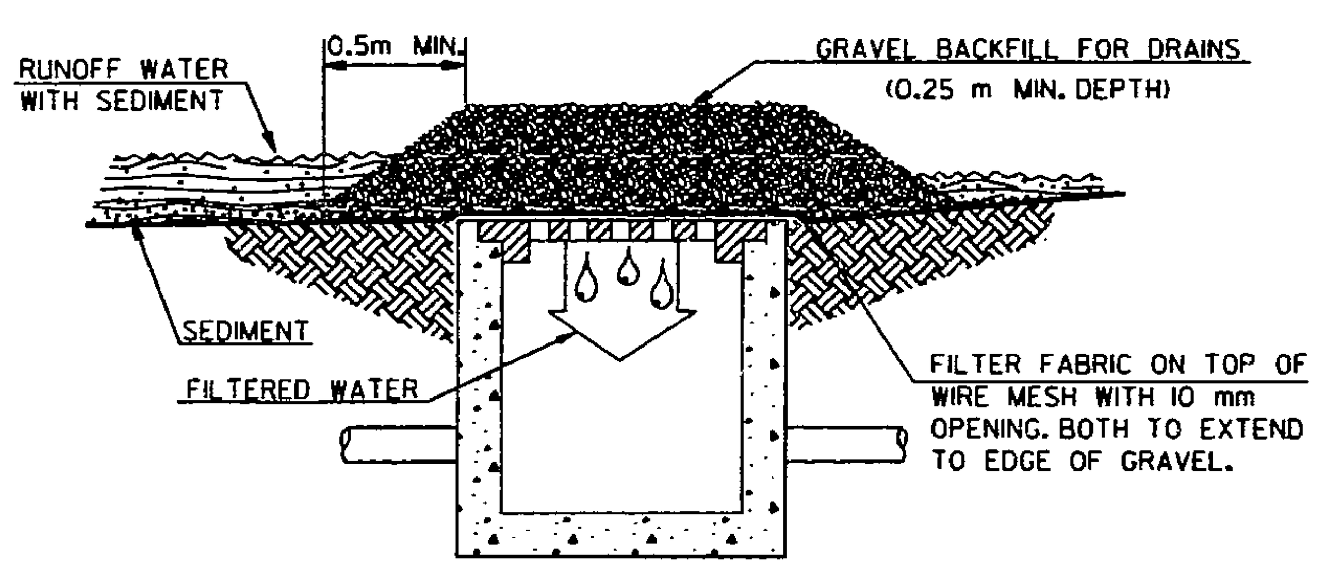
SILT FENCE AT SLOPE DETAIL



SECTION A-A
NTS



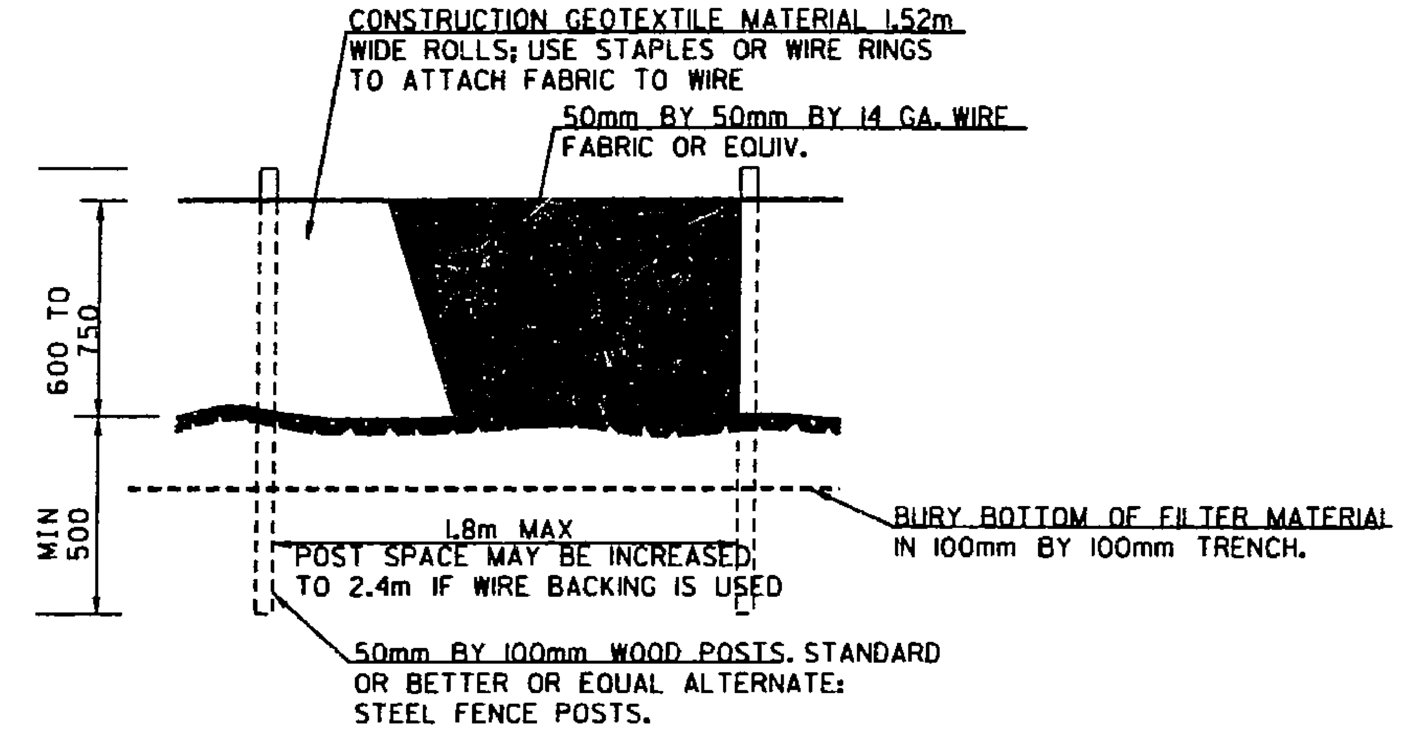
GEOTEX GRATE COVER



INLET PROTECTION NOTES

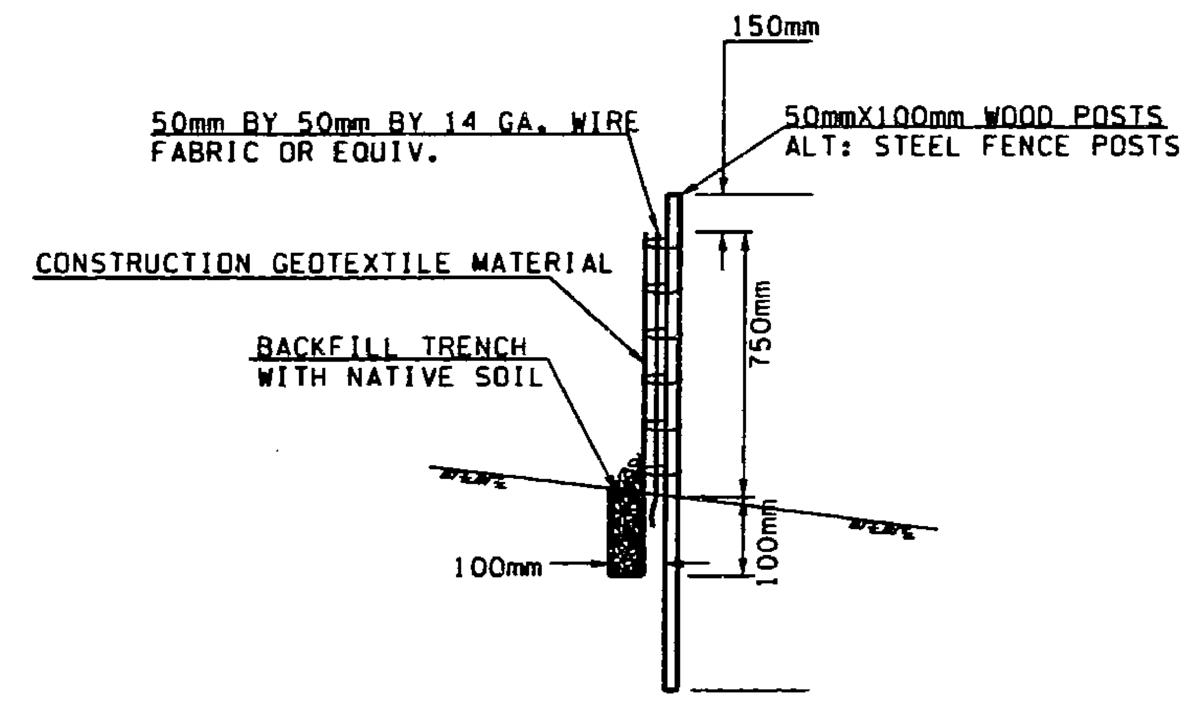
1. IF GRAVEL BECOMES CLOGGED WITH SEDIMENT, IT SHALL BE REMOVED AND MAY BE USED AS FILL AT OTHER LOCATIONS ON SITE AS APPROPRIATE. FRESH CLEAN GRAVEL SHALL BE PLACED AROUND INLETS.

STORM DRAIN INLET PROTECTION DETAIL
N.T.S.



NOTE: MEASUREMENTS ARE IN MM UNLESS OTHERWISE INDICATED

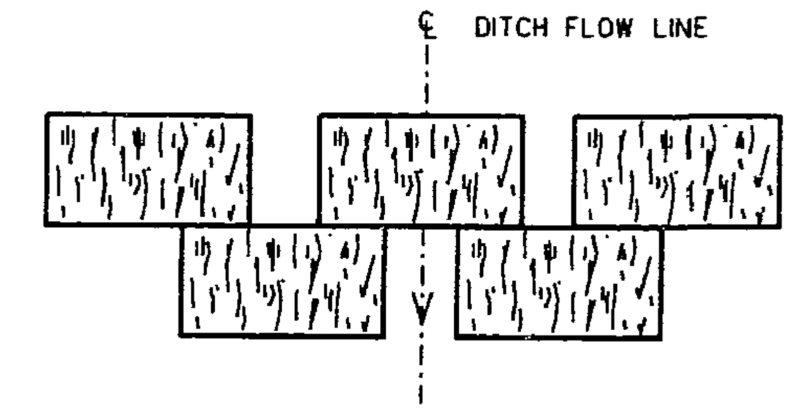
SILT FENCE ELEVATION
NTS



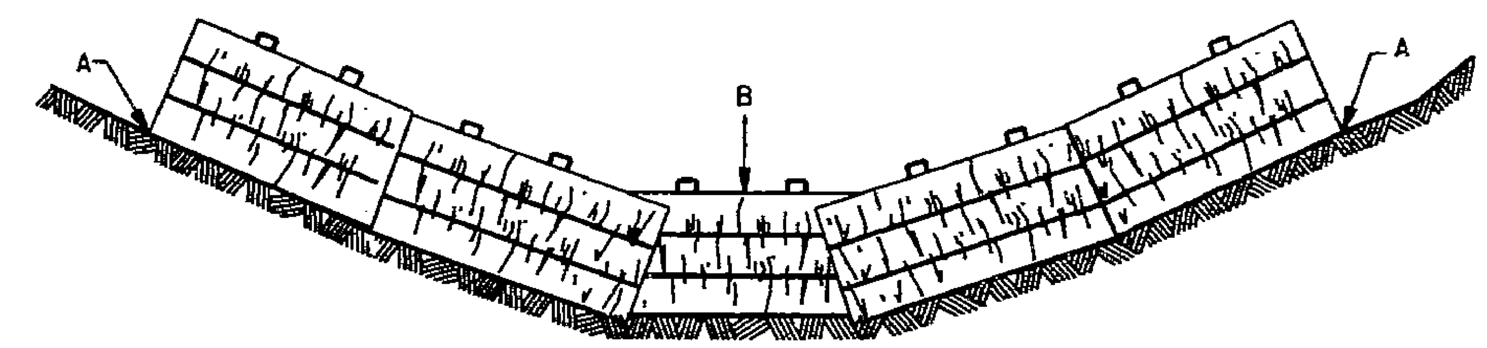
SILT FENCE STAKING DETAIL

1. FILTER FENCES SHALL BE REMOVED WHEN THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED. RETAINED SEDIMENT MUST BE REMOVED AND PROPERLY DISPOSED OF, OR MULCHED AND SEEDED.
2. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATLEY.
3. SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT OF THE FENCE, OR WHEN ONE THIRD OF THE FLOW AREA OF THE FENCE FABRIC, MEASURED VERTICALLY, IS PLUGGED.
4. FENCE SHALL BE CONSTRUCTED ALONG CONTOURS, PERPENDICULAR TO SLOPES. THE ELEVATION ALONG THE BOTTOM OF A FENCE SHALL NOT VARY MORE THAN 200 mm FROM END TO END, EXCEPT FOR THE ELEVATION CHANGE AT EACH END. EACH END SHALL EXTEND PERPENDICULAR TO THE MAIN FENCE, IN AN UPSLOPE DIRECTION , FOR A DISTANCE SUCH THAT THE TOE OF THE FENCE AT THE END POST IS EQUAL TO OR ABOVE THE LOWEST POINT ALONG THE TOP OF THE MAIN RUN OF FENCE.

TEMPORARY SILT FENCE DETAIL
N.T.S



STRAW BALE PLAN VIEW DETAIL
NTS

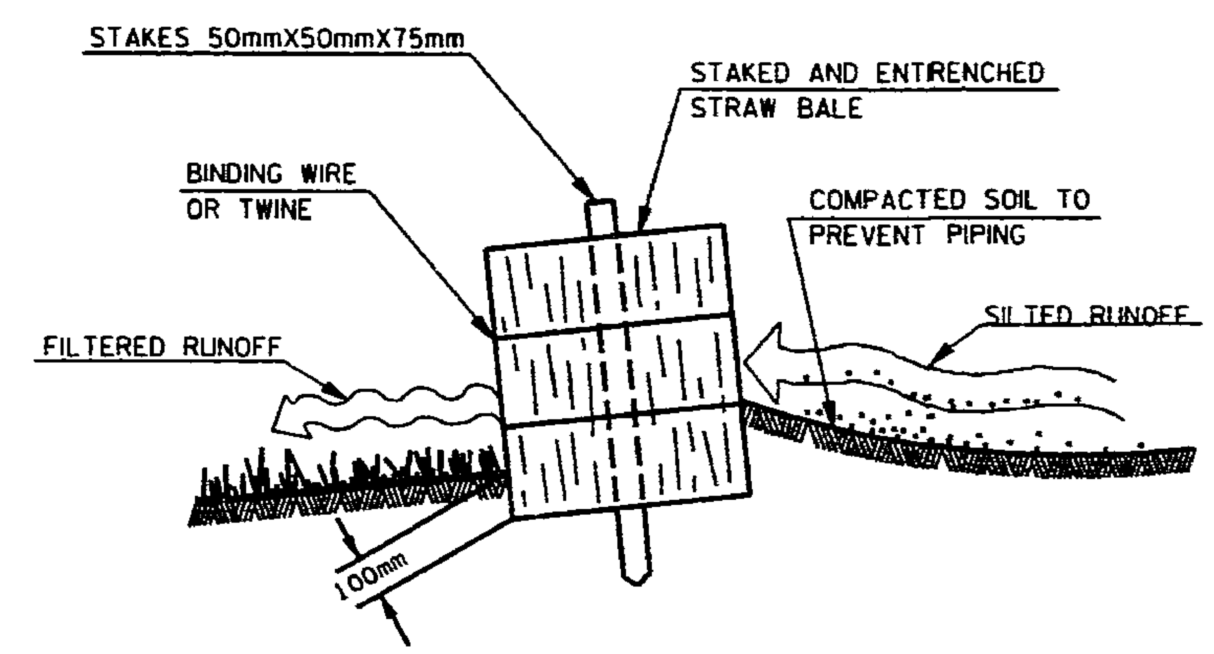


POINTS A SHOULD BE HIGHER THAN POINT B

STRAW BALE PLACEMENT DETAIL
NTS

MAINTENANCE

- STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELLY AFTER EACH RUN-OFF PRODUCING RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERC UTTING BENEATH BALES.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RUNOFF- PRODUCING RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.



STRAW BALE STAKING DETAIL
NTS

STRAW BALE CHECK DAM

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. QUINTEIRO					
ENTERED BY	M. QUINTEIRO					
CHECKED BY	R. SUAFOA					
PROJ. ENGR.	J. JOHNSON					
REGIONAL ADM.	J. OKAMOTO					
		DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

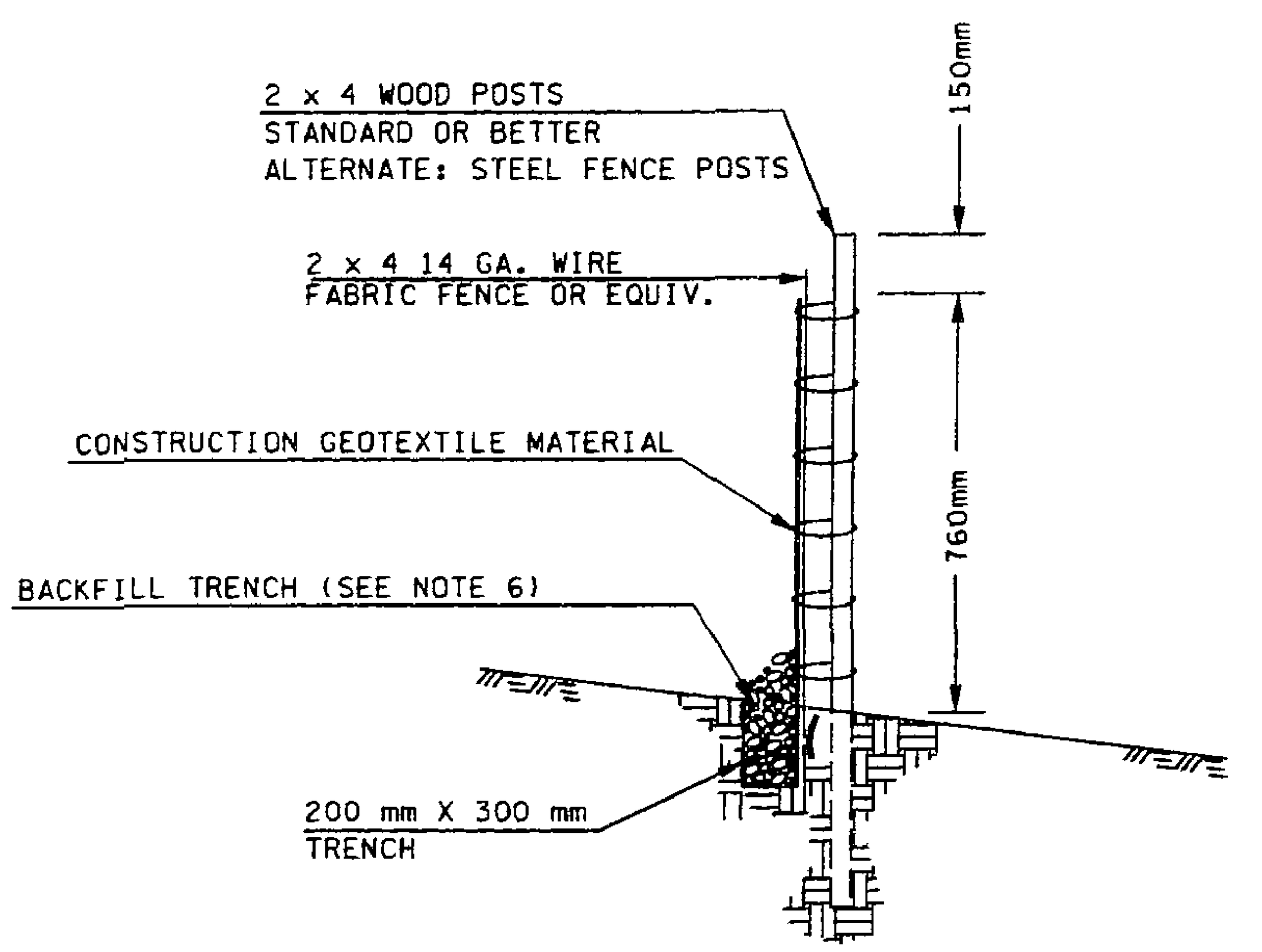
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

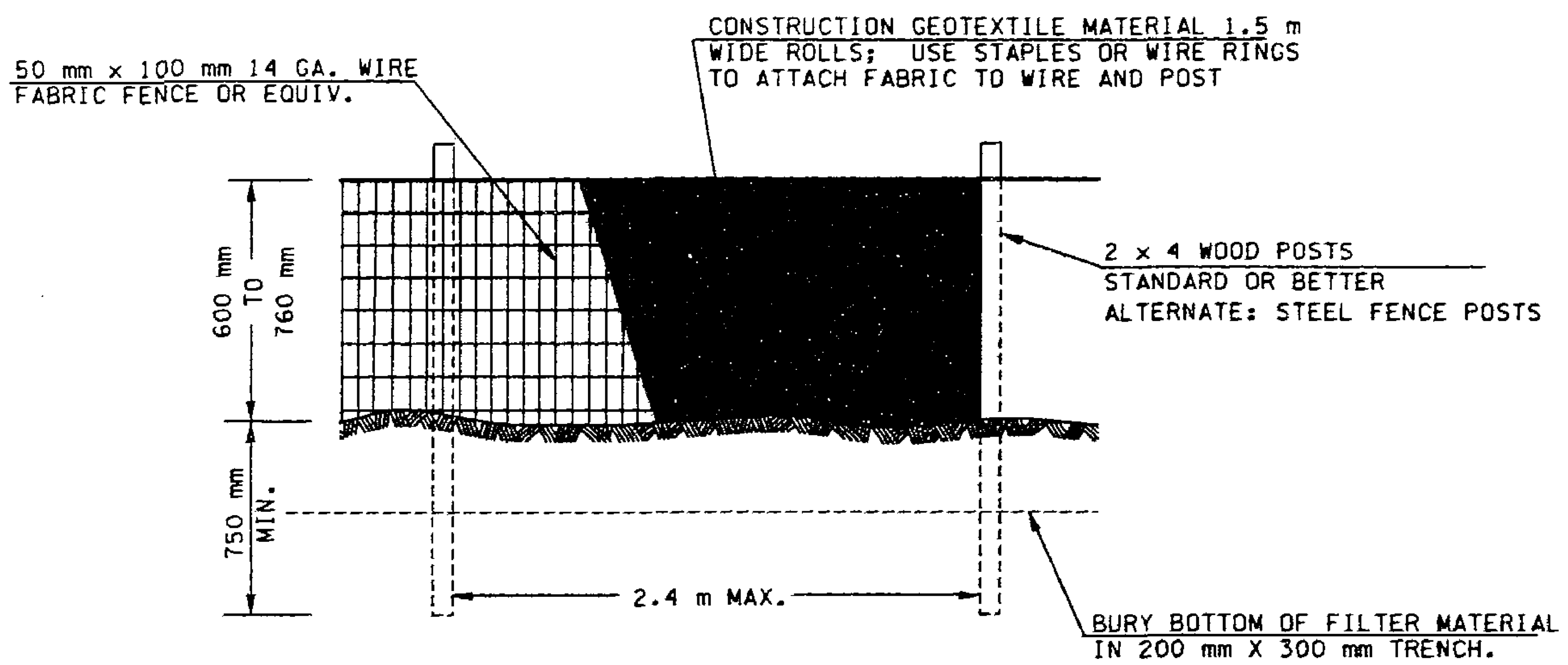
TEMPORARY EROSION CONTROL DETAIL

SW4

SHEET 24 OF 138 SHEETS



SILT FENCE STAKING DETAIL



SILT FENCE ELEVATION

CONSTRUCTION GEOTEXTILE FOR TEMPORARY SILT FENCE

GENERAL NOTES:

1. THE FILTER FABRIC (CONSTRUCTION GEOTEXTILE FOR TEMPORARY SILT FENCE) SHALL BE PURCHASED IN A CONTINUOUS ROLL , 1.5 M WIDE, CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, THE FILTER FABRIC SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 150 mm OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.

2. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 2.4 m APART AND DRIVEN SECURELY INTO THE GROUND (A MINIMUM OF 0.75 m).

3. A TRENCH SHALL BE EXCAVATED A MINIMUM OF 200 mm WIDE BY 300 mm DEEP, UPSLOPE AND ADJACENT TO THE POST TO ALLOW THE FILTER FABRIC TO BE BURIED.

4. THE 50 mm X 100 mm X 14 GAUGE WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 25 mm LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 100 mm AND SHALL NOT EXTEND MORE THAN 0.9 m ABOVE THE ORIGINAL GROUND SURFACE.

5. THE FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 0.5 m OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 0.9 m ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO TREES.

6. THE TRENCH SHALL BE BACKFILLED WITH NATIVE MATERIAL OR WITH NUMBER 4 CONCRETE AGGREGATE.

7. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

8. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

9. SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY ONE-THIRD THE HEIGHT OF THE FENCE OR WHEN ONE-THIRD OF THE FLOW AREA OF THE FENCE FABRIC, MEASURED VERTICALLY, IS PLUGGED. RETAINED SEDIMENT MUST BE PROPERLY DISPOSED OF.

10. IN ORDER OF PRECEDENCE, PER SECTION 1-04.2, SILT FENCE SHALL CONFORM TO THIS DETAIL AND THEN TO SECTION 2-12, WSDOT STANDARD SPECIFICATIONS.

11. SILT FENCE LOCATIONS SHALL BE EVALUATED AND ADJUSTED AS DIRECTED OR APPROVED BY THE ENGINEER AND THE PERMITTING AUTHORITY.

12. SILT FENCE SHALL BE INSTALLED TO FOLLOW CONTOURS, WHERE FEASIBLE.

13. ANY DEVIATION OR CHANGE TO THIS PLAN DETAIL MUST BE APPROVED BY AN INSPECTOR FOR THE PERMITTING AUTHORITY.

14. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE MANUFACTURER'S SPECIFICATIONS FOR FILTER FABRIC ON SITE.

15. MAINTENANCE STANDARDS:
   A. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
   B. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
   C. THE UPSTREAM SIDE OF THE FENCE SHALL BE CHECKED FOR SIGNS OF THE FENCE CLOGGING, ACTING AS A BARRIER TO FLOW, AND CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF SUCH CHANNELIZATION OCCURS, THE CONTRACTOR SHALL REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT AS APPROVED BY THE ENGINEER.
   D. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT IS 300 mm HIGH.
   E. THE FABRIC SHALL BE REPLACED WHEN IT HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN AS DETERMINED BY THE ENGINEER.

FOR "AS CONSTRUCTED PLANS" ONLY

NOT TO SCALE

DESIGNED BY				
ENTERED BY				
CHECKED BY				
PROJ. ENGR.				
REGIONAL ADM. J. OKAMOTO		1/19/98	SHEET ADDED	M.W.
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SILT FENCE DETAIL

SW4A

SHEET 24A OF 138 SHEETS

QUANTITY TABULATION

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.
THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION	GRAVEL BORROW INCL. HAUL * (TONNE)	EMBANKMENT COMPACTION * (M3)	SHOULDER BALLAST (TONNE)	FURNISHING 14 DAY CONC. FOR CEMENT CONC. PAVEMENT (M3)	CEMENT CONC. PAVEMENT (M2)	EPOXY-COATED TIE BAR WITH DRILL HOLE (EACH)		EXTRUDED CURB (METER)	BEAM GUARDRAIL TYPE 1 (METER)	BEAM GUARDRAIL SRT TERMINA (EACH)	PERMANENT IMPACT ATTENUATOR (EACH)	CHAIN LINK FENCE TYPE 3 (METER)	END, CORNER, AND PULL POST FOR CHAIN LINK FENCE (EACH)				SEE GENERAL NOTES
P-1	SB 0+742 (10.770M LT.) TO SBCD' 1+318.800 (7.377M LT.)								610									1
P-1	SB 0+410 (11.050M LT.) TO SBCD 1+331.650 (8.450M LT.)									922								
P-1	SB 0+742 TO 1+343 (3.660M LT.)																	
P-1	SB 0+742 TO 1+185 (7.320M LT.)	3937.1	134.60	50.9														
P-1	SB 0+742 TO 1+175 (7.320M RT.)				154.79	675.90	649.0											
P-1	SB 0+742 TO 1+175 (8.390M RT.)																	
P-2	SB 1+085											1						2
P-2	SB 1+158 TO 1+358 (RT.)				43.0	200	0											
P-2	SB 1+180 (30.000M LT.) TO SBCD' 1+260 (26.500M LT.)		193.6										90 ~~80~~	1 ~~3~~				
P-2	SBCD' 1+185 TO 1+318.802 (LT.)		1372.0	46.8														
P-3	SBCD 1+331.650 (8.450M LT.)										1							
	SHEET TOTAL	3937.1	1699.6	97.7	197.79	875.90	649.0		610	922	1	1	90 ~~80~~	1 ~~3~~				
	PROJECT TOTAL	3937.1	1699.6	97.7	197.79	875.90	649.0		610	922	1	1	90 ~~80~~	1 ~~3~~				

GENERAL NOTES:

1. USE EXTRUDED CURB TYPE 2, SEE STANDARD PLANS F-2B.
2. ACCEPTABLE IMPACT ATTENUATORS ARE:
   A. REACT 350 (9 Cylinders) RDWY. SAFETY SERVICE INC.
   B. LMA ENERGY ABSORPTION SYSTEM

*FOR ADDITIONAL QUANTITIES SEE STRUCTURE NOTES AND MAINTENANCE ACCESS ROAD PROFILE SHEET RP1.

PRELIMINARY QUANTITIES ONLY
FOR FINAL QUANTITIES SEE
CAPS LEDGER

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. WELAYE				
ENTERED BY	M. WELAYE				
CHECKED BY	R. SUAFOA				
PROJ. ENGR.	J. JOHNSON				
REGION ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID. PROJ. NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL & ENGINEERING SERVICE CENTER

Washington State Department of Transportation

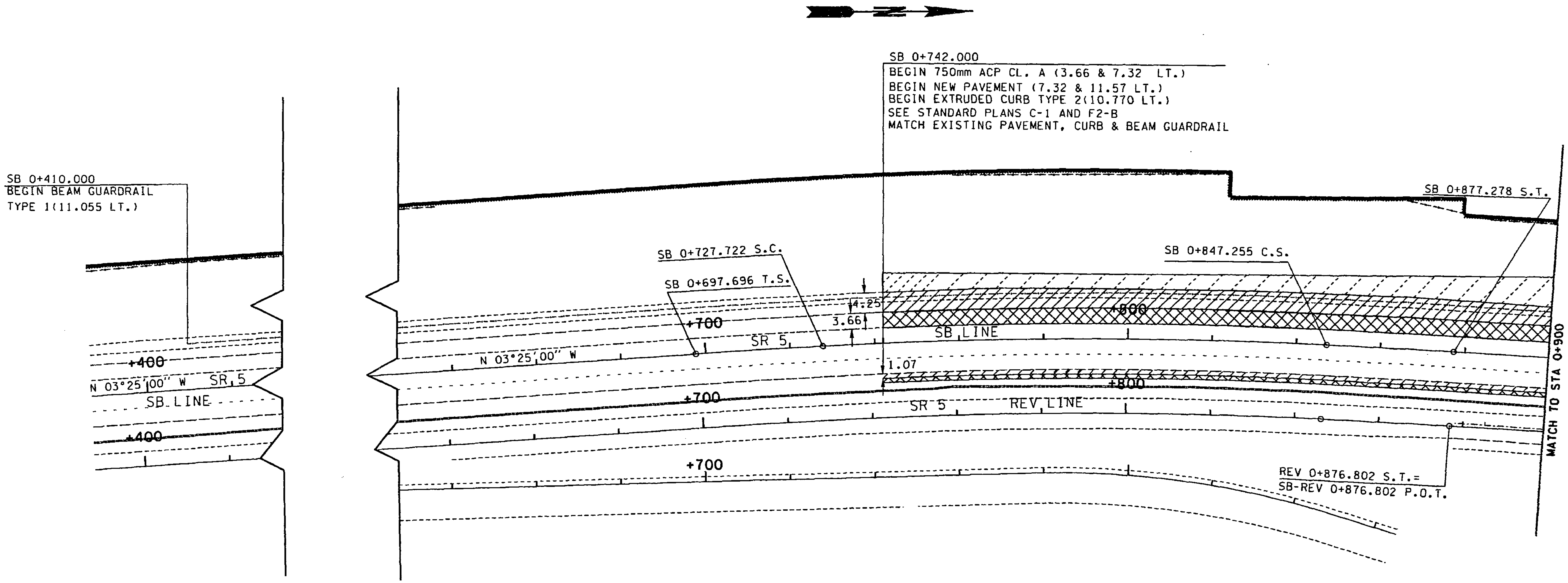
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

QUANTITY TABULATION - PAVING

QTPV1

SHEET 25 OF 138 SHEETS

PLOT23 06 JAN 98 s:\412353\projects\ol2538\ol2538pv.dgn wujim



LEGEND

(swatch)	AREA OF NEW PAVEMENT
(swatch)	ASPHALT CONCRETE PAVEMENT CLASS A (ACP CL. A)
(swatch)	CEMENT CONCRETE PAVEMENT
—ı——ı—	BEAM GUARDRAIL

0 10 20 30 40 50
SCALE IN METERS

NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

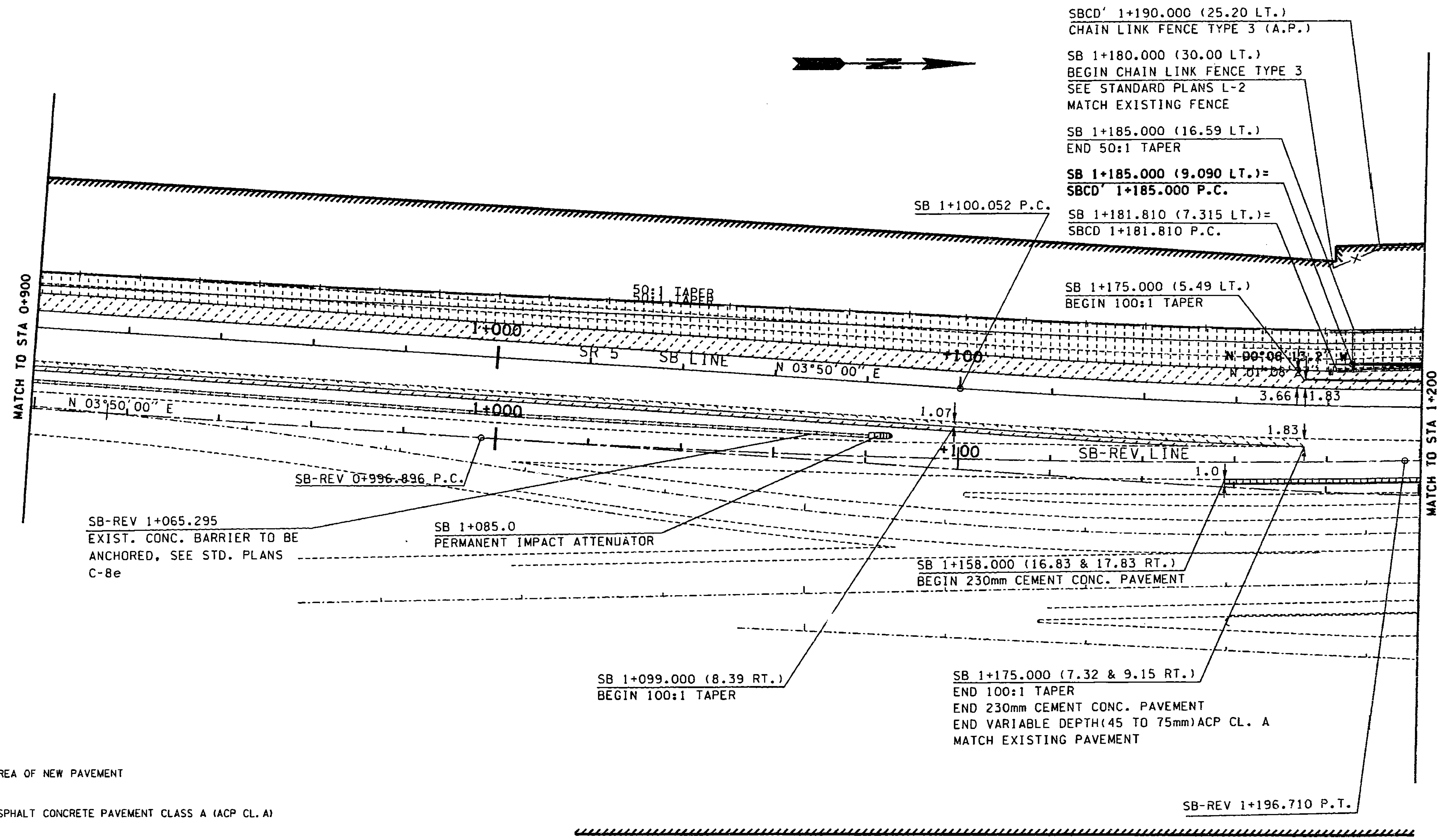
PAVING PLAN

P1

SHEET 26 OF 138 SHEETS

PLOT4 16 DEC 97 s:\412353\projects\o12538\o12538pv.dgn quintem

T. 26N. R. 4E. W. M.



LEGEND

- AREA OF NEW PAVEMENT
- ASPHALT CONCRETE PAVEMENT CLASS A (ACP CL. A)
- CEMENT CONCRETE PAVEMENT
- BEAM GUARDRAIL

0 10 20 30 40 50
SCALE IN METERS

NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

PAVING PLAN

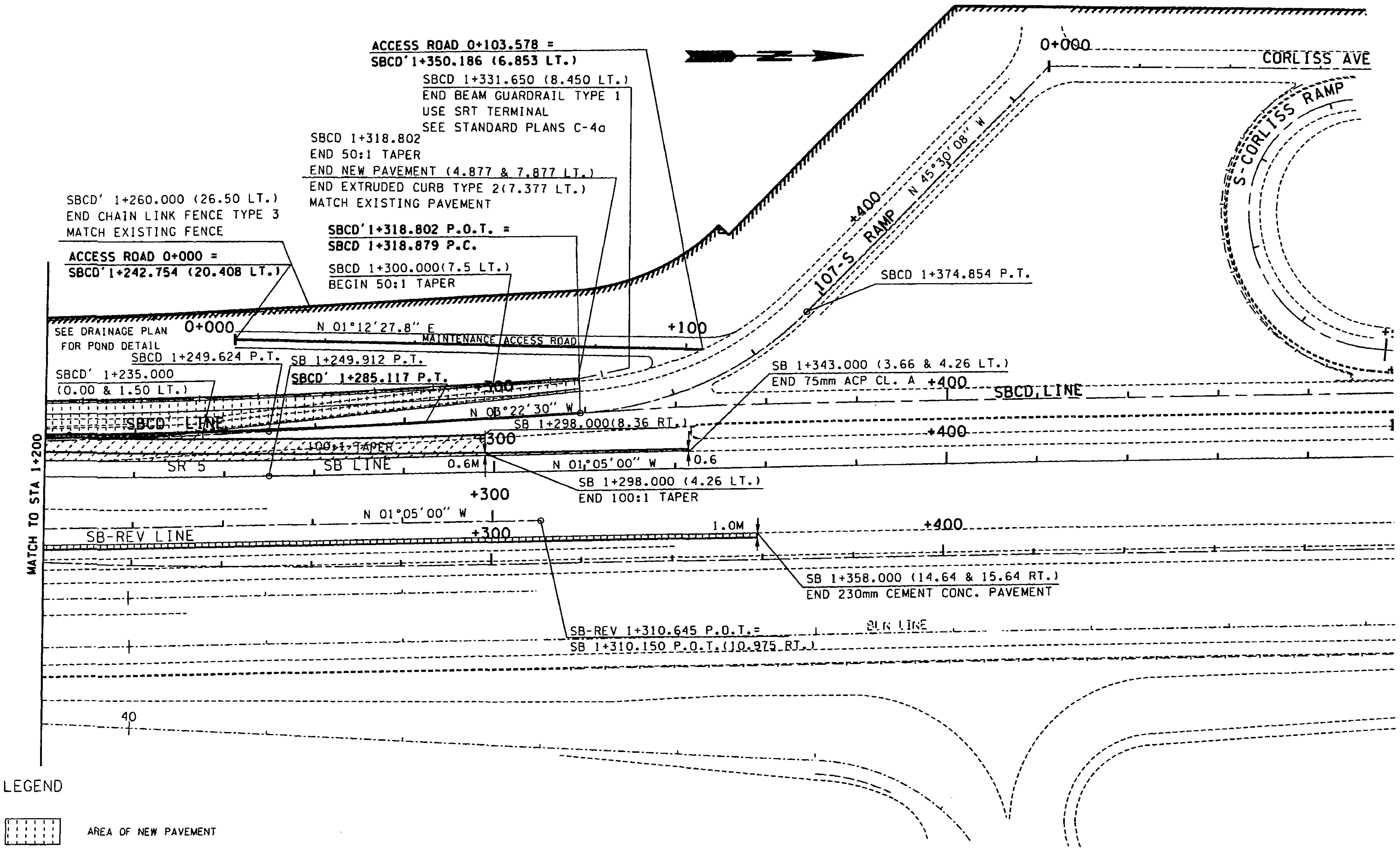
P2

SHEET 27 OF 140 SHEETS

05 JAN 98 s:\412353\projects\ol2538\ol2538pv.dgn wujim

PLOT5

T. 26N. R. 4E. W. M.



LEGEND

- AREA OF NEW PAVEMENT
- ASPHALT CONCRETE PAVEMENT CLASS A (ACP CL. A)
- CEMENT CONCRETE PAVEMENT
- BEAM GUARDRAIL

0 10 20 30 40 50
SCALE IN METERS

NOTE: ALL DIMENSIONS AND OFFSETS ARE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

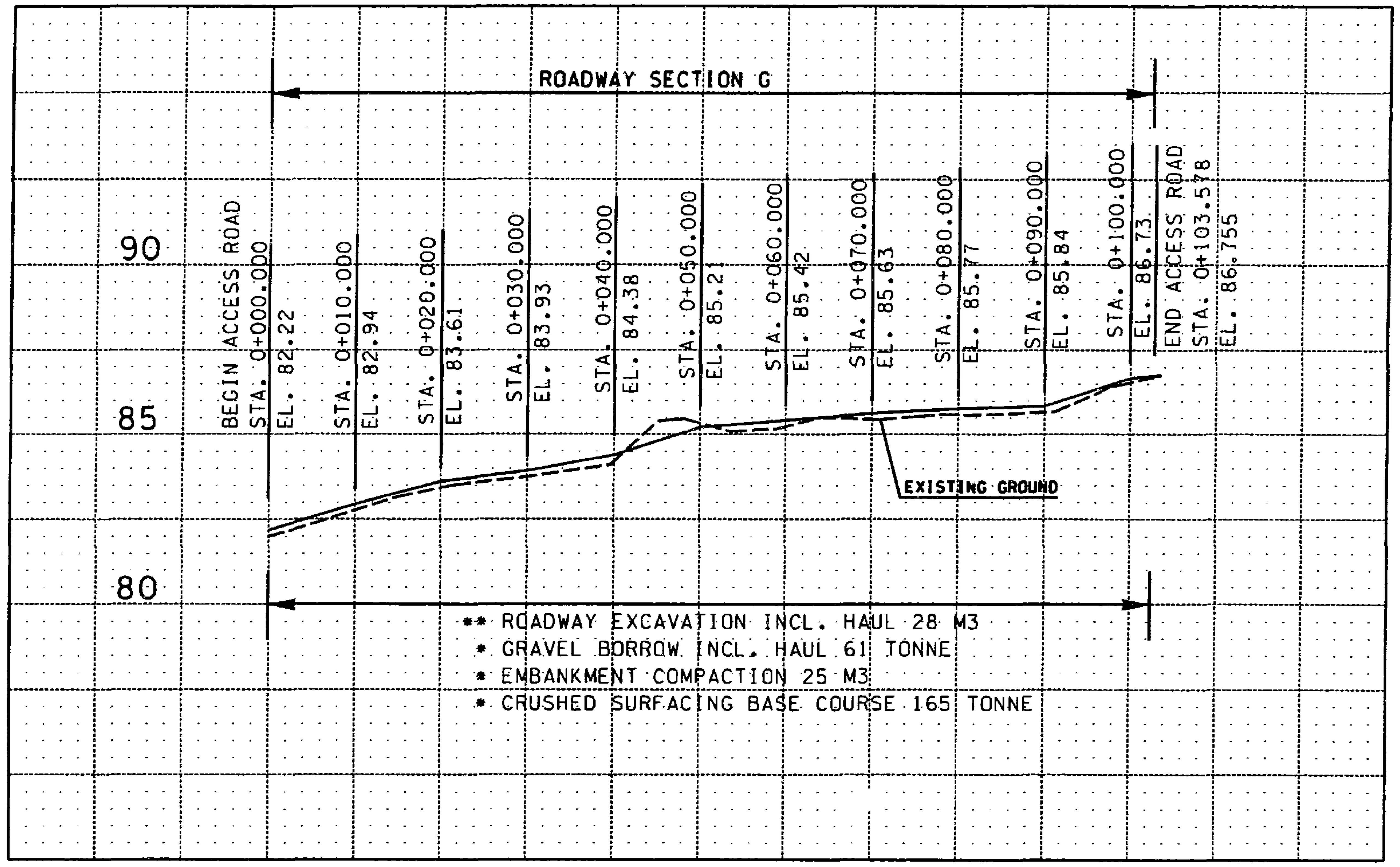
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

PAVING PLAN

P3

SHEET 28 OF 138 SHEETS



MAINTENANCE ACCESS ROAD PROFILE

** FOR ADDITIONAL QUANTITIES SEE QUANTITY TABULATION - SITE PREPARATION
* FOR ADDITIONAL QUANTITIES SEE STRUCTURE NOTES AND QUANTITY TABULATION - PAVING

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

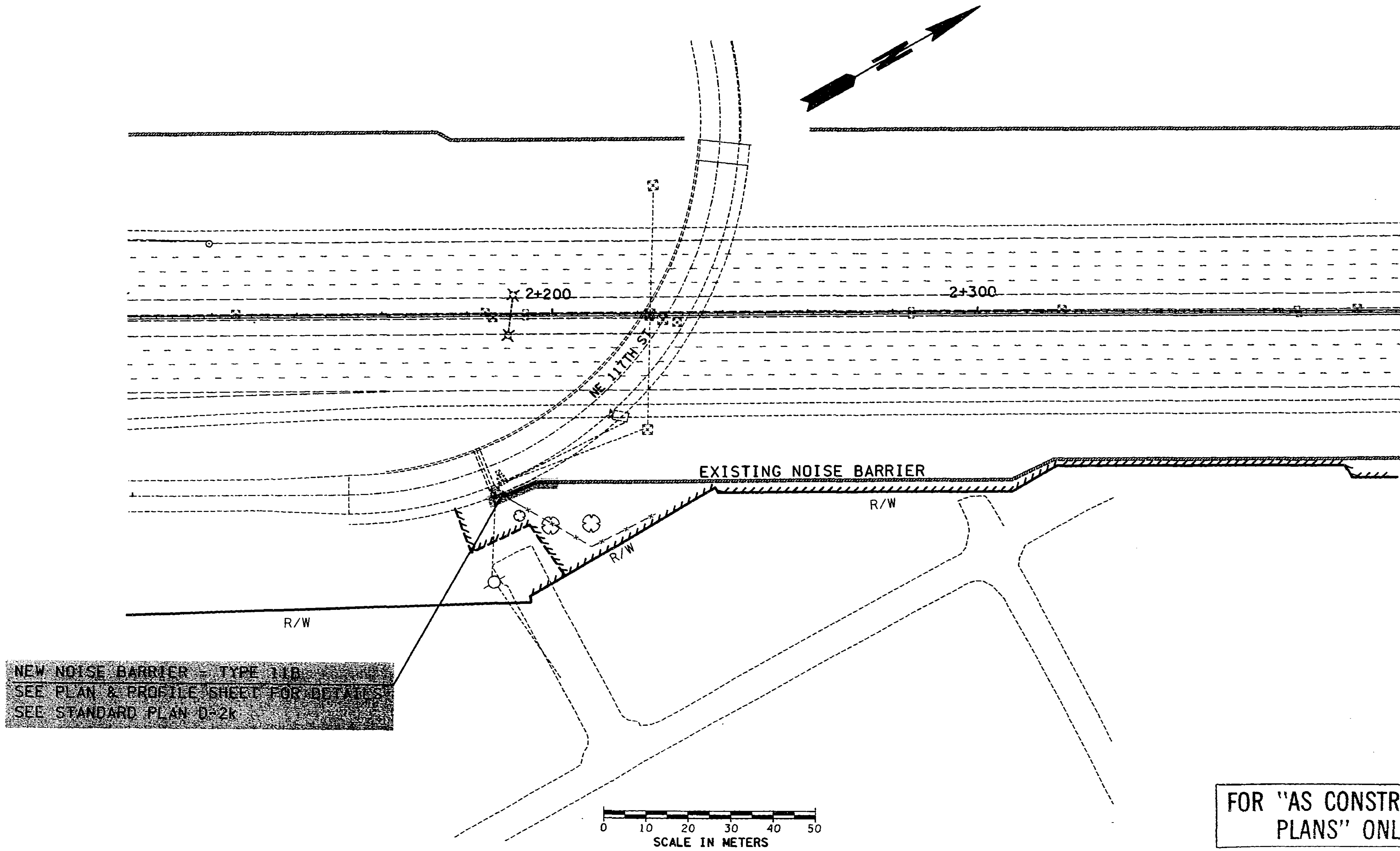
MAINTENANCE ACCESS ROAD PROFILE

RP1

SHEET 29 OF 138 SHEETS

PLOT8 19 JAN 98 c:\projects\ol2538\ol2538pv.dgn welayem

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO		1/19/98	CHANGED WALL TYPE	M.W.
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

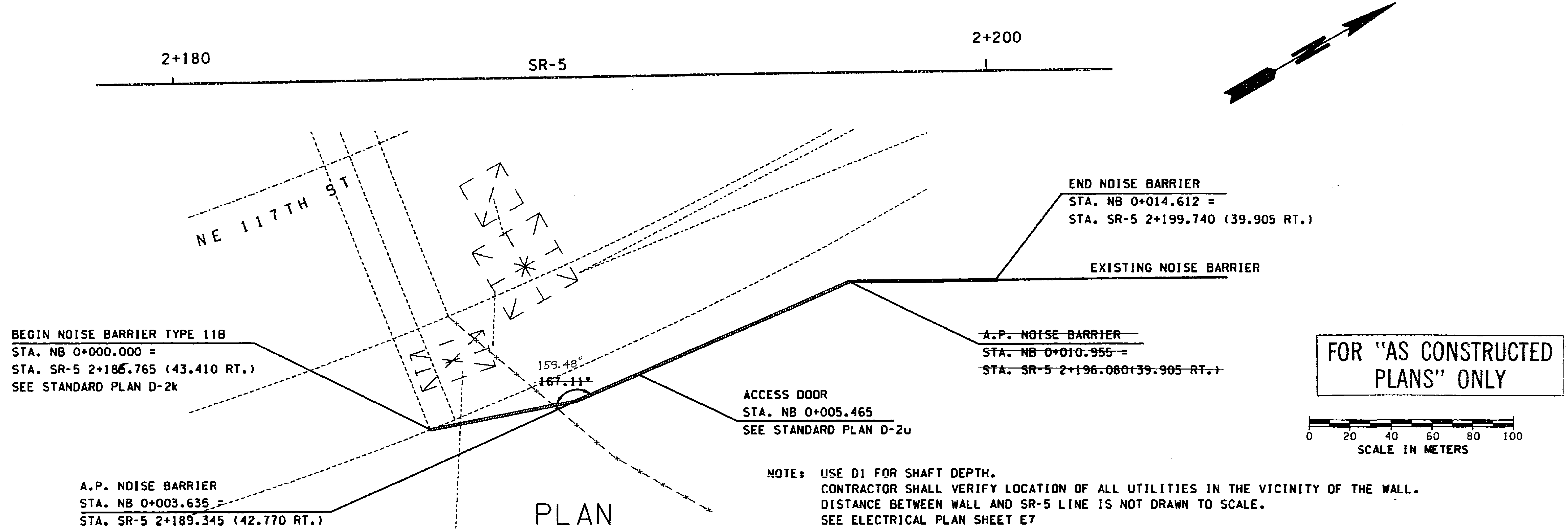
SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

NOISE BARRIER PLAN

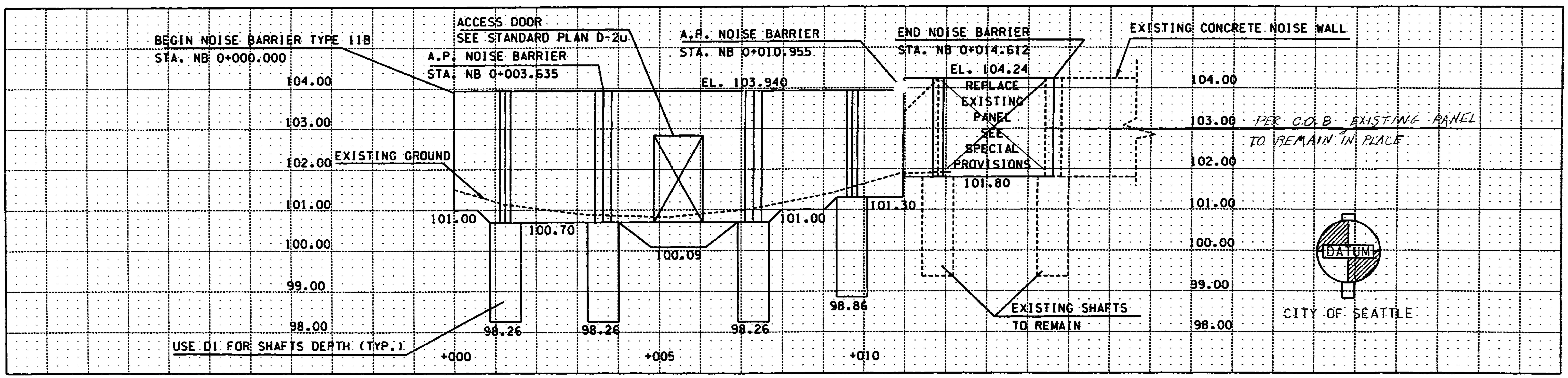
W1

SHEET 30 OF 138 SHEETS

PLOT18 27 JAN 98 s:\412353\projects\o12538\o12538pv.dgn quintem



PLAN



ELEVATION

DESIGNED BY	M. WELAYE			
ENTERED BY	M. WELAYE			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO		12/9/98	REPLACEMENT SHEET
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

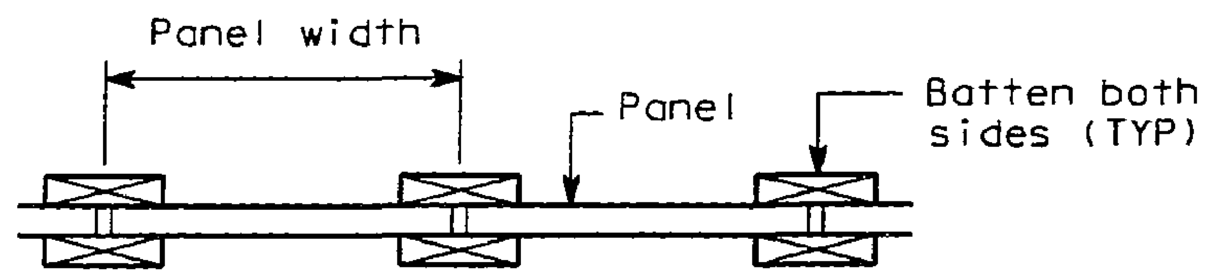
SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

NOISE BARRIER PLAN & PROFILE

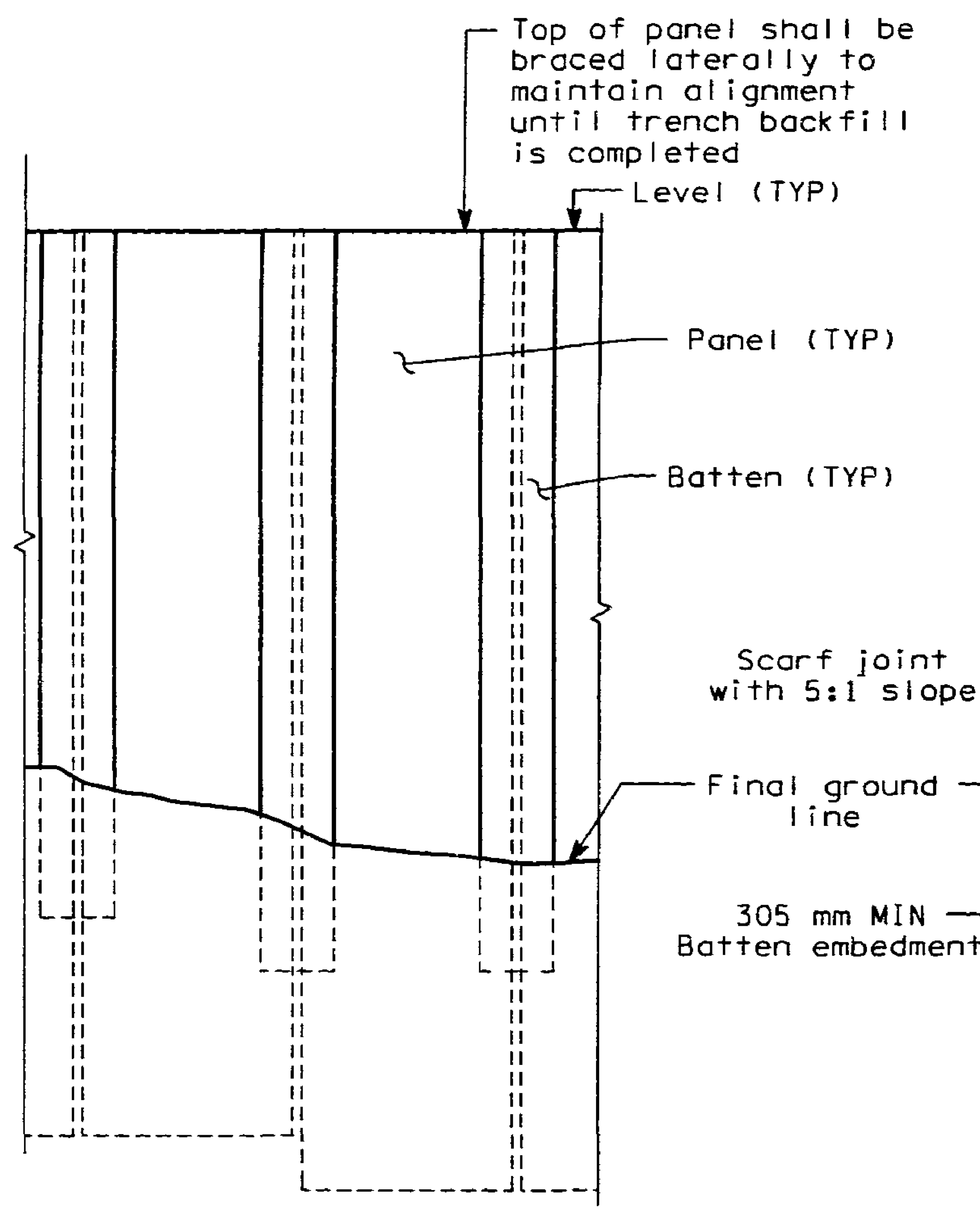
W2

SHEET 31 OF 138 SHEETS

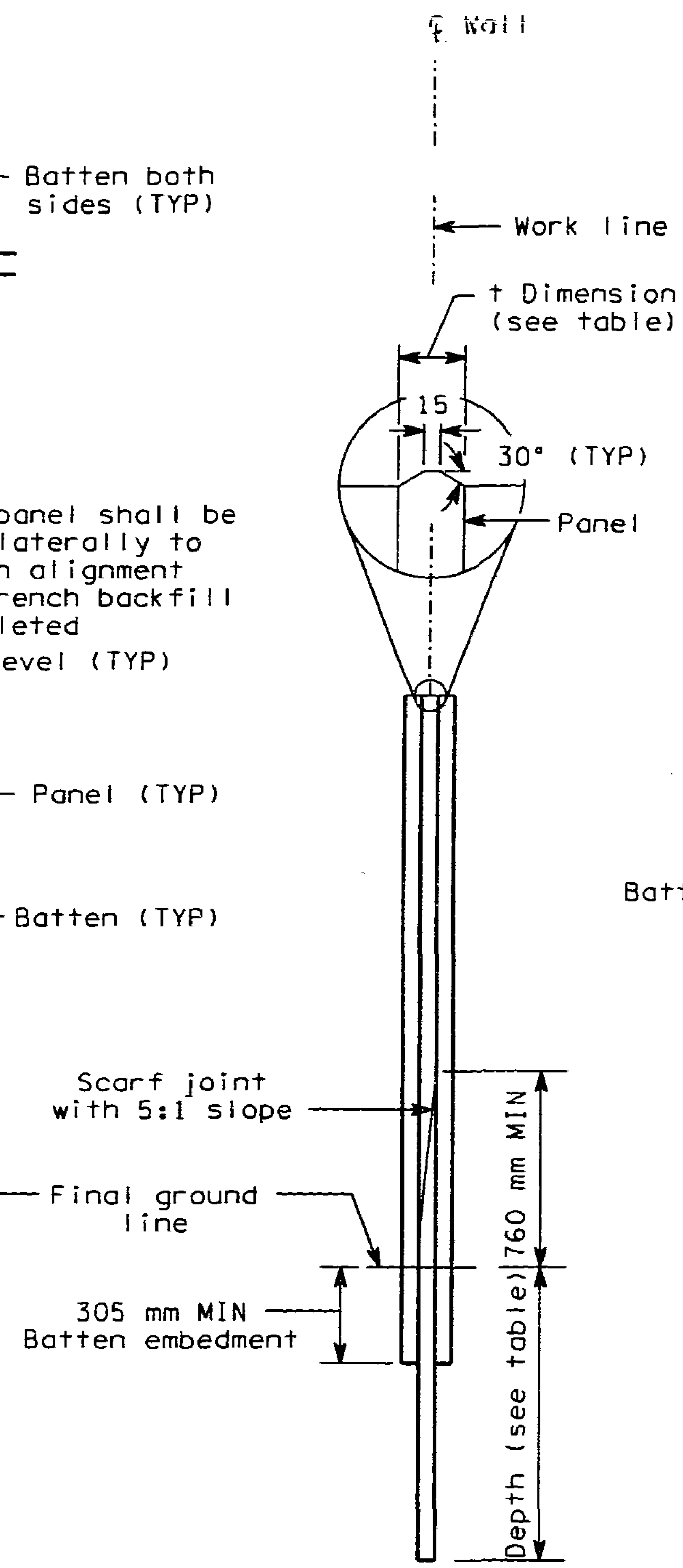
WALL HT H (m)	DEPTH (m)	GLULAM t (mm)	PLYWOOD t (mm)
1.830	1.065	40	40
2.440	1.145	45	55
3.050	1.220	55	65
3.660	1.295	65	75
4.265	1.450	75	35
4.875	1.525	30	90
5.485	1.600	90	110



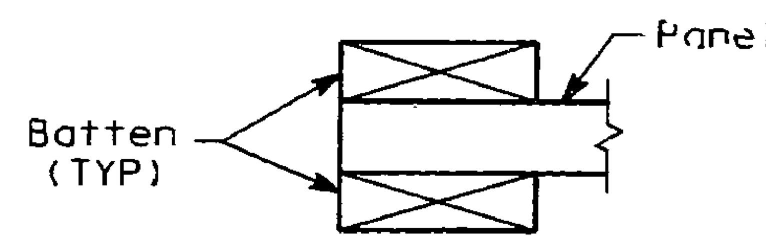
PLAN



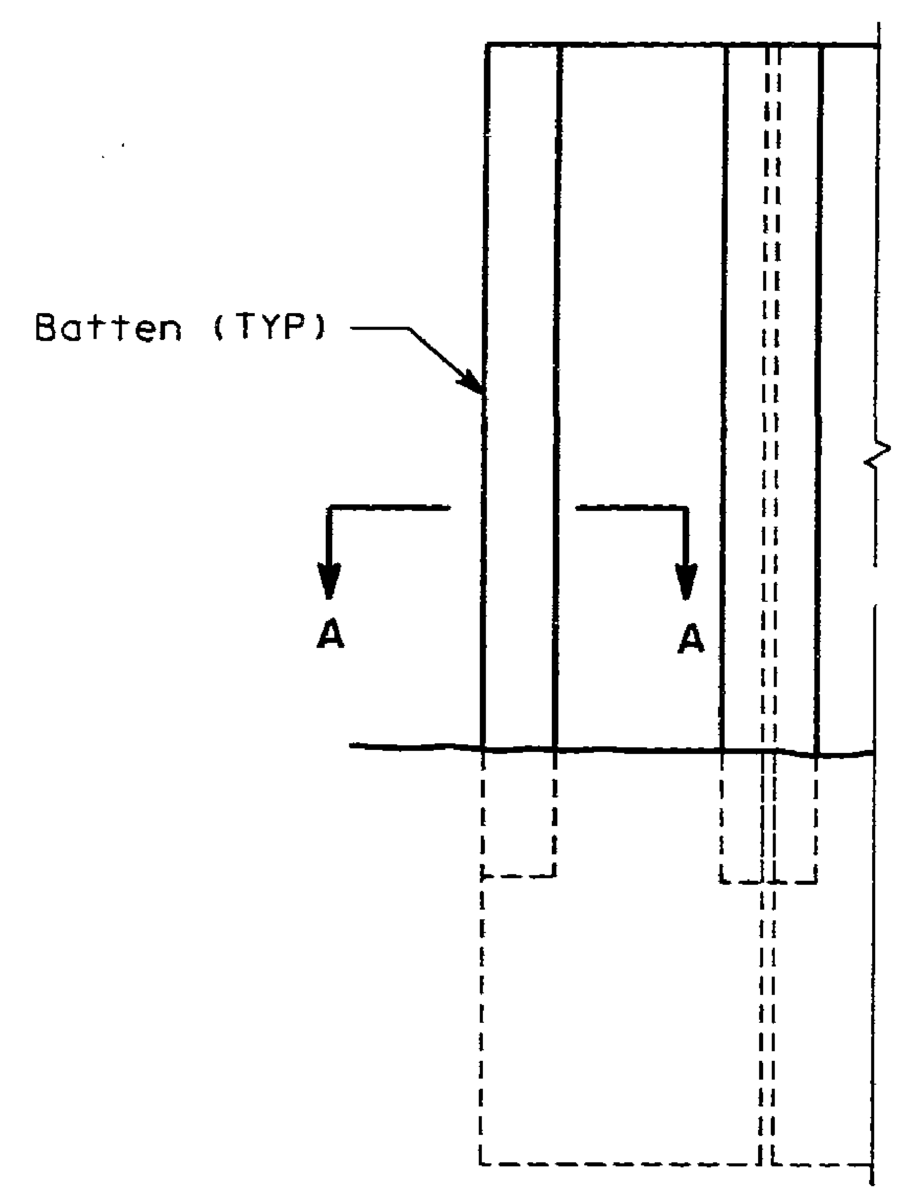
ELEVATION



TYPICAL SECTION



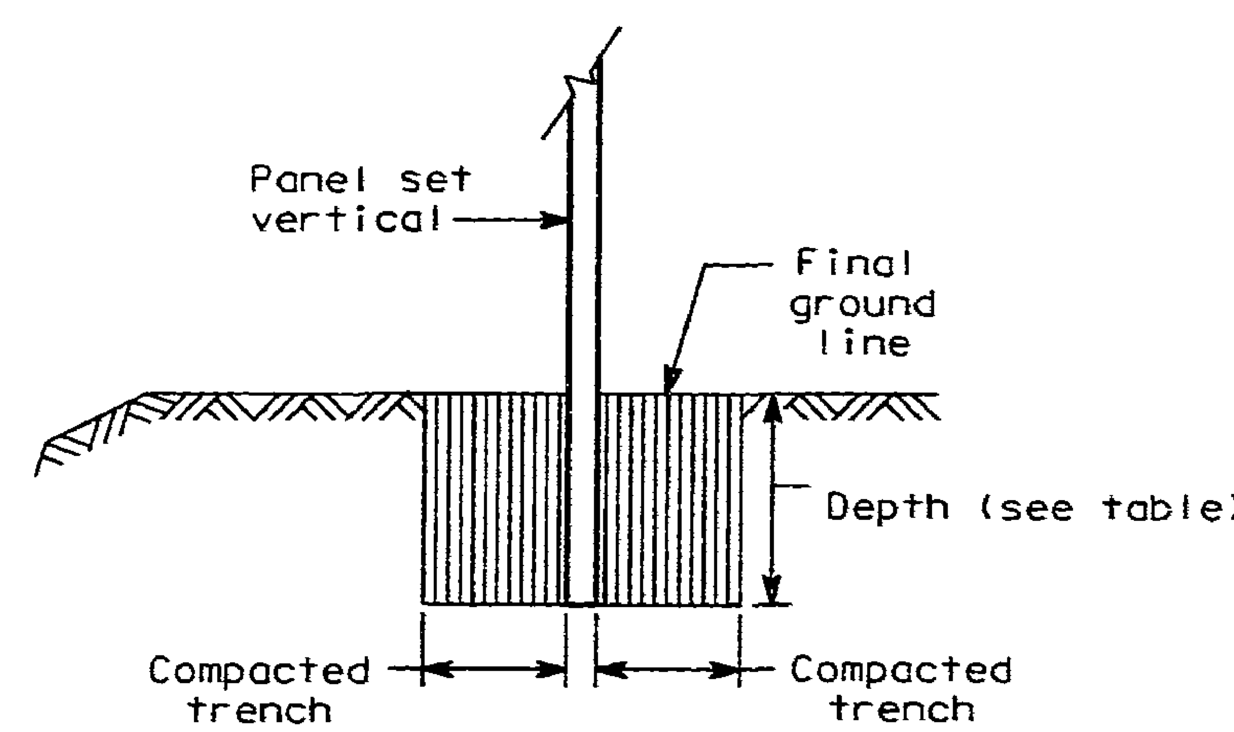
SECTION A-A



ELEVATION END DETAIL

NOTES

1. For intermediate wall heights not listed use the next higher H.
2. Panels shall have at least 915 mm of level ground on each side.
3. Plywood and Glulam panels and all lumber to be pressure preservative treated.



TRENCH FOOTING

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

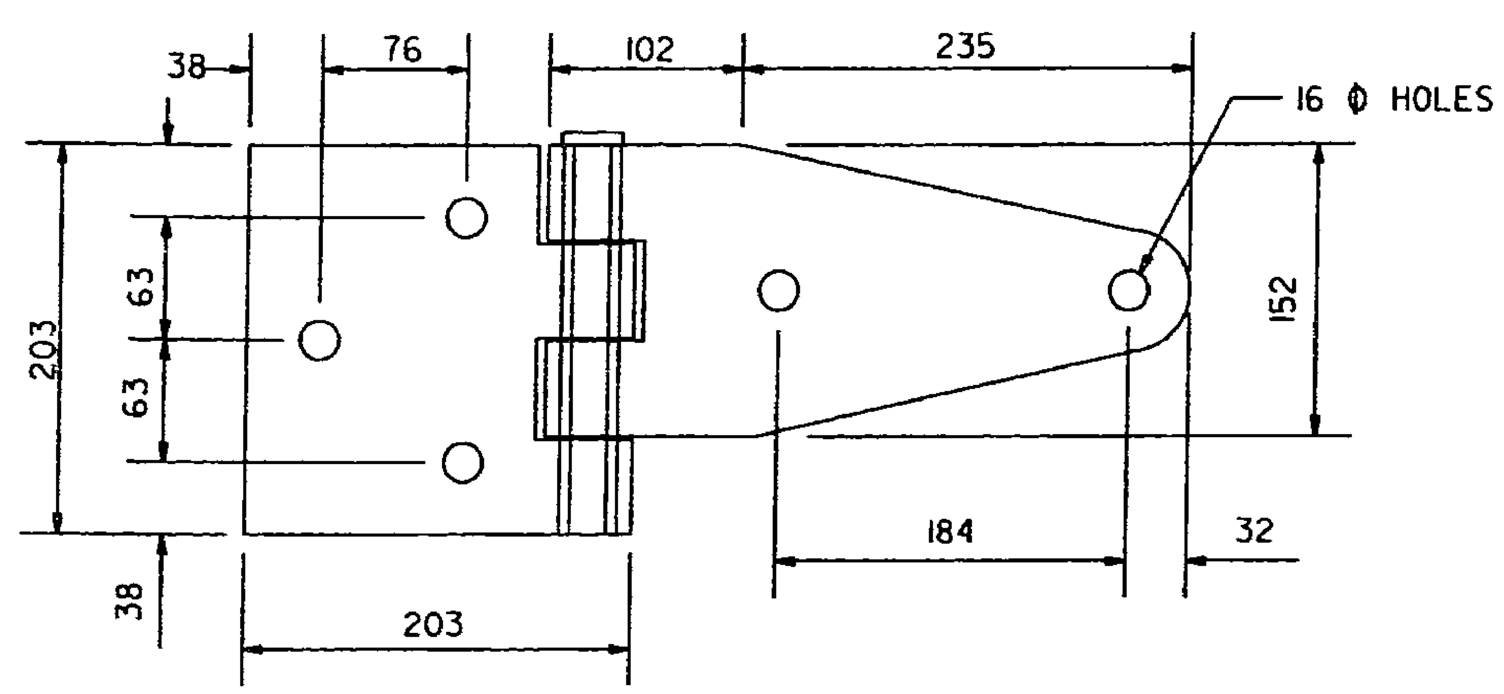
SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TIMBER PANEL WALL DETAIL

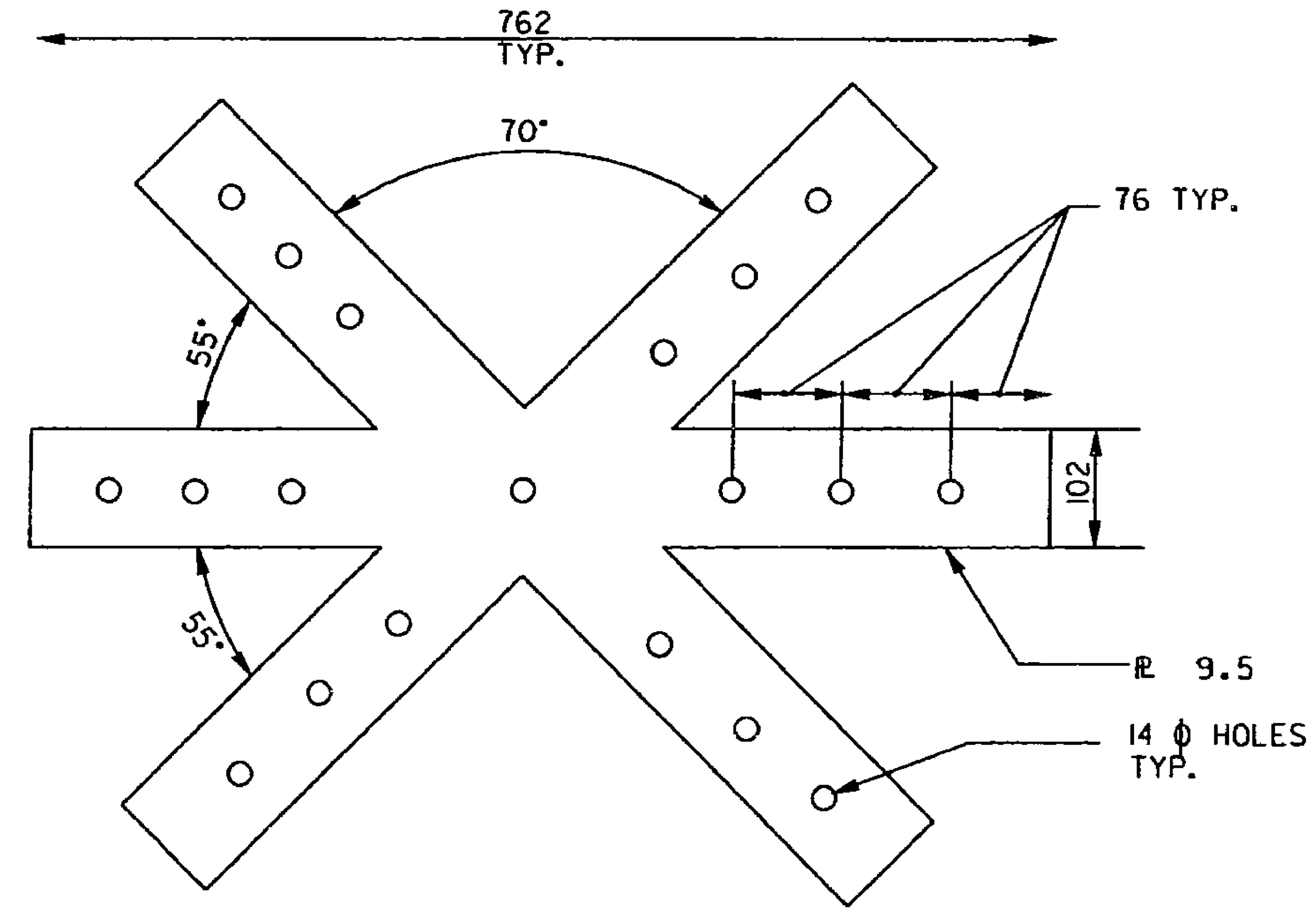
W3

SHEET 32 OF 138 SHEETS

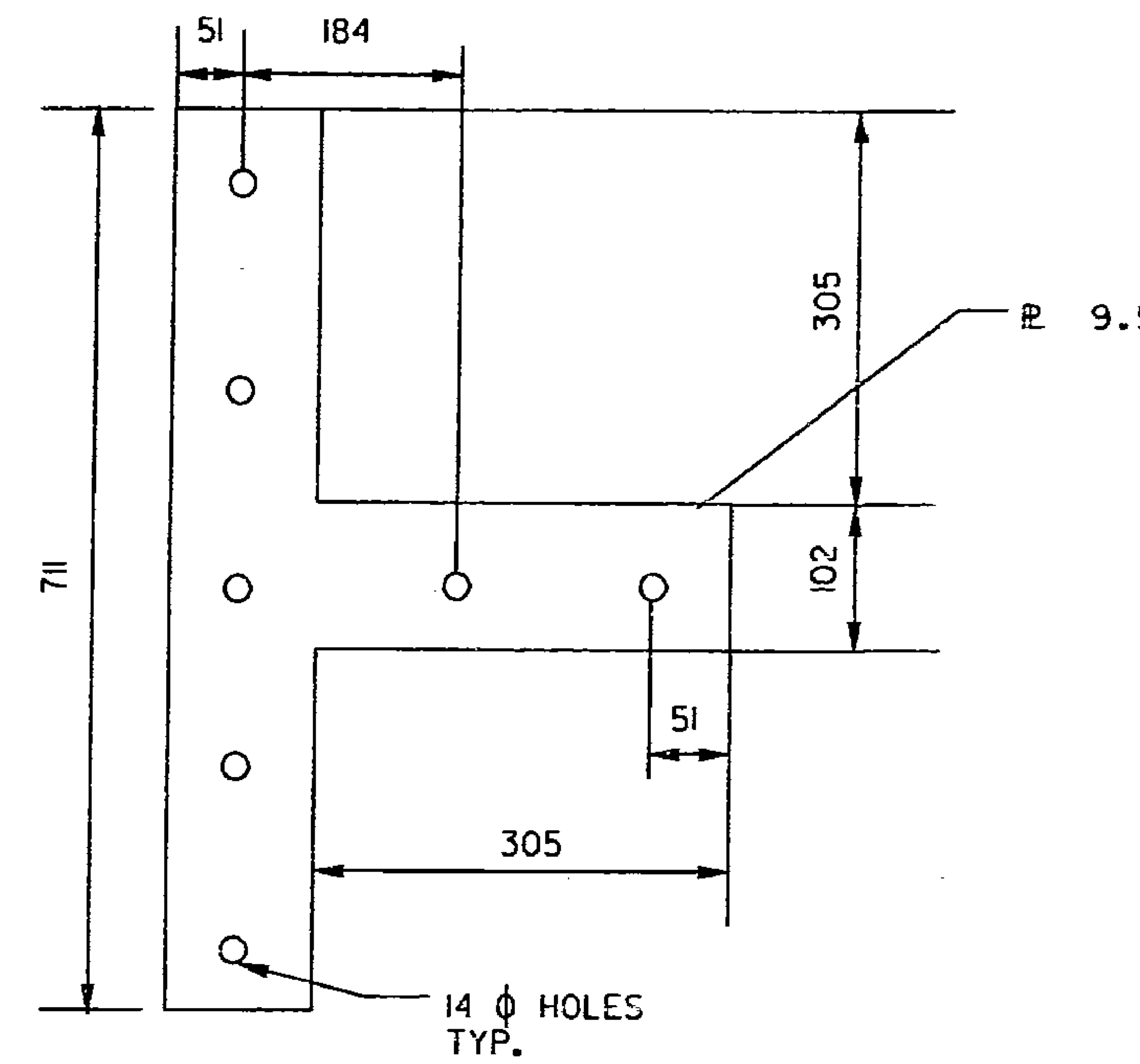
PLOT20 05 JAN 98 s:\412353\projects\o12538\o12538pv.dgn wujim



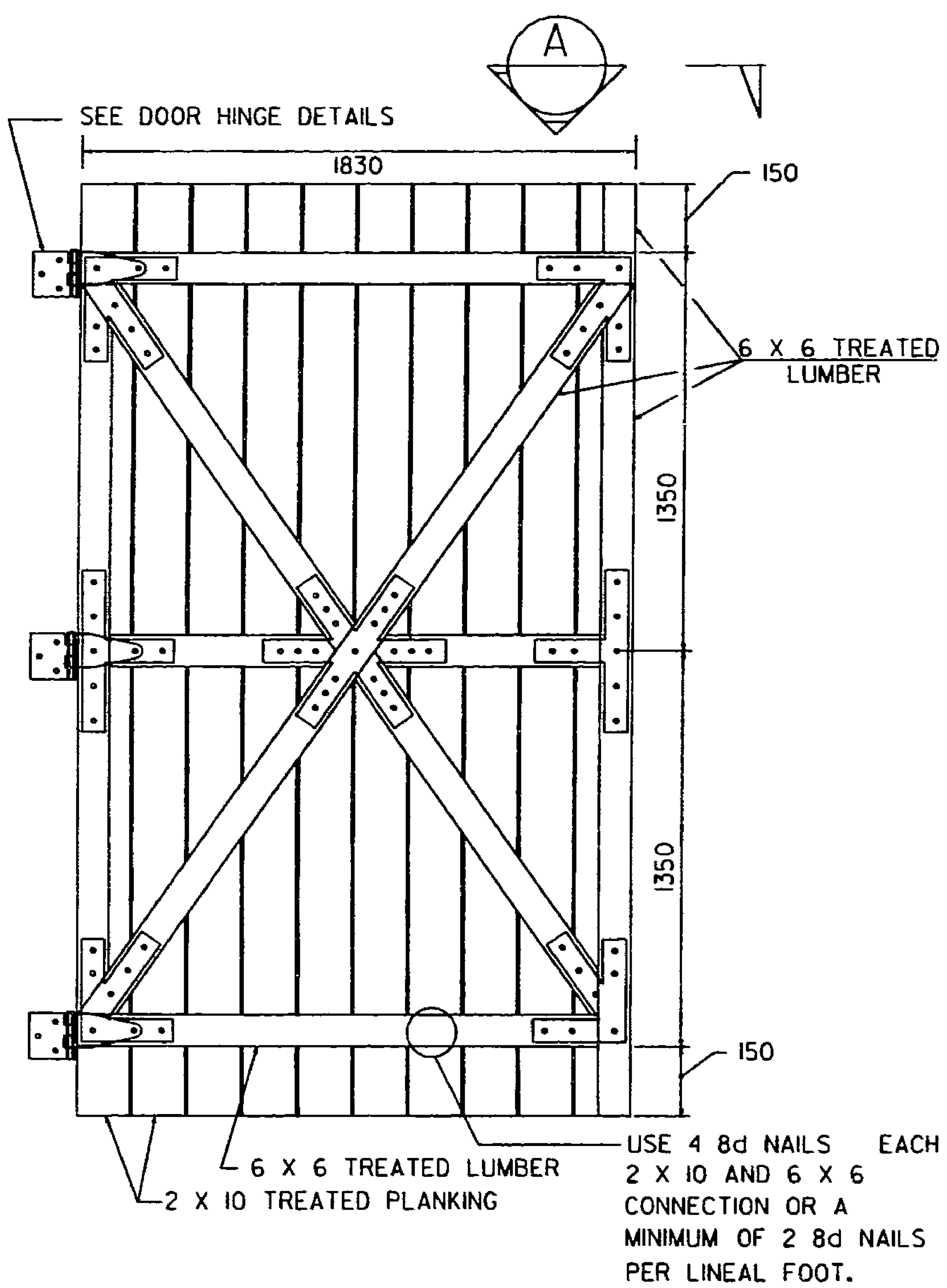
DOOR HINGE



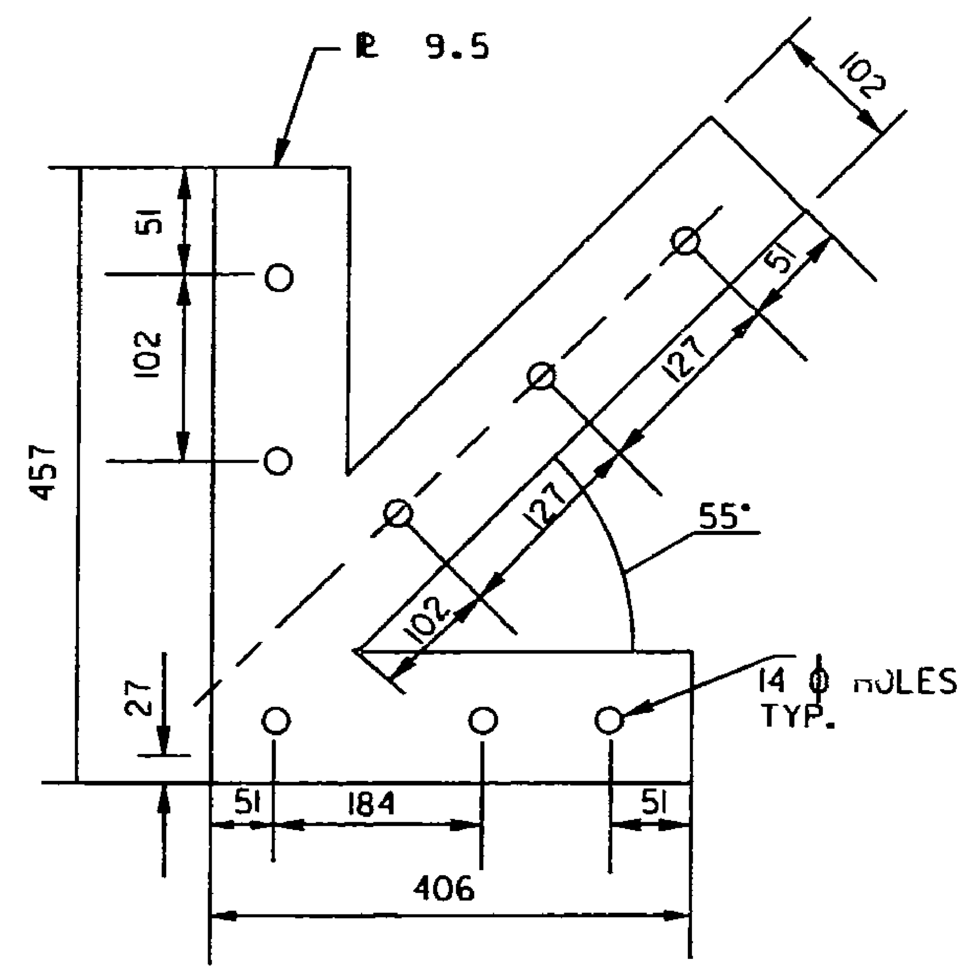
CENTER BRACKET DETAIL



SIDE BRACKET DETAIL

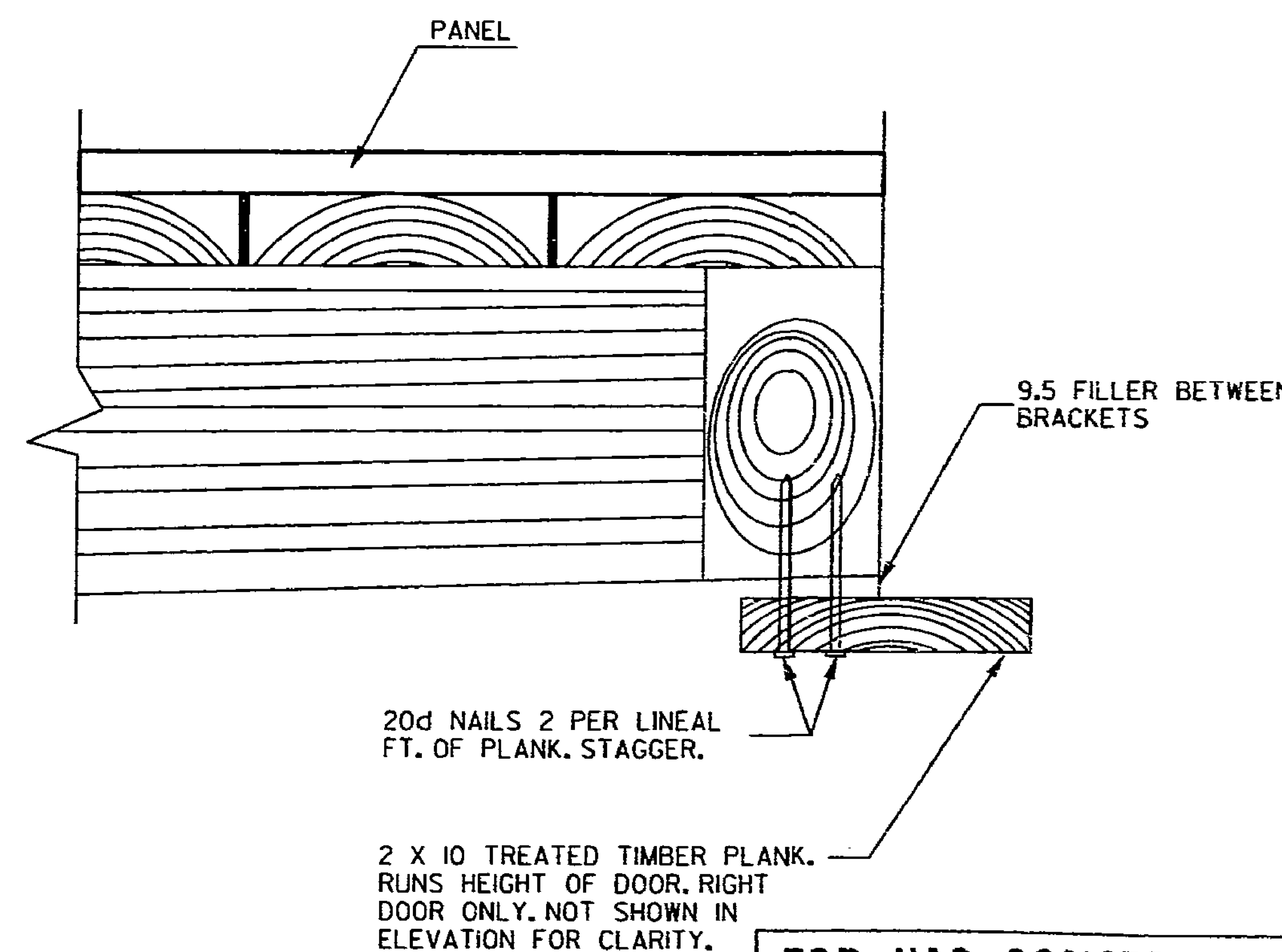


DOOR ELEVATION



CORNER BRACKET DETAIL

NOTE: CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD.
ALL DIMENSON ARE IN MM UNLESS OTHERWISE NOTED



ACCESS DOOR DETAIL

SECTION A

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TIMBER PANEL WALL DETAIL

W4

SHEET 33 OF 138 SHEETS

QUANTITY TABULATION

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.
THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION	FLEXIBLE GUIDE POST	PAINT STRIPE	PLASTIC DRAINAGE MARKING	PLASTIC CORE STRIPE	PLASTIC PREFERENTIAL LANE SYMBOL TYPE 1	RAISED PAVEMENT MARKER TYPE 1 (W)	RAISED PAVEMENT MARKER TYPE 2	SEE GENERAL NOTES
		EACH	METER	EACH	METER	EACH	HUNDRED	HUNDRED	
CH-1	SB 0+642.000 (7.320M LT.) TO SBCD' 1+318.802(4.877M LT)	32 ~~23~~	1178	11 ~~8~~					1,3
CH-1	SB 0+642.000 (3.660M LT.) TO TO SB 1+385.000 (0.000M)						~~2.1~~	~~0.74~~	1, 4
CH-1	SB 0+642.000 (0.000M) TO SB 1+385.000 (3.660M RT.)						~~2.1~~	~~0.74~~	1, 4
CH-1	SB 0+642.000 (3.660M RT.) TO SB 1+385.000 (7.320M RT.)						~~2.1~~	~~0.74~~	1, 4
CH-1	SB 0+642.000 (7.320M RT.) TO SB 1+095.000 (9.150M RT.)			~~6~~			1.58	~~0.19~~	1,3,5
CH-2	SB 1+005.000 (5.490M LT.) TO SB 1+095.000 (7.290M LT.)						~~0.3~~	~~0.1~~	1, 4
CH-2	SB 1+095.000 (7.290M LT.) TO SBCD 1+318.802 (4.267M RT.)				247			1.04	1
CH-2	SB 1+095.000 (5.490M LT.) TO SB 1+318.000 (3.745M LT.)			~~2~~	205		~~2.8~~	~~0.76~~	1,2,3,4
CH-2	SB 1+095.000 (9.150M RT.) TO SB 1+175.000 (9.150M RT.)				93		~~0.5~~	~~0.3~~	1,2,4
CH-2	SB 1+175.000 (9.150M RT.) TO SB 1+266.000 (11.950M RT.)				14				1
CH-2	SB 1+110.000(14.960M RT.) TO SB 1+485.000 (10.980M RT.)				498	1	6.18		1
CH-2	SB 1+110.000(18.710M RT.) TO SB 1+485.000 (14.640M RT.)			~~2~~				~~0.16~~	1,3,5
CH-3	SB 1+318.000(3.745M LT.) TO SB 1+485.000 (3.660M LT.)			~~2~~	44			2.25	1,3
	SHEET TOTAL	32 ~~23~~	1178	11 ~~20~~	1101	1	7.76	3.29	
	PROJECT TOTAL	32 ~~23~~	1178	11 ~~20~~	1101	1	7.76	3.29	

GENERAL NOTES:

1. SEE APPLICABLE STANDARD PLANS FOR DETAIL.
2. GORE AREA MARKING DETAIL SHEET CHD1.
3. DRAINAGE MARKING DETAIL SHEET CHD1
4. RAISED PAVEMENT MARKER TYPE 2 (WHITE).
5. RAISED PAVEMENT MARKER TYPE 2 (YELLOW).

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. WELAYE
ENTERED BY	M. WELAYE
CHECKED BY	R. SUAFOA
PROJ. ENGR.	J. JOHNSON
REGION ADM.	J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID. PROJ. NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL & ENGINEERING SERVICE CENTER

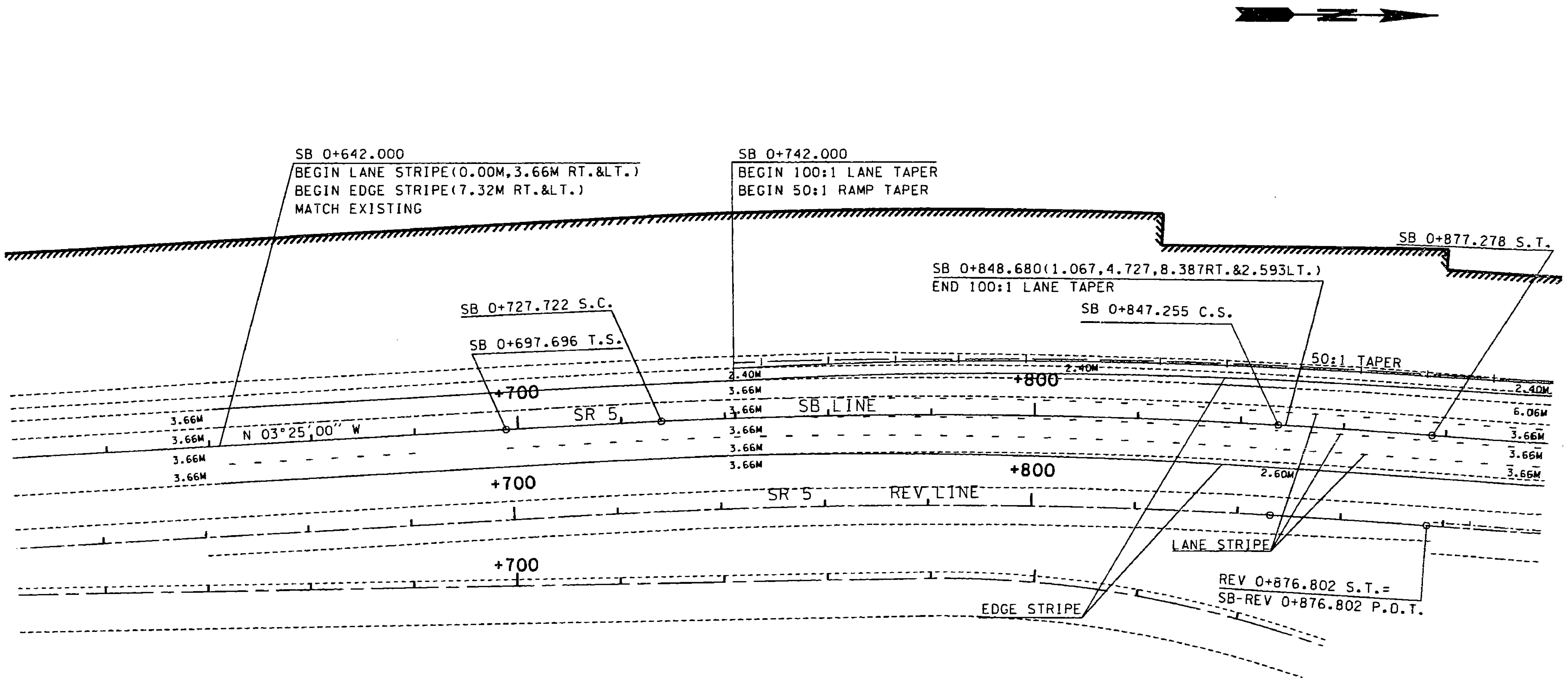
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

QUANTITY TABULATION - CHANNELIZATION

QTCH1

SHEET 34 OF 138 SHEETS



TOTAL CURVE DATA			CURVE DATA				SPIRAL DATA		
P.I. STATION	DELTA	TANGENT	DELTA	RADIUS	LENGTH	S	a	DE	Ls
SB 0+787.589	07°15'00"	89.893	05°47'40.3"	1181.931	119.533		1.00	00°43'40	30.026m

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

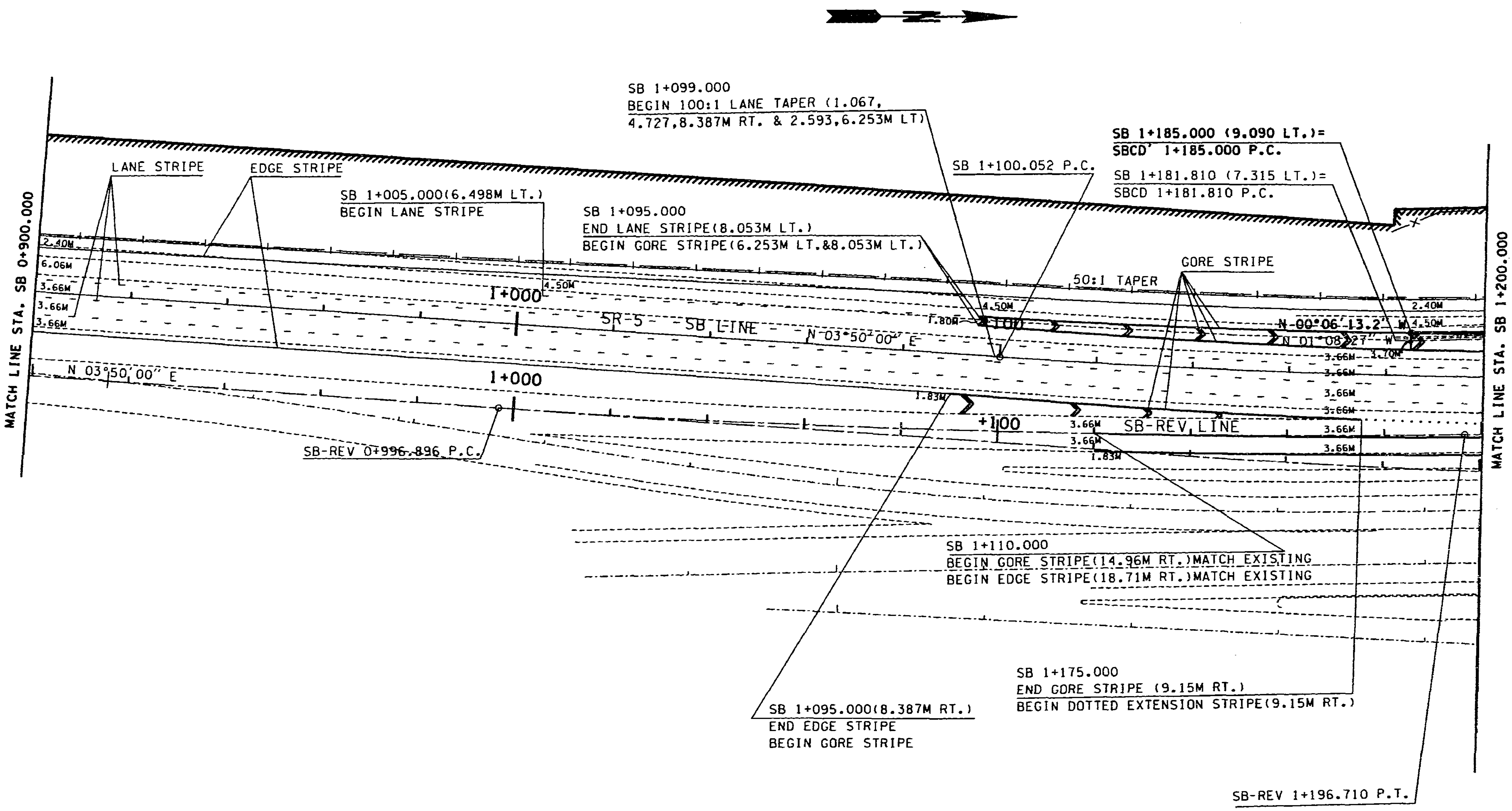
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

CHANNELIZATION & ALIGNMENT PLAN

CH1

SHEET 35 OF 138 SHEETS

T. 26N, R. 4E. W.M.
CITY OF SEATTLE



CURVE DATA				
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH
SB 1+175.028	04°55'00.0"	1739.098	74.976	149.860
SR REV 1+096.864	04°55'00.0"	2328.506	99.968	199.814

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

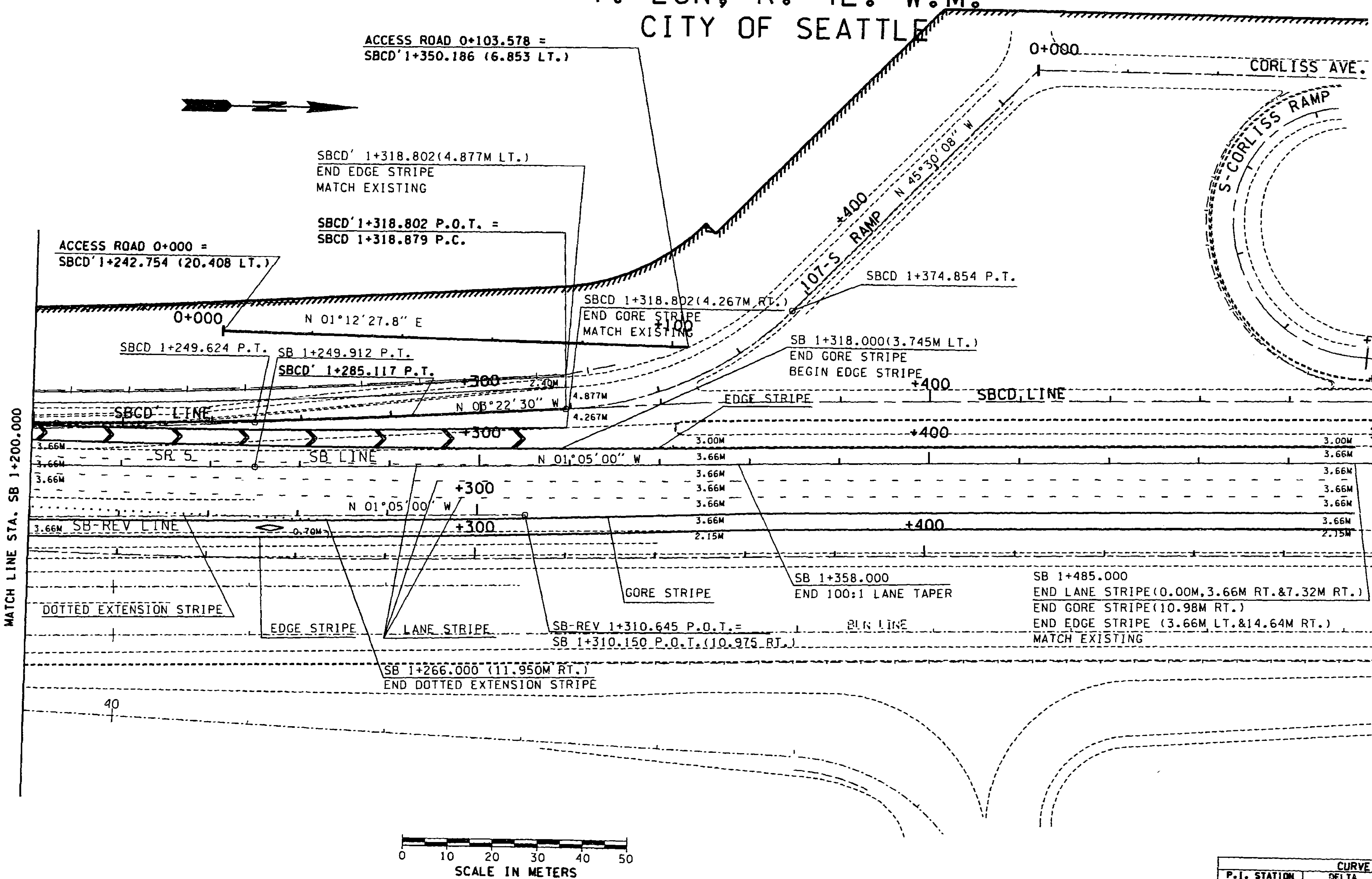
CHANNELIZATION & ALIGNMENT PLAN

CH2

SHEET 36 OF 138 SHEETS

PLOT5 05 JAN 98 s:\412353\projects\ol2538\ol2538ch.dgn wujim

T. 26N, R. 4E. W.M.
CITY OF SEATTLE



CURVE DATA				
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH
SBCD 1+215.721	02°14'03.0"	1739.098	33.911	67.814
SBCD 1+348.200	42°07'38.0"	76.130	29.321	55.975
SBCD' 1+234.833	03°16'16.7"	1745.125	49.833	99.639

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

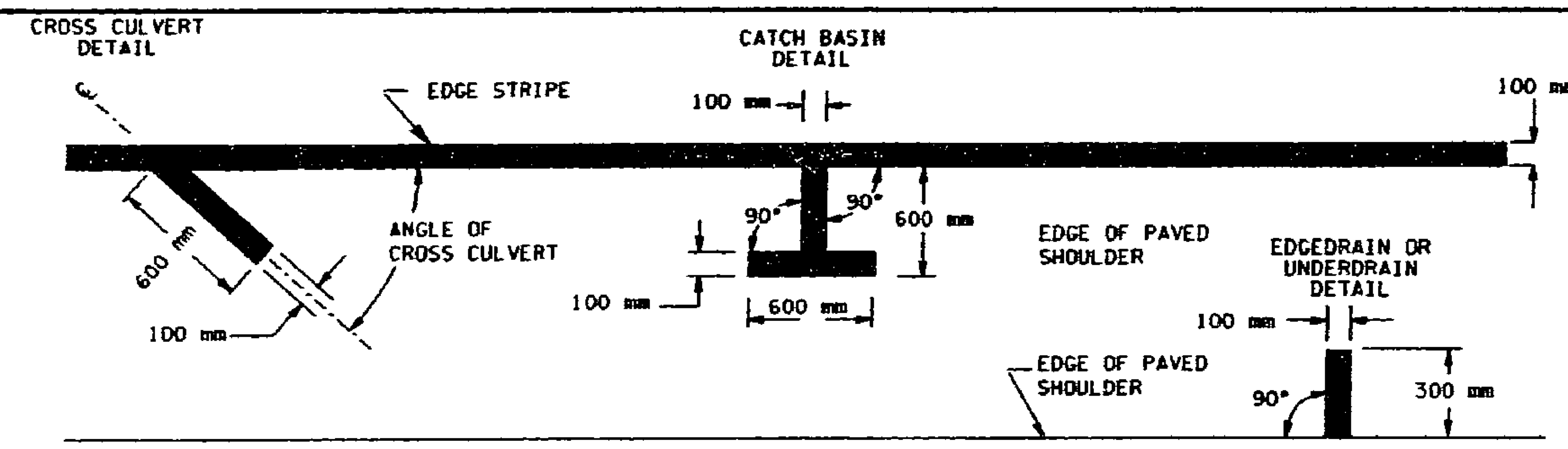
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

CH3

SHEET 37 OF 138 SHEETS

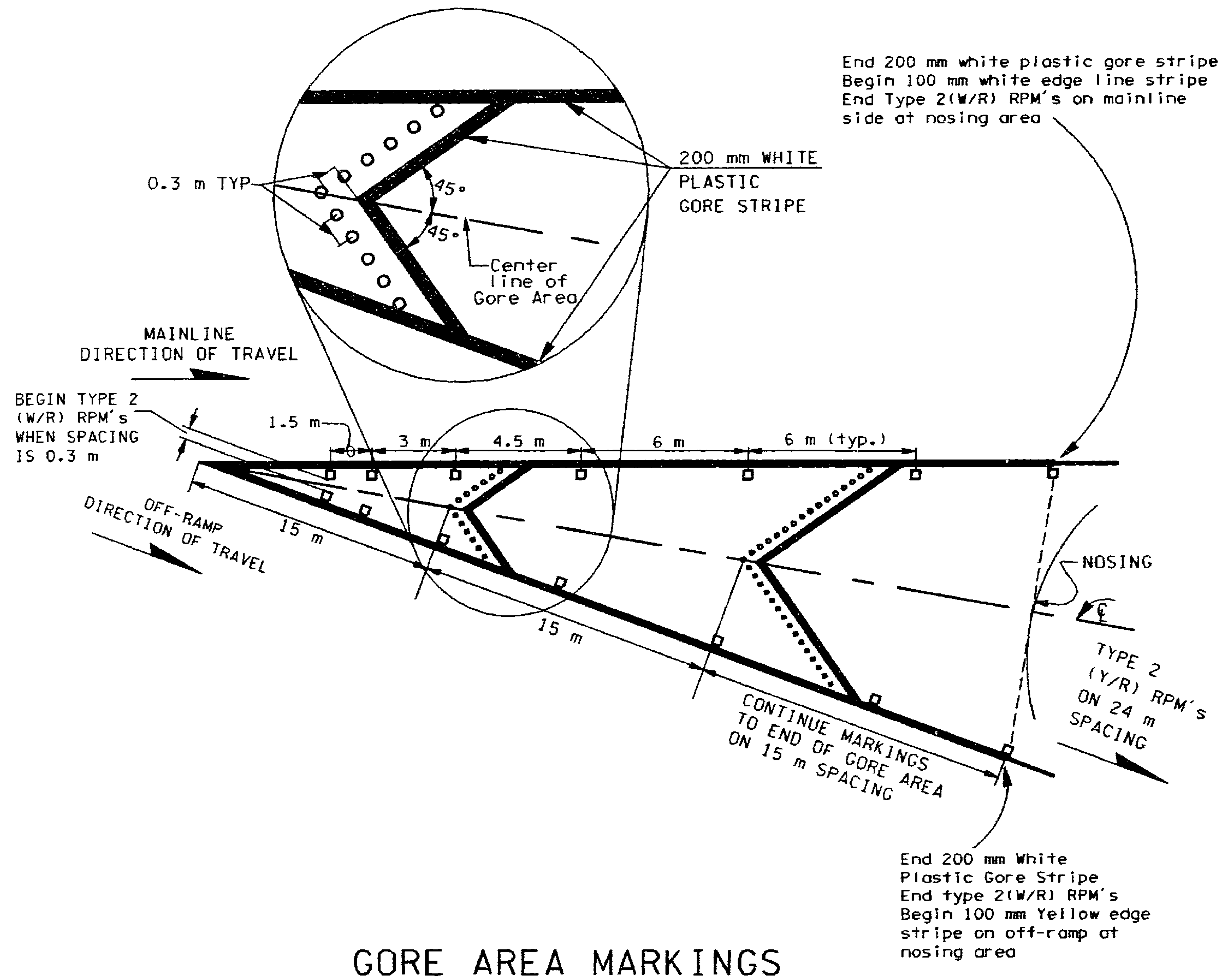
CHANNELIZATION & ALIGNMENT PLAN

$$USERNAME$$ $$$$$$$$DESIGNFILENAME$$$$$$ $$$$DATE$$$ PLOT6



PLASTIC DRAINAGE MARKINGS

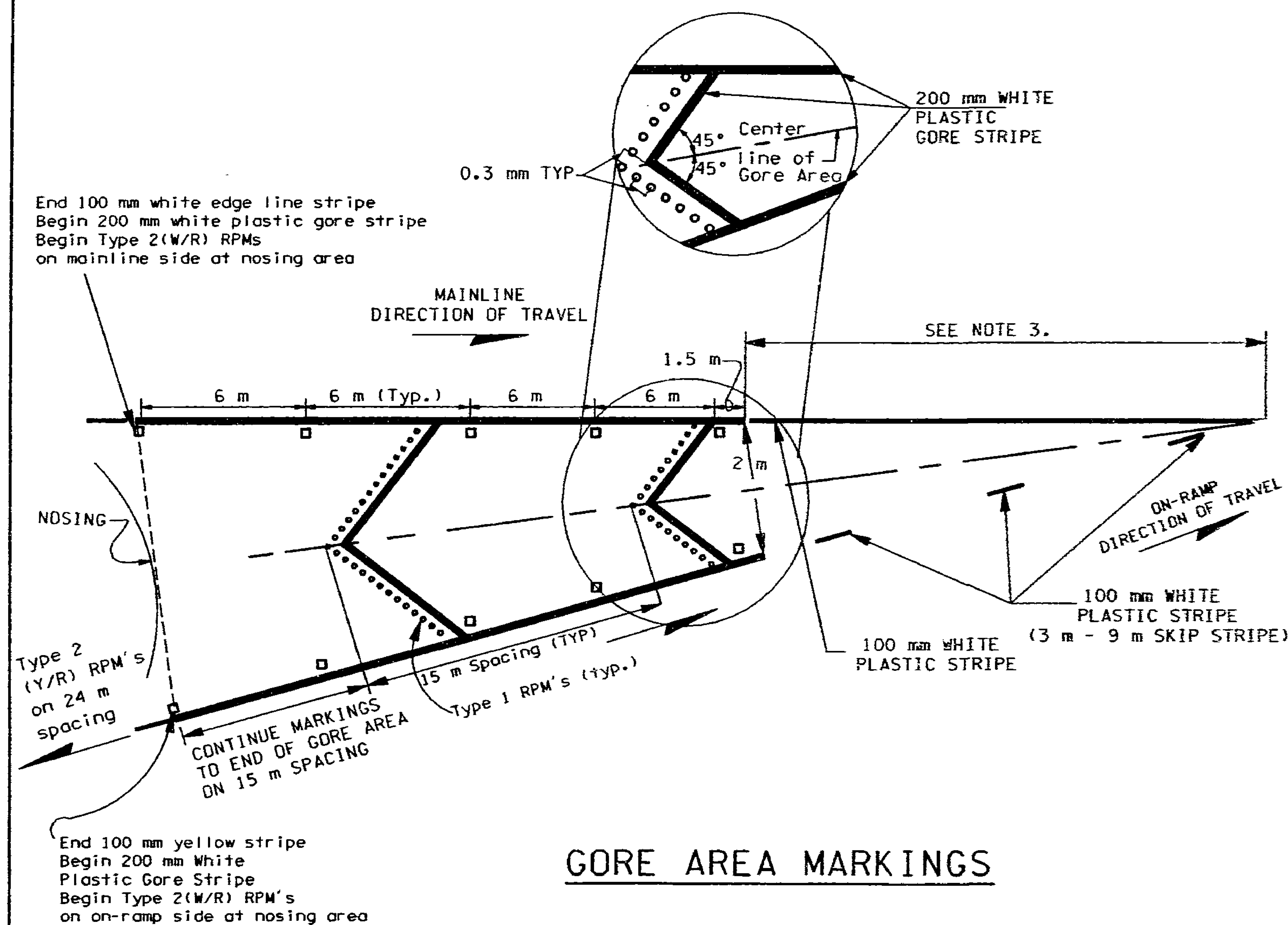
NOT TO SCALE



GORE AREA MARKINGS

Gore area chevron for off-ramp using Plastic Gore Stripe and RPMs

NOTE: FOR GORE AREAS LONGER THAN 150 m, CHEVRON SPACING MAY BE INCREASED TO 30 m C/C.



GORE AREA MARKINGS

Gore area chevron for on-ramp using plastic gore stripe and RPMs

NOTE: FOR GORE AREAS LARGER THAN 150 m CHEVRON SPACING MAY BE INCREASED TO 30 m C/C.

LEGEND

○ TYPE 1W RAISED PAVEMENT MARKER

□ TYPE 2W/R (OR Y/R) RAISED PAVEMENT MARKER

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. WELAYE				
ENTERED BY M. WELAYE				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

CHANNELIZATION DETAILS

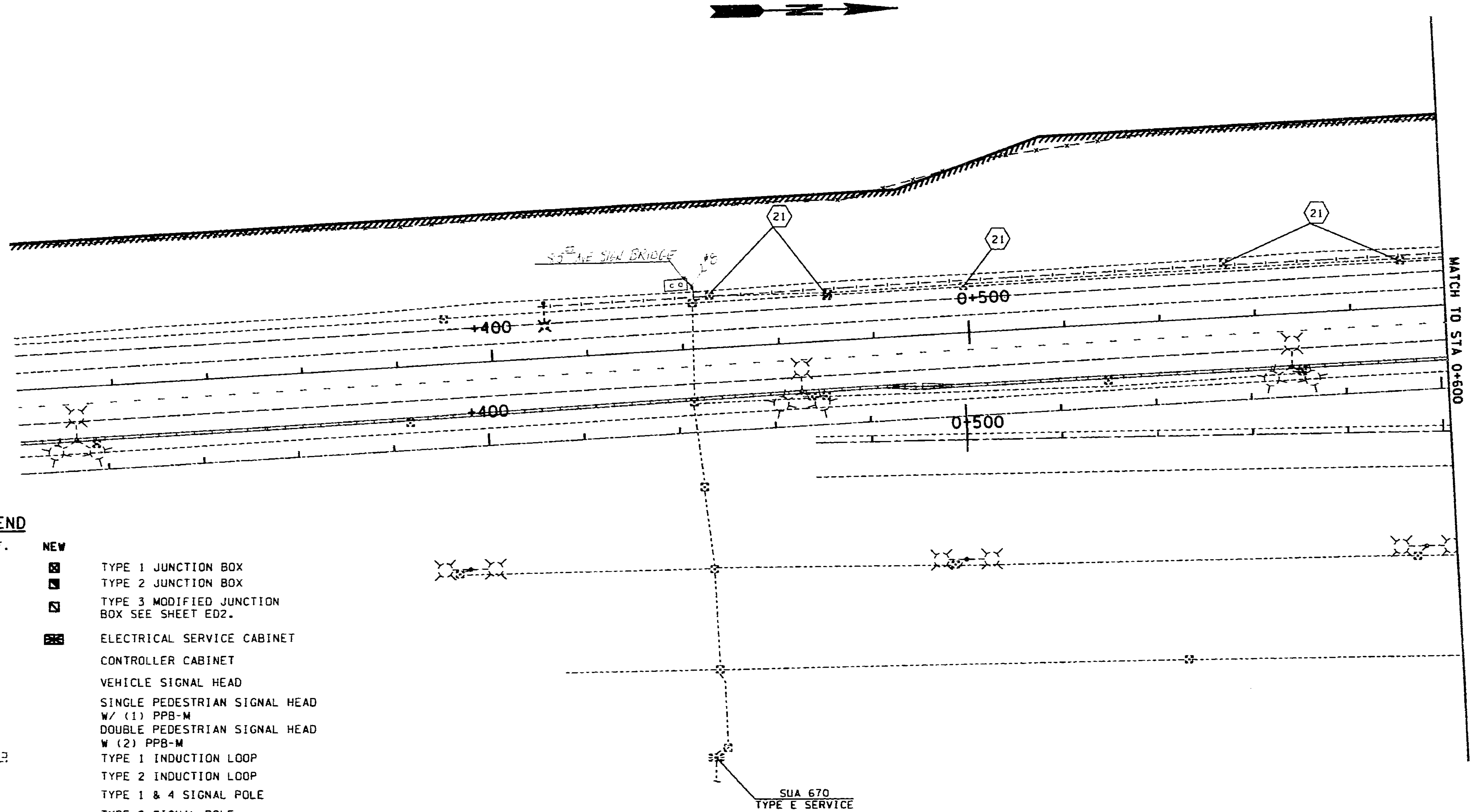
CHD1

SHEET 38 OF 138 SHEETS

06 JAN 98 :\dgn\current\oi2538\ncwithl\2538elel.dgn calaisk

PLOT2

T. 26N. R. 4E. W. M.



LEGEND

EXIST.	NEW	
		TYPE 1 JUNCTION BOX
		TYPE 2 JUNCTION BOX
		TYPE 3 MODIFIED JUNCTION BOX SEE SHEET ED2.
		ELECTRICAL SERVICE CABINET
		CONTROLLER CABINET
		VEHICLE SIGNAL HEAD
		SINGLE PEDESTRIAN SIGNAL HEAD W/ (1) PPB-M
		DOUBLE PEDESTRIAN SIGNAL HEAD W (2) PPB-M
		TYPE 1 INDUCTION LOOP
		TYPE 2 INDUCTION LOOP
		TYPE 1 & 4 SIGNAL POLE
		TYPE 2 SIGNAL POLE
		TYPE 3 SIGNAL POLE
		CONDUIT
		LUMINAIRE STANDARD
		TEMPORARY LUMINAIRE STANDARD WITH DOUBLE MASTARMS AND FIXTURES
		WOOD POLE
		WOOD POLE ANCHOR

0 10 20 30 40 50

SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

CONSTRUCTION NOTES

21 REMOVE JUNCTION BOX AND ABANDON CONDUIT. BACKFILL VOID.

DESIGNED BY K. CALAIS						
ENTERED BY K. CALAIS						
CHECKED BY T. THAYER						
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO						
	DATE	DATE	REVISION	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO. 5334		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5

VIC NORTHGATE WAY TO VIC NE 145TH ST

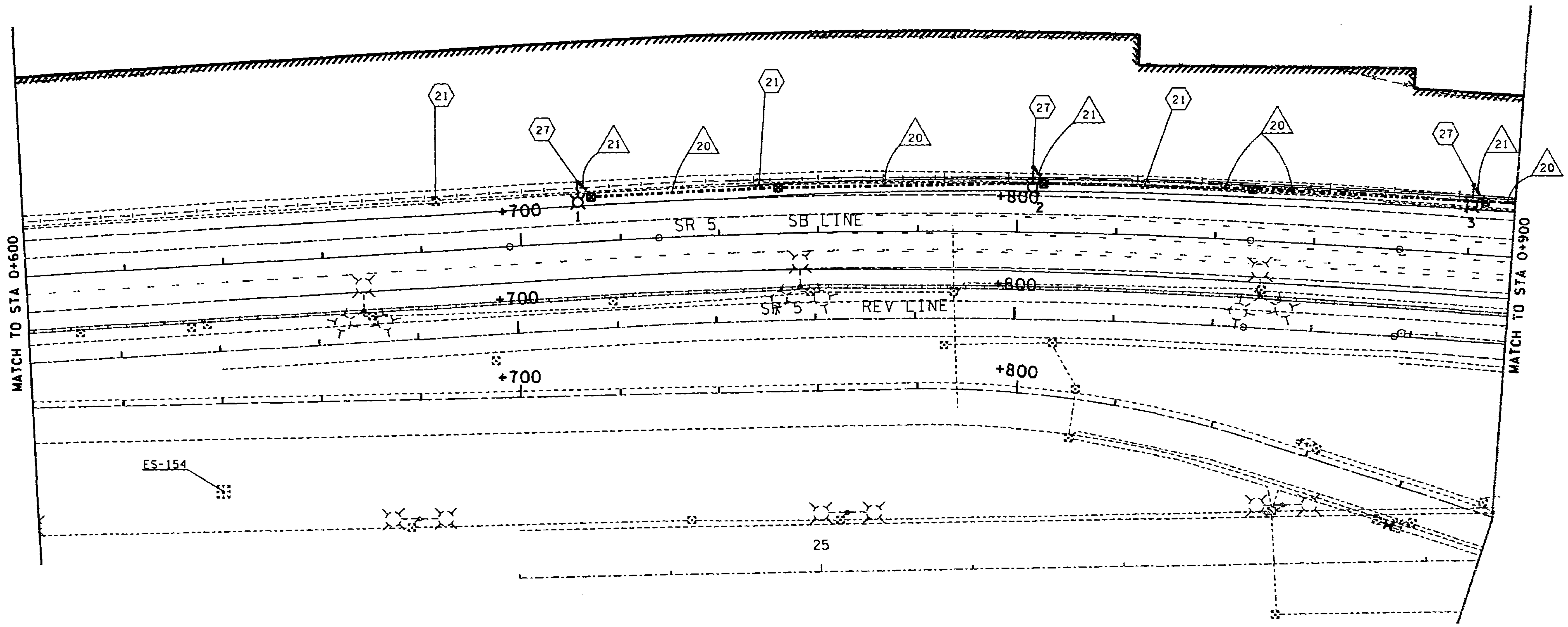
ILLUMINATION PLAN

E1

SHEET 39 OF 138 SHEETS

PLOT3   06 JAN 98: \dgn\current\o12538\ncwithl\2538elel.dgn calaisk

T. 26N. R. 4E. W. M.



LUMINAIRE SCHEDULE								
SERVICE NO. SUA 671								240/480 VOLTAGE
LUMINAIRE NUMBER	CIRCUIT NUMBER	LOCATION STATION	LOCATION OFFSET	TYPE-DISTRIBUTION-WATTAGE	MAST ARM	H1	BASE TYPE	COMMENTS
1	1	SB LINE STA 0+712	12.1M.LT	III - MED CUT OFF - 310 HPS	4.9M	13.5M	FIXED	BEHIND GUARDRAIL
2	1	SB LINE STA 0+803	13.1M.LT	III - MED CUT OFF - 310 HPS	4.9M	13.5M	FIXED	BEHIND GUARDRAIL
3	1	SB LINE STA 0+890	14.1M.LT	III - MED CUT OFF - 310 HPS	4.9M	13.5M	FIXED	BEHIND GUARDRAIL

NOTES: FOR LEGEND SEE SHEET E1.
FOR LOCATION OF SUA 671 SEE SHEET E5.

WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/INSULATION EXISTING	WIRE/INSULATION NEW	CIRCUIT	COMMENTS
20	35mm		2-#8	1	LIGHTING
21	27mm		2-#8	1	LIGHTING

CONSTRUCTION NOTES

(21) REMOVE JUNCTION BOX AND ABANDON CONDUIT. BACKFILL VOID.
(27) CONSTRUCT FOUNDATION AND INSTALL LIGHT STANDARD.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

					REGION NO.	STATE	FED.AID PROJ.NO.
DESIGNED BY K. CALAIS					10	WASH	NH-0053(839)
ENTERED BY K. CALAIS					JOB NUMBER 97W058		
CHECKED BY T. THAYER					CONTRACT NO.		
PROJ. ENGR. J. JOHNSON							
REGIONAL ADM. J. OKAMOTO							
	DATE	DATE	REVISION	BY			

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

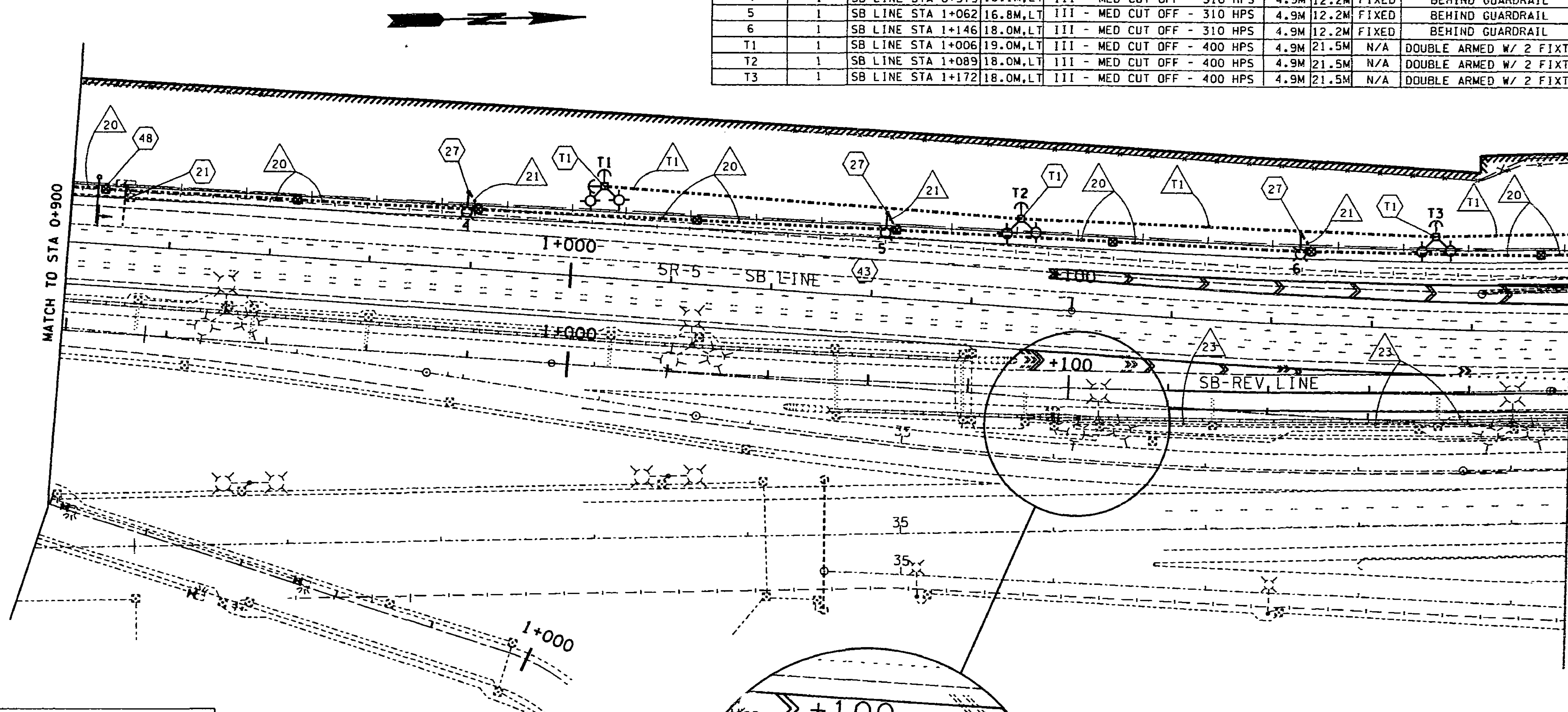
E2

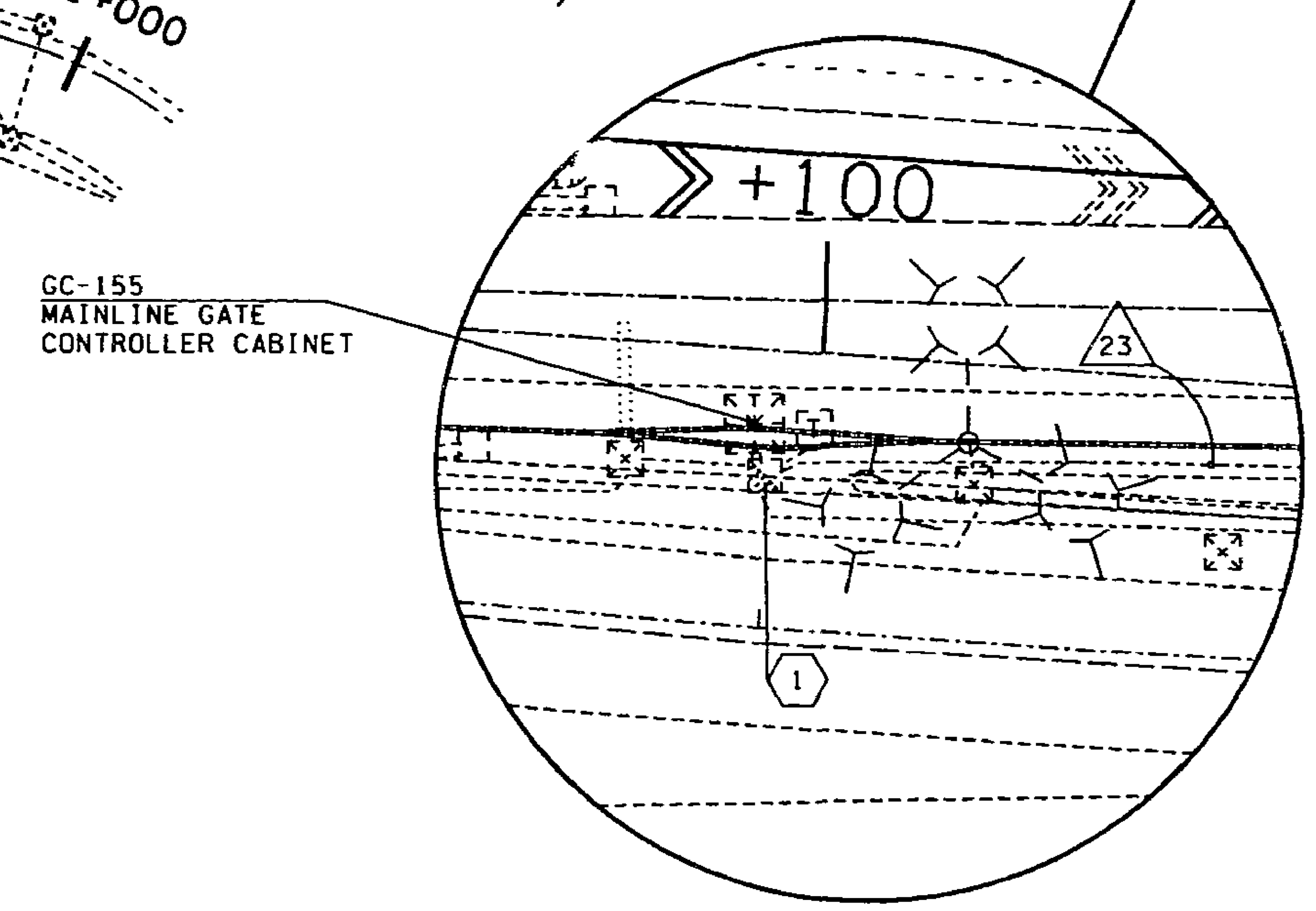
SHEET 40 OF 138 SHEETS

PLOT4 06 JAN 98: \dgn\current\ol2538\ncwithl\2538elel.dgn calaisk

T. 26N. R. 4E. W. M.

LUMINAIRE SCHEDULE								
SERVICE NO. SUA 671								240/480 VOLTAGE
LUMINAIRE NUMBER	CIRCUIT NUMBER	LOCATION STATION	LOCATION OFFSET	TYPE-DISTRIBUTION-WATTAGE	MAST ARM	H1	BASE TYPE	COMMENTS
4	1	SB LINE STA 0+979	15.1M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
5	1	SB LINE STA 1+062	16.8M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
6	1	SB LINE STA 1+146	18.0M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
T1	1	SB LINE STA 1+006	19.0M,LT	III - MED CUT OFF - 400 HPS	4.9M	21.5M	N/A	DOUBLE ARMED W/ 2 FIXTURES
T2	1	SB LINE STA 1+089	18.0M,LT	III - MED CUT OFF - 400 HPS	4.9M	21.5M	N/A	DOUBLE ARMED W/ 2 FIXTURES
T3	1	SB LINE STA 1+172	18.0M,LT	III - MED CUT OFF - 400 HPS	4.9M	21.5M	N/A	DOUBLE ARMED W/ 2 FIXTURES





WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/INSULATION EXISTING	WIRE/INSULATION NEW	CIRCUIT	COMMENTS
20	35mm		2-#8	1	LIGHTING
21	27mm		2-#8	1	LIGHTING
23	EX 53mm	7-#12		---	MAINLINE GATE CONTROL
			3-#2	14	MAINLINE GATE & NET POWER
T1	AERIAL		#6 TRIPLEX	1	TEMPORARY LIGHTING

CONSTRUCTION NOTES

1. SEE SC&DI SHEETS FOR CONTINUATION OF POWER CIRCUIT.
21. REMOVE JUNCTION BOX AND ABANDON CONDUIT.
27. CONSTRUCT FOUNDATION AND INSTALL LIGHT STANDARD.
48. SEE SIGNING SHEETS FOR CONTINUATION OF POWER CIRCUIT.
T1. INSTALL TEMPORARY LIGHTING AND APPURTENANCES ON A 26M CLASS III TIMBER POLE WITH DOUBLE MASTARMS AND FIXTURES.

NOTES: FOR LEGEND SEE SHEET E1.
FOR LOCATION OF SUA 671 SEE SHEET E5.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY K. CALAIS
ENTERED BY K. CALAIS
CHECKED BY T. THAYER
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	NH-0053(839)

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E3

SHEET 41 OF 138 SHEETS

06 JAN 98 &:\dgn\current\o12538\ncwithl\2538ele1.dgn calaisk

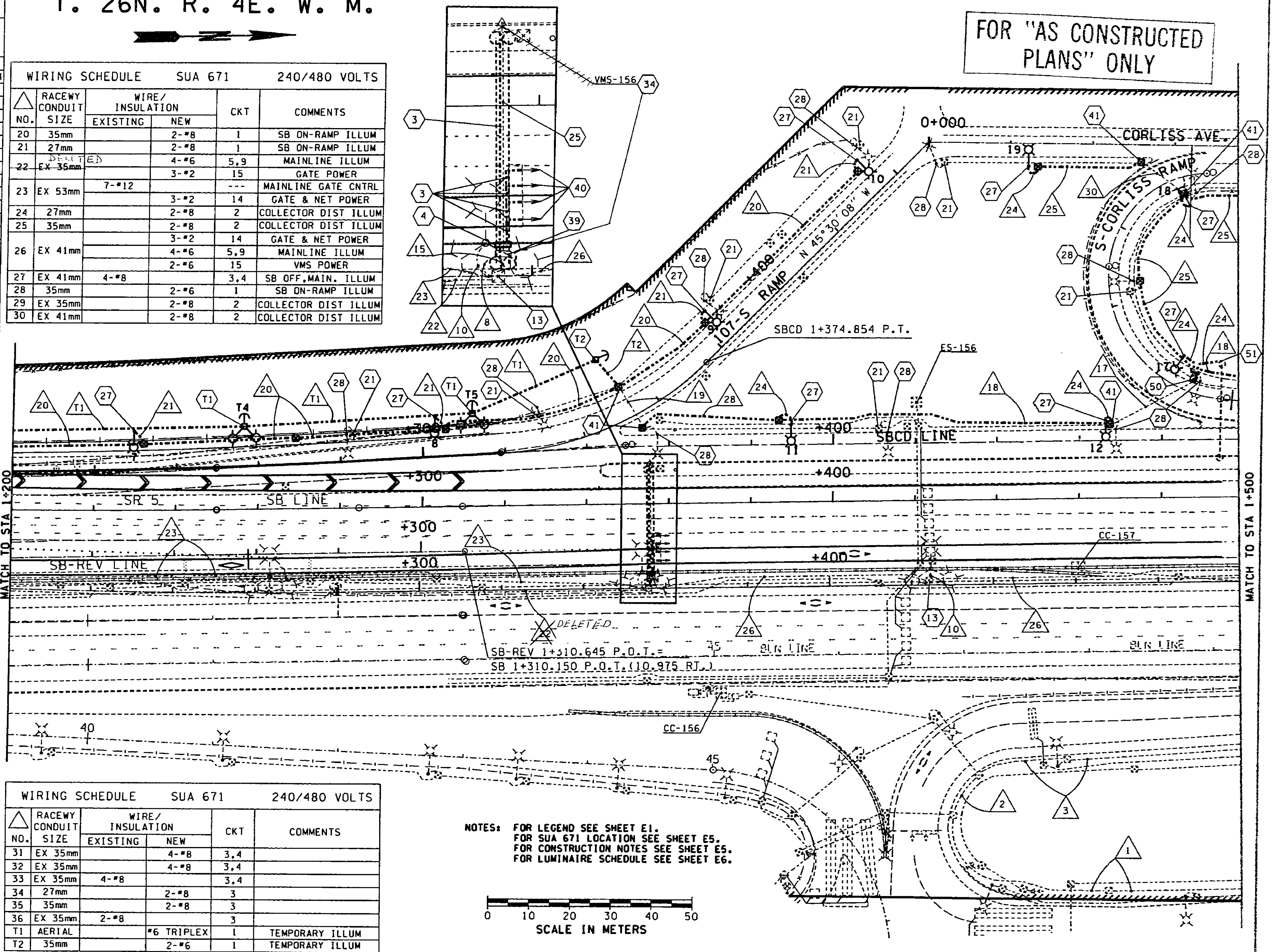
PLOT5

WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CKT	COMMENTS
1	EX 91mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
		2-#8		3	SB OFF-RAMP ILLUM
		6-#6		4,5,6	MAINLINE ILLUM
		2-#4		9	MAINLINE ILLUM
	EX 91mm	2-#8		10	CCTV
		2-#8		12	CAMERA
		3-#2		13	103RD GATE POWER
		3-#2		14	GATE & NET POWER
	EX 78mm	2-#8		7	107TH-N ILLUM
		2-#8		8	107TH-N ILLUM
		2-#8		11	110TH-N ILLUM
			2-#6	15	VMS POWER
2	EX 91mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
		2-#8		3	SB OFF-RAMP ILLUM
		6-#6		4,5,6	MAINLINE ILLUM
		2-#4		9	MAINLINE ILLUM
		2-#8		10	CCTV
		2-#8		12	CAMERA
		3-#2		14	GATE & NET POWER
	EX 78mm	2-#8		7	107TH-N ILLUM
		2-#8		8	107TH-N ILLUM
		2-#8		11	110TH-N ILLUM
			2-#6	15	VMS POWER
3	EX 91mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
		2-#8		3	SB OFF-RAMP ILLUM
		6-#6		4,5,6	MAINLINE ILLUM
		2-#4		9	MAINLINE ILLUM
		2-#8		10	CCTV
		3-#2		14	GATE & NET POWER
	EX 53mm	2-#8		8	107TH-N ILLUM
		2-#8		11	110TH-N ILLUM
			2-#6	15	VMS POWER
4	EX 91mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
		2-#8		3	SB OFF-RAMP ILLUM
		6-#6		4,5,6	MAINLINE ILLUM
		2-#4		9	MAINLINE ILLUM
		2-#8		10	CCTV
	EX 53mm	3-#2		14	GATE & NET POWER
			2-#6	15	VMS POWER
5	EX 91mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
		2-#8		3	SB OFF-RAMP ILLUM
		2-#8		10	CCTV
			2-#6	15	VMS POWER
	EX 63mm	8-#6		4,5,6,9	MAINLINE ILLUM
		3-#2		14	GATE & NET POWER
6	EX 41mm		4-#6	4,6	MAINLINE ILLUM
			2-#6	15	VMS POWER
7	EX 53mm		4-#6	4,6	MAINLINE ILLUM
			2-#6	15	VMS POWER
	EX 53mm		EMPTY	---	SPARE
8	EX 27mm		2-#8	5	VMS ILLUM
9	EX 27mm		2-#8	6	MAINLINE ILLUM
10	EX 27mm	4-#8		5,9	MAINLINE ILLUM
12	EX 41mm		4-#6	4,6	MAINLINE ILLUM
14	EX 27mm	4-#8		4,6	MAINLINE ILLUM
15	41mm		2-#6	15	VMS POWER
16	EX 53mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
			4-#8	3,4	SB OFF,MAIN. ILLUM
17	EX 53mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
18	35mm		2-#6	1	SB ON-RAMP ILLUM
			2-#8	2	COLLECTOR DIST ILLUM
19	EX 35mm		2-#6	1	SB ON-RAMP ILLUM

T. 26N. R. 4E. W. M.

FOR "AS CONSTRUCTED PLANS" ONLY

WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CKT	COMMENTS
20	35mm		2-#8	1	SB ON-RAMP ILLUM
21	27mm		2-#8	1	SB ON-RAMP ILLUM
~~22~~	~~EX 35mm~~ DELETED		4-#6	5,9	MAINLINE ILLUM
			3-#2	15	GATE POWER
23	EX 53mm	7-#12		---	MAINLINE GATE CNTRL
			3-#2	14	GATE & NET POWER
24	27mm		2-#8	2	COLLECTOR DIST ILLUM
25	35mm		2-#8	2	COLLECTOR DIST ILLUM
26	EX 41mm		3-#2	14	GATE & NET POWER
			4-#6	5,9	MAINLINE ILLUM
			2-#6	15	VMS POWER
27	EX 41mm	4-#8		3,4	SB OFF,MAIN. ILLUM
28	35mm		2-#6	1	SB ON-RAMP ILLUM
29	EX 35mm		2-#8	2	COLLECTOR DIST ILLUM
30	EX 41mm		2-#8	2	COLLECTOR DIST ILLUM



WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CKT	COMMENTS
31	EX 35mm		4-#8	3,4	
32	EX 35mm		4-#8	3,4	
33	EX 35mm	4-#8		3,4	
34	27mm		2-#8	3	
35	35mm		2-#8	3	
36	EX 35mm	2-#8		3	
T1	AERIAL		#6 TRIPLEX	1	TEMPORARY ILLUM
T2	35mm		2-#6	1	TEMPORARY ILLUM

NOTES: FOR LEGEND SEE SHEET E1.
FOR SUA 671 LOCATION SEE SHEET E5.
FOR CONSTRUCTION NOTES SEE SHEET E5.
FOR LUMINAIRE SCHEDULE SEE SHEET E6.

0 10 20 30 40 50
SCALE IN METERS

DESIGNED BY K. CALAIS					REGION NO. 10	STATE WASH
ENTERED BY K. CALAIS					JOB NUMBER 97W058	FED.AID PROJ.NO. NH-0053(839)
CHECKED BY T. THAYER					CONTRACT NO. 5334	
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

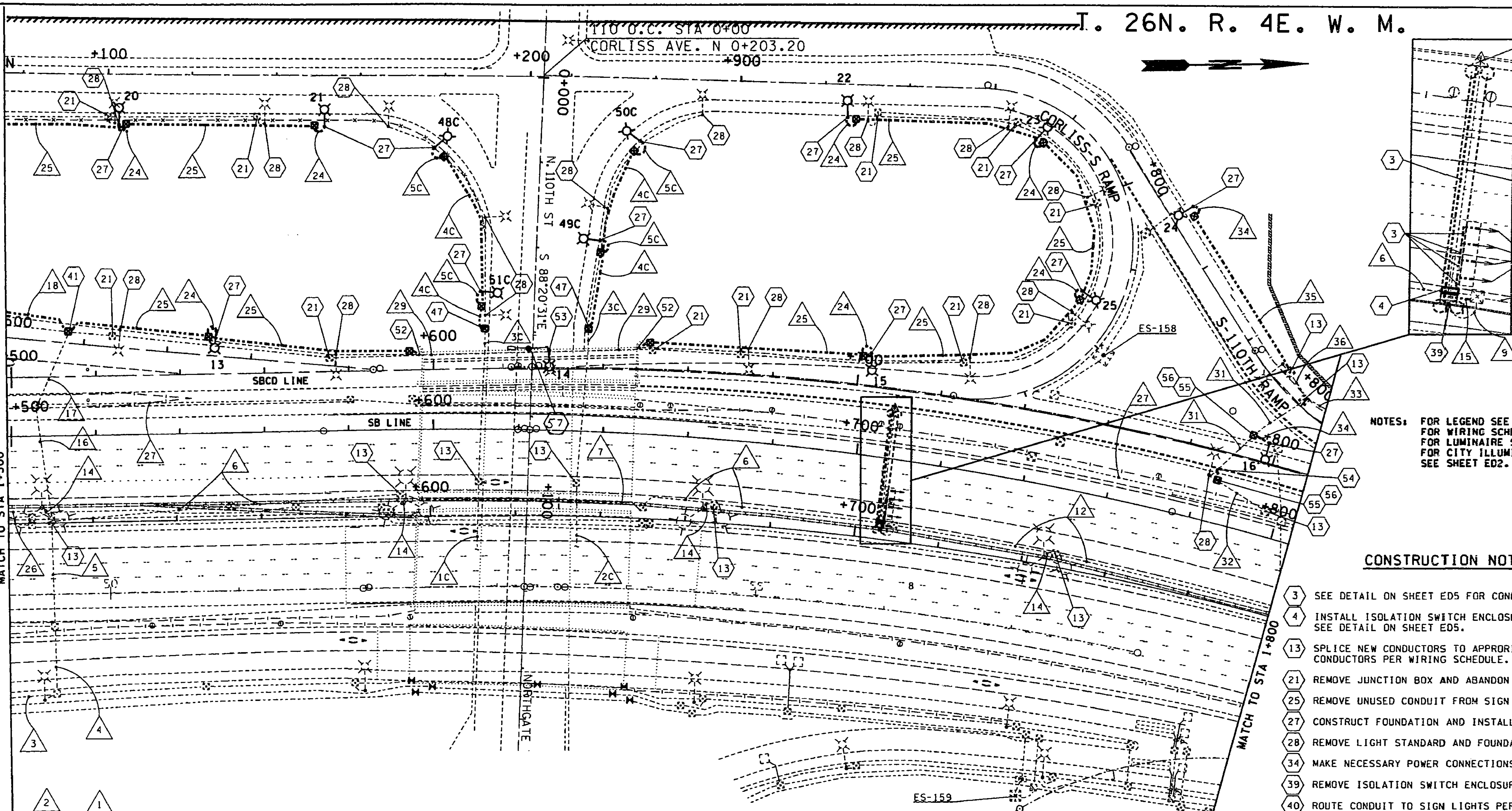
SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E4

SHEET 42 OF 138 SHEETS

PLOT6 06 JAN 98 t:\dgn\current\ol2538\ncwith\2538elel.dgn calaisk



NOTES: FOR LEGEND SEE SHEET E1.
FOR WIRING SCHEDULE SEE SHEET E4.
FOR LUMINAIRE SCHEDULE SEEE SHEET E6.
FOR CITY ILLUMINATION ONE-LINE DIAGRAM SEE SHEET ED2.

CONSTRUCTION NOTES

- (3) SEE DETAIL ON SHEET ED5 FOR CONDUIT INSTALLATION.
- (4) INSTALL ISOLATION SWITCH ENCLOSURE ON SIGN STRUCTURE. SEE DETAIL ON SHEET ED5.
- (13) SPLICE NEW CONDUCTORS TO APPRORIATE EXISTING CIRCUIT CONDUCTORS PER WIRING SCHEDULE.
- (21) REMOVE JUNCTION BOX AND ABANDON CONDUIT. BACKFILL VOID.
- (25) REMOVE UNUSED CONDUIT FROM SIGN STRUCTURE.
- (27) CONSTRUCT FOUNDATION AND INSTALL LIGHT STANDARD.
- (28) REMOVE LIGHT STANDARD AND FOUNDATION.
- (34) MAKE NECESSARY POWER CONNECTIONS.
- (39) REMOVE ISOLATION SWITCH ENCLOSURE AND UNUSED CONDUIT.
- (40) ROUTE CONDUIT TO SIGN LIGHTS PER DETAILS ON SHEETS ED3 & ED4.
- (41) REPLACE TYPE 1 JUNCTION BOX WITH NEW TYPE 1 JUNCTION BOX.
- (45) INSTALL A 40 AMP DPST BREAKER INSIDE SERVICE CABINET. LABEL CIRCUIT AS CKT 15 (VMS POWER)
- (46) CONSTRUCT ASPHALT RAMP AROUND EXPOSED LUMINAIRE BASE. SEE DETAIL ON SHEET P3.
- (47) INTERCEPT EXISTING CITY ILLUMINATION CONDUIT RUN WITH JUNCTION BOX. ROUTE CONDUIT AND CONDUCTORS AS SHOWN. COORDINATE CITY ILLUMINATION WORK THROUGH THE ENGINEER.
- (50) REPLACE TYPE 1 JUNCTION BOX WITH NEW TYPE 2 JUNCTION BOX.
- (51) INTERCEPT CONDUIT EXITING SIGN STRUCTURE AND ROUTE TO NEW JUNCTION BOX.
- (52) INTERCEPT CONDUIT EXITING BRIDGE RAIL AND ROUTE TO NEW JUNCTION BOX.
- (53) REMOVE BRIDGE RAIL MOUNTED LUMINAIRE. INSTALL NEW LUMINAIRE. VERIFY BOLT PATTERN BEFORE ORDERING POLE.
- (54) INTERCEPT CONDUIT AND ROUTE TO NEW JUNCTION BOX.
- (55) INTERCEPT CONDUIT AND INSTALL JUNCTION BOX.
- (56) MAINTAIN LIGHTING DURING NIGHT TIME HOURS.
- (T1) INSTALL TEMPORARY LIGHTING AND APPURTENANCES ON A 26M CLASS III TIMBER POLE WITH DOUBLE MASTARMS AND FIXTURES.
- (T2) INSTALL 12M CLASS V TIMBER POLE AND APPURTENANCES.
- (57) POWER TO SIGN LIGHTER 110th BRIDGE STRUCTURE

CITY WIRING SCHEDULE SCL PP#86 120/240V

△ NO.	RACEWY CONDUIT SIZE	WIRE/INSULATION EXISTING	WIRE/INSULATION NEW	CKT	COMMENTS
1C•	EX 35mm	2-#8		1C	N-110TH ILLUM
		2-#10		2C	UNDERDECK ILLUM
2C•	EX 35mm	2-#8		1C	N-110TH ILLUM
		2-#10		2C	UNDERDECK ILLUM
3C•	EX 35mm		2-#8	1C	N-110TH ILLUM
4C•	35mm		2-#8	1C	N-110TH ILLUM
5C•	27mm		2-#8	1C	N-110TH ILLUM

• PVC CONDUIT

0 10 20 30 40 50
SCALE IN METERS

DESIGNED BY	K. CALAIS			
ENTERED BY	K. CALAIS			
CHECKED BY	T. THAYER			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E5

SHEET 43 OF 138 SHEETS

PLOT7 06 JAN 98: \dgn\current\ol2538\ncwithl\2538elel.dgn calaisk

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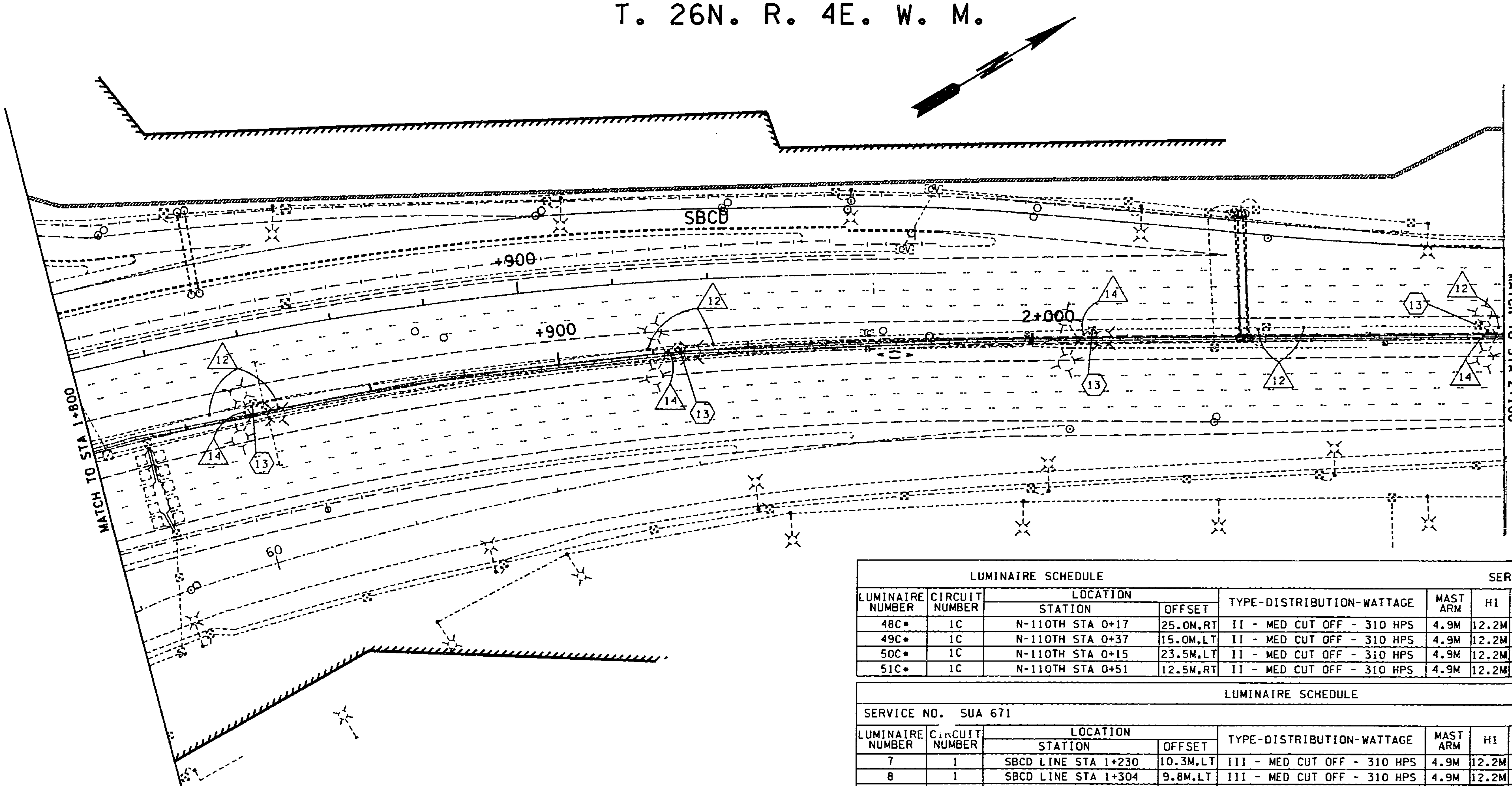


FOR "AS CONSTRUCTED PLANS" ONLY

LUMINAIRE SCHEDULE								SERVICE NO. SCL PP**** 240V
LUMINAIRE NUMBER	CIRCUIT NUMBER	LOCATION		TYPE-DISTRIBUTION-WATTAGE	MAST ARM	H1	BASE TYPE	COMMENTS
		STATION	OFFSET					
48C*	1C	N-110TH STA 0+17	25.0M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	CITY ILLUMINATION
49C*	1C	N-110TH STA 0+37	15.0M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	CITY ILLUMINATION
50C*	1C	N-110TH STA 0+15	23.5M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	CITY ILLUMINATION
51C*	1C	N-110TH STA 0+51	12.5M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	CITY ILLUMINATION

LUMINAIRE SCHEDULE

SERVICE NO. SUA 671 — 240/480 VOLTAGE

LUMINAIRE NUMBER	CIRCUIT NUMBER	LOCATION		TYPE-DISTRIBUTION-WATTAGE	MAST ARM	H1	BASE TYPE	COMMENTS
		STATION	OFFSET					
7	1	SBCD LINE STA 1+230	10.3M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
8	1	SBCD LINE STA 1+304	9.8M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
9	1	107-S RAMP STA 1+384	9.2M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
10	1	107-S RAMP STA 1+436	9.2M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND BARRIER
11*	2	SBCD LINE STA 1+390	4.9M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
12*	2	SBCD LINE STA 1+467	4.9M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
13*	2	SBCD LINE STA 1+549	10.0M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
14*	2	SBCD LINE STA 1+627	4.6M,LT	III - MED CUT OFF - 310 HPS	1.8M	12.2M	FIXED	VERIFY BOLT PATTERN
15*	2	SBCD LINE STA 1+703	8.0M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	FIXED	BEHIND GUARDRAIL
16*	3	SBCD LINE STA 1+798	5.0M,LT	III - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
17*	2	SBCD LINE STA 1+485	20.5M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
18*	2	CORLISS AVE STA 0+064	15.0M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
19*	2	CORLISS AVE STA 0+025	6.0M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
20*	2	CORLISS AVE STA 0+103	12.0M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
21*	2	CORLISS AVE STA 0+151	12.0M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
22*	2	CORLISS-S RAMP STA 1+875	7.8M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
23*	2	CORLISS-S RAMP STA 1+823	9.0M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
24*	3	CORLISS-S RAMP STA 1+793	14.5M,RT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
25*	2	CORLISS-S RAMP STA 1+768	9.7M,LT	II - MED CUT OFF - 310 HPS	4.9M	12.2M	SLIP	
T4	1	SBCD LINE STA 1+254	10.0M,LT	III - MED CUT OFF - 400 HPS	4.9M	21.5M	N/A	DOUBLE ARMED W/ 2 FIXTURES
T5	1	SBCD LINE STA 1+313	10.0M,LT	III - MED CUT OFF - 400 HPS	4.9M	21.5M	N/A	DOUBLE ARMED W/ 2 FIXTURES

* VERIFY OFFSET WITH ENGINEER.

CONSTRUCTION NOTES

(13) SPLICE NEW CONDUCTORS TO APPROPRIATE EXISTING CIRCUIT CONDUCTORS PER WIRING SCHEDULE.

NOTES: FOR LEGEND SEE SHEET E1.
FOR SUA 671 LOCATION SEE SHEET E5.

WIRING SCHEDULE SUA 671 240/480 VOLTS

△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION		CIRCUIT	COMMENTS
		EXISTING	NEW		
12	EX 41mm		4-#6	4,6	LIGHTING
14	EX 27mm	4-#8		4,6	LIGHTING

0 10 20 30 40 50
SCALE IN METERS

DESIGNED BY K. CALAIS				
ENTERED BY K. CALAIS				
CHECKED BY T. THAYER				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E6

SHEET 44 OF 138 SHEETS

21 JAN 98 d:\dgn\current\ol2538\ncwithl\2538elel.dgn calaisk

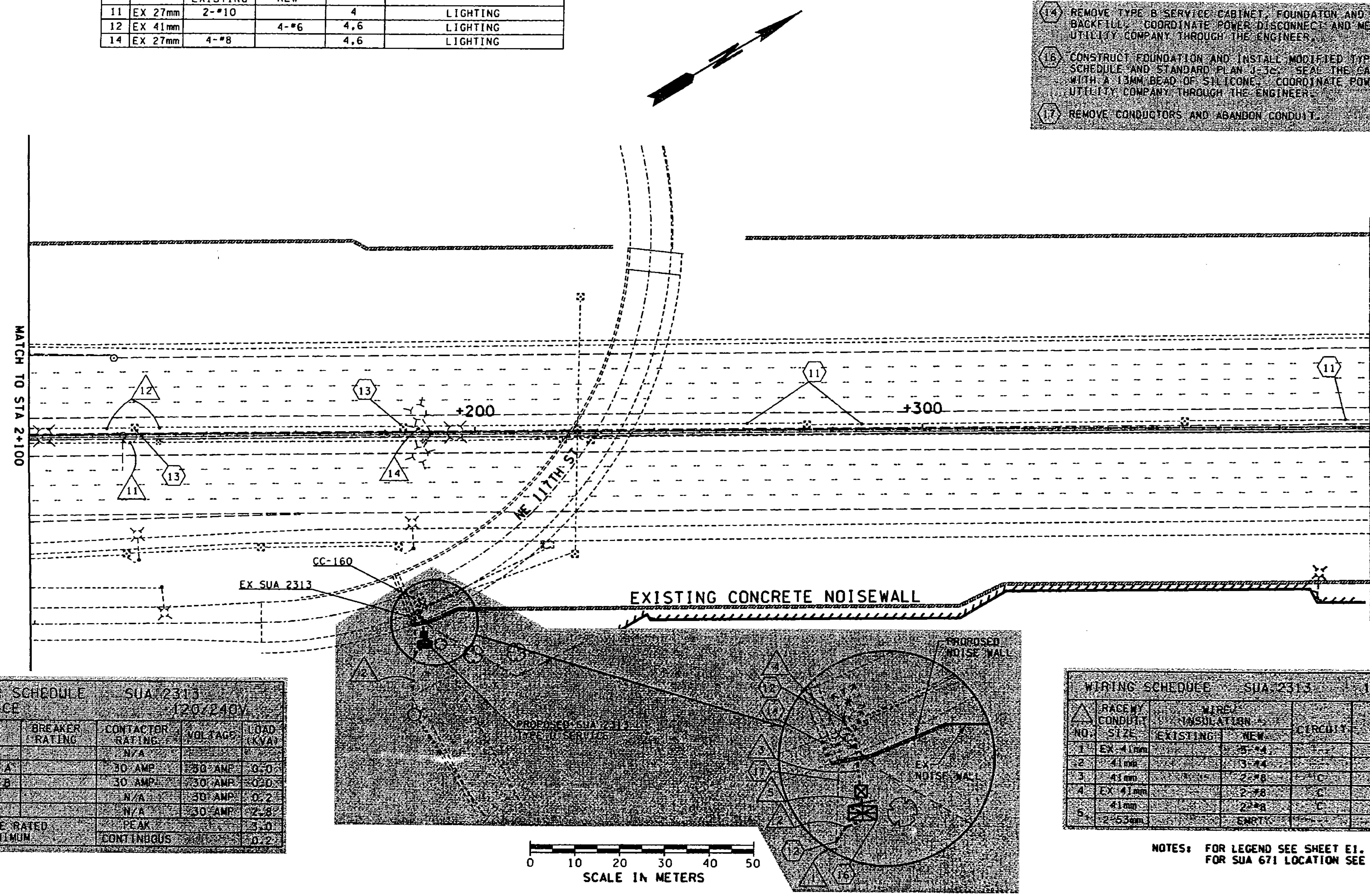
PLOT8

T. 26N. R. 4E. W. M.

WIRING SCHEDULE SUA 671 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CIRCUIT	COMMENTS
11	EX 27mm	2-#10		4	LIGHTING
12	EX 41mm		4-#6	4,6	LIGHTING
14	EX 27mm	4-#8		4,6	LIGHTING

CONSTRUCTION NOTES

- (11) REMOVE CONDUCTORS FROM CONDUIT. PREPARE CONDUIT FOR FUTURE USE.
- (12) INTERCEPT EXISTING CONDUIT AND ROUTE AS SHOWN.
- (13) SPLICE NEW CONDUCTORS TO APPROPRIATE EXISTING CIRCUIT CONDUCTORS PER WIRING SCHEDULE.
- (14) REMOVE TYPE B SERVICE CABINET, FOUNDATON AND CONDUIT ELBOWS. BACKFILL. COORDINATE POWER DISCONNECT AND METER REMOVAL WITH THE UTILITY COMPANY THROUGH THE ENGINEER.
- (16) CONSTRUCT FOUNDATION AND INSTALL MODIFIED TYPE D SERVICE PER BREAKER SCHEDULE AND STANDARD PLAN J-3c. SEAL THE CABINET TO THE FOUNDATION WITH A 13MM BEAD OF SILICONE. COORDINATE POWER CONNECTION WITH THE UTILITY COMPANY THROUGH THE ENGINEER.
- (17) REMOVE CONDUCTORS AND ABANDON CONDUIT.



FOR "AS CONSTRUCTED PLANS" ONLY

BREAKER SCHEDULE SUA 2313 TYPE D SERVICE 120/240V					
CIRCUIT	DESCRIPTION	BREAKER RATING	CONTACTOR RATING	VOLTAGE	LOAD (KVA)
---	MAIN		N/A		
A	ILLUMINATION A		30 AMP	30 AMP	0.0
B	ILLUMINATION B		30 AMP	30 AMP	0.0
C	SC&DI		N/A	30 AMP	0.2
D	CONTROL		N/A	30 AMP	2.8
BUSSWORK SHALL BE RATED AT 100 AMP MINIMUM			PEAK		3.0
			CONTINUOUS		0.2

WIRING SCHEDULE SUA 2313 120/240 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CIRCUIT	COMMENTS
1	EX 41mm		5-#4		UNFUSED POWER
2	41mm		3-#4		UNFUSED POWER
3	41mm		2-#8	C	CC 160
4	EX 41mm		2-#8	C	CC 160
5	41mm		2-#8	C	CC 160
	2-53mm		EMPTY		SPARE

NOTES: FOR LEGEND SEE SHEET E1.
FOR SUA 671 LOCATION SEE SHEET E5.

DESIGNED BY	K. CALAIS				
ENTERED BY	K. CALAIS				
CHECKED BY	T. THAYER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO		1/19/98	SERVICE REPLACEMENT	KC
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

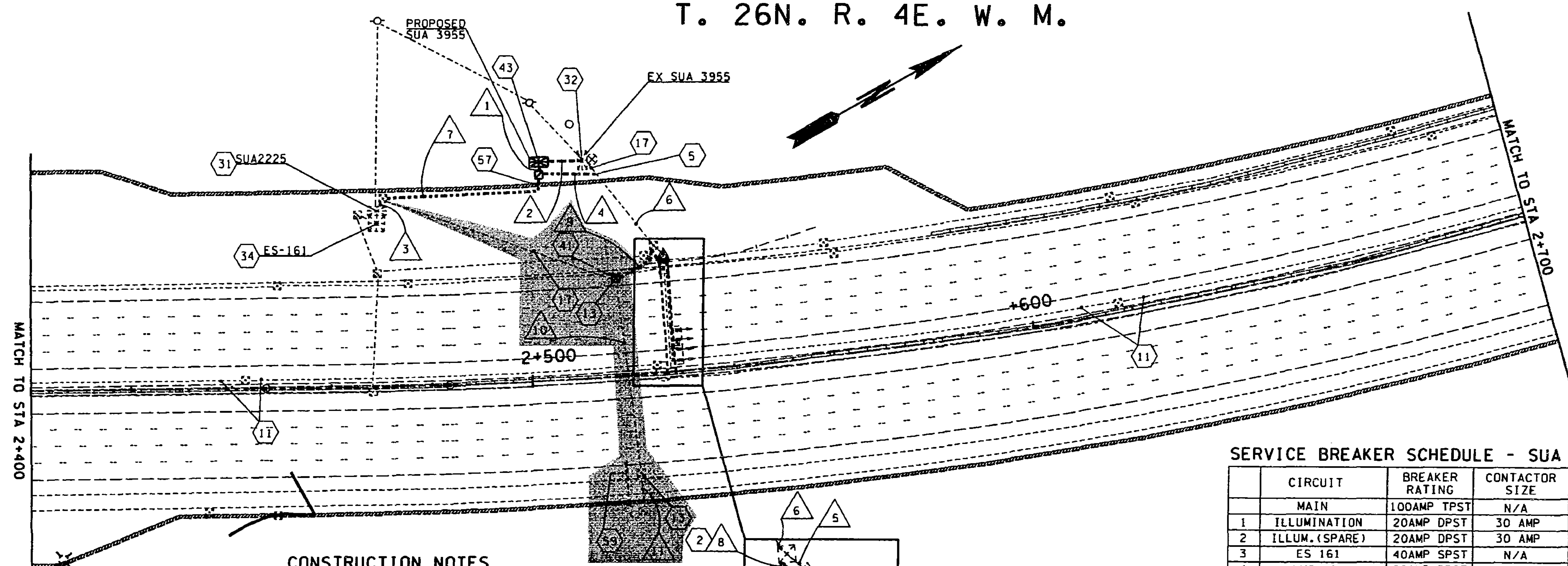
SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

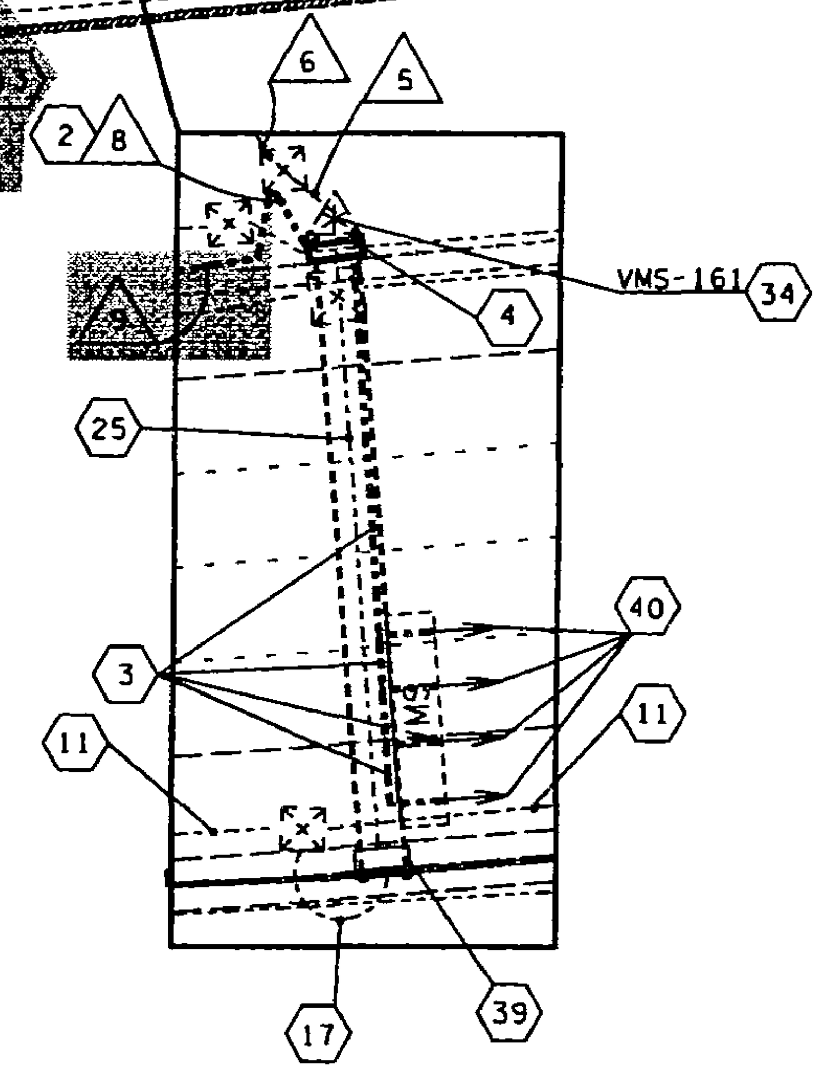
ILLUMINATION PLAN

E7

SHEET 45 OF 138 SHEETS

T. 26N. R. 4E. W. M.





SERVICE BREAKER SCHEDULE - SUA 3955

	CIRCUIT	BREAKER RATING	CONTACTOR SIZE	LOAD (KVA)
	MAIN	100AMP TPST	N/A	
1	ILLUMINATION	20AMP DPST	30 AMP	2.0
2	ILLUM.(SPARE)	20AMP DPST	30 AMP	0.0
3	ES 161	40AMP SPST	N/A	3.0
4	VMS 161	20AMP DPST	N/A	3.0
5	SPARE	20AMP DPST	N/A	0.0
6	SPARE	15AMP DPST	N/A	0.0
		CONTINUOUS		4.9
		PEAK		11.0

CONSTRUCTION NOTES

(2) ROUTE CONDUIT FROM GRADE UP SIGN STRUCTURE TO ISOLATION SWITCH ENCLOSURE AND SIGN LIGHTS. SEE DETAILS ON SHEETS ED3-ED5.

(3) SEE DETAIL ON SHEET ED5 FOR CONDUIT INSTALLATION.

(4) INSTALL ISOLATION SWITCH ENCLOSURE ON SIGN STRUCTURE. SEE DETAILS ON SHEETS ED3-ED5.

(5) INTERCEPT EXISTING CONDUIT. ROUTE CONDUIT TO JUNCTION BOX AS SHOWN.

(11) REMOVE CONDUCTORS FROM CONDUIT. PREPARE CONDUIT FOR FUTURE USE.

(13) SPLICE NEW CONDUCTORS TO APPROPRIATE EXISTING CIRCUIT CONDUCTORS PER WIRING SCHEDULE.

(17) REMOVE CONDUCTORS AND ABANDON CONDUIT.

(25) REMOVE UNUSED CONDUIT FROM SIGN STRUCTURE.

(31) REMOVE TYPE A SERVICE AND APPURTENANCES FROM BACK OF ES161 CABINET. COORDINATE POWER DISCONNECT AND METER REMOVAL WITH UTILITY COMPANY THROUGH THE ENGINEER.

(32) REMOVE POLE MOUNTED TYPE A SERVICE CABINET AND APPURTENANCES. LEAVE TIMBER POLE FOR POWER CONNECTION TO NEW SERVICE. COORDINATE POWER DISCONNECT WITH THE UTILITY COMPANY THROUGH THE ENGINEER.

(34) MAKE NECESSARY POWER CONNECTIONS.

(39) REMOVE ISOLATION SWITCH ENCLOSURE AND UNUSED CONDUIT.

(40) ROUTE CONDUIT TO SIGN LIGHTS PER DETAILS ON SHEETS ED3 & ED4.

(41) REPLACE TYPE 1 JUNCTION BOX WITH NEW TYPE 1 JUNCTION BOX.

(43) INSTALL FOUNDATION AND TYPE E SERVICE CABINET PER BREAKER SCHEDULE AND STANDARD PLAN J-3d WITH THE EXCEPTION THAT THE TRANSFORMER SHALL BE A 5KVA-480/120V. INSTALL A 15 AMP SECONDARY CIRCUIT BREAKER. SEAL THE CABINET TO THE FOUNDATION WITH A 13MM BEAD OF SILICONE. COORDINATE THE POWER CONNECTION WITH THE UTILITY COMPANY THROUGH THE ENGINEER.

(57) ROUTE CONDUIT UNDER NOISE WALL.

(59) REPLACE EXISTING 175W-240V FIXTURE WITH A 175W-480V FIXTURE.

WIRING SCHEDULE SUA 3955 240/480 VOLTS

△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CIRCUIT	COMMENTS
1	53mm		2-#8	1	VMS LIGHTING
			2-#8	3	ES 161 120V
			2-#8	4	VMS 161
	2-53mm		EMPTY	---	FUTURE
2	53mm		3-#2	---	UNFUSED POWER
3	EX 27mm		2-#8	3	ES 161 120V
4	35mm		4-#8	1,4	VMS LIGHTING, VMS 161
5	EX 27mm		2-#8	4	VMS 161
6	EX 35mm		4-#8	1,4	VMS LIGHTING, VMS 161
7	35mm		2-#8	3	ES 161 120V
8	53mm		2-#8	1	VMS LIGHTING
9	35mm		2-#8	1	SIGN LIGHTING
10	EX 27mm		2-#8	1	SIGN LIGHTING
11	EX 27mm	2-#8		1	SIGN LIGHTING

NOTE: FOR LEGEND SEE SHEET E1.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

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ENTERED BY K. CALAIS					
CHECKED BY T. THAYER					
PROJ. ENGR. J.JOHNSON					
REGIONAL ADM. J. OKAMOTO		1/19/98	CONDUIT RUN ADDITION	KC	
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		NH-0053(839)
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E8

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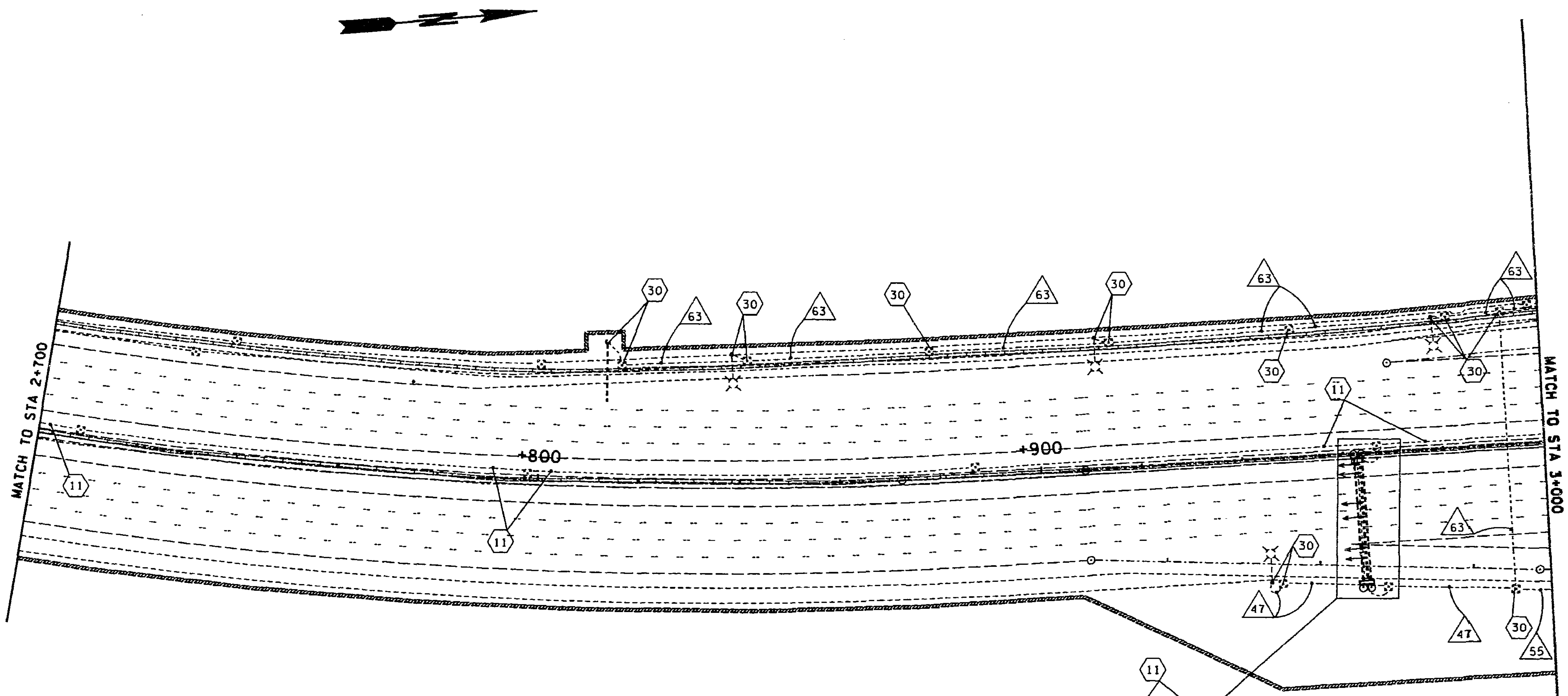

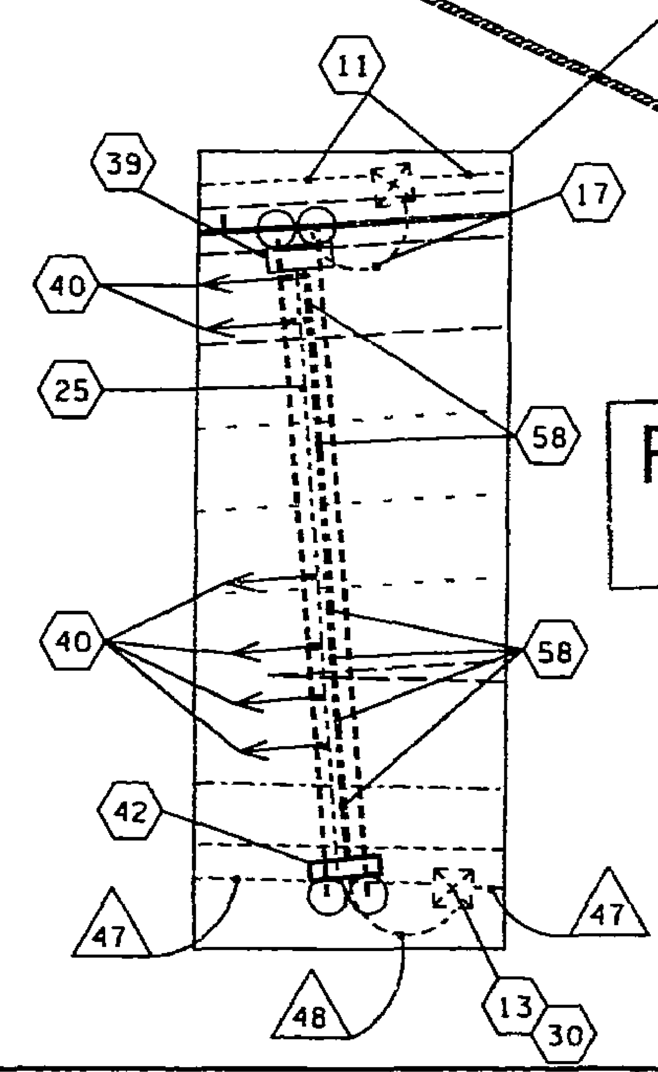

CONSTRUCTION NOTES

(11) REMOVE CONDUCTORS FROM CONDUIT. PREPARE CONDUIT FOR FUTURE USE.

(13) SPLICE NEW CONDUCTORS TO APPROPRIATE CIRCUIT CONDUCTORS PER WIRING SCHEDULE.

(17) REMOVE CONDUCTORS AND ABANDON CONDUIT.

(25) REMOVE UNUSED CONDUIT FROM SIGN STRUCTURE.

(30) LABEL EXISTING CONDUCTORS PER WIRING SCHEDULE.

(39) REMOVE ISOLATION SWITCH ENCLOSURE AND UNUSED CONDUIT.

(40) ROUTE CONDUIT TO SIGN LIGHTS PER DETAILS ON SHEETS ED3 & ED4.

(42) INSTALL ISOLATION SWITCH ENCLOSURE ON SIGN STRUCTURE AND ROUTE CONDUIT TO EXISTING SIGNS. SEE DETAILS ON SHEETS ED3,ED4 & ED6.

(58) SEE DETAIL ON SHEET ED6 FOR CONDUIT INSTALLATION.

WIRING SCHEDULE SUA 674 240/480 VOLTS

△ NO.	RACEWY CONDUIT SIZE	WIRE/INSULATION EXISTING	WIRE/INSULATION NEW	CIRCUIT	COMMENTS
47	EX 41mm	2-#6		2	LIGHTING
48	EX 27mm		2-#8	2	LIGHTING
55	EX 41mm	4-#6		1,2	LIGHTING
63	EX 41mm	2-#6		1	LIGHTING

0 10 20 30 40 50
SCALE IN METERS

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NOTES: FOR LEGEND SEE SHEET E1.
FOR SUA 674 LOCATION SEE SHEET E10.

DESIGNED BY K. CALAIS				
ENTERED BY K. CALAIS				
CHECKED BY T. THAYER				
PROJ. ENGR. J.JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO. NH-0053(839)
JOB NUMBER 97W058
CONTRACT NO.

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SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

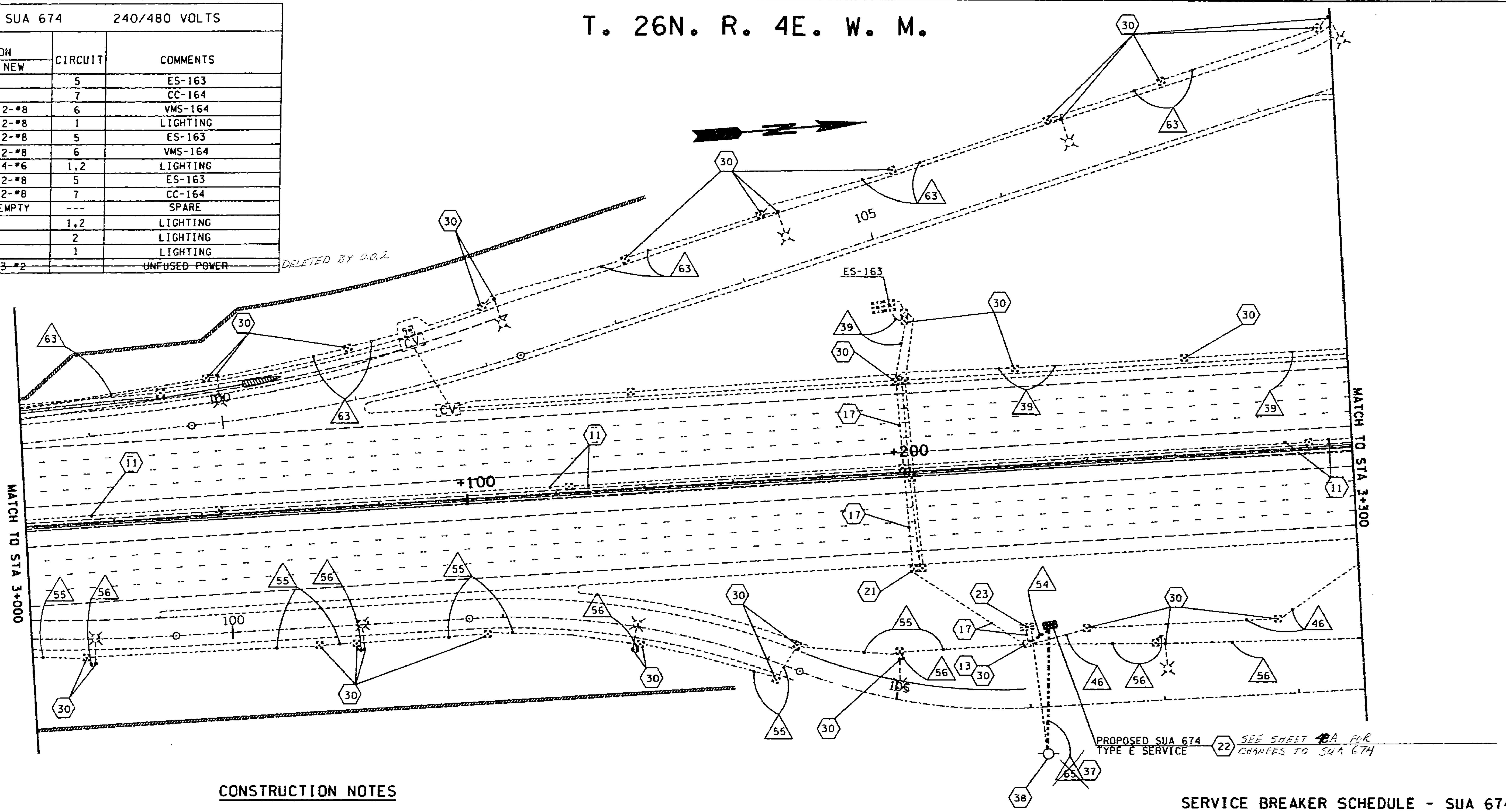
ILLUMINATION PLAN

E9
SHEET 47 OF 138 SHEETS

NO.	RACEWY CONDUIT SIZE	WIRE/INSULATION EXISTING	WIRE/INSULATION NEW	CIRCUIT	COMMENTS
WIRING SCHEDULE	SUA 674	240/480 VOLTS			
39	EX 41mm	2-#8		5	ES-163
46	EX 41mm	2-#8		7	CC-164
			2-#8	6	VMS-164
			2-#8	1	LIGHTING
			2-#8	5	ES-163
54	53mm		2-#8	6	VMS-164
			4-#6	1,2	LIGHTING
	53mm		2-#8	5	ES-163
			2-#8	7	CC-164
	53mm		EMPTY	---	SPARE
55	EX 41mm	4-#6		1,2	LIGHTING
56	EX 35mm	2-#6		2	LIGHTING
63	EX 41mm	2-#6		1	LIGHTING
~~65~~	~~53mm~~		~~3-#2~~		~~UNFUSED POWER~~

DELETED BY C.O.2

T. 26N. R. 4E. W. M.



CONSTRUCTION NOTES

(11) REMOVE CONDUCTORS FROM CONDUIT. PREPARE CONDUIT FOR FUTURE USE.

(13) SPLICE NEW CONDUCTORS TO APPROPRIATE EXISTING CIRCUIT CONDUCTORS PER WIRING SCHEDULE.

(17) REMOVE CONDUCTORS AND ABANDON CONDUIT.

(21) REMOVE JUNCTION BOX AND ABANDON CONDUIT. BACKFILL VOID.

(22) INSTALL FOUNDATION AND TYPE E SERVICE CABINET PER BREAKER SCHEDULE AND STANDARD PLAN J-3d WITH THE EXCEPTION THAT THE TRANSFORMER INSTALLED SHALL BE A 3KVA-480/120V. INSTALL A 15 AMP SECONDARY CIRCUIT BREAKER. SEAL CABINET TO THE FOUNDATION WITH A 13mm BEAD OF SILICONE. COORDINATE THE POWER CONNECTION WITH THE UTILITY COMPANY THROUGH THE ENGINEER.

(23) REMOVE TYPE E SERVICE CABINET, FOUNDATION, AND CONDUIT ELBOWS. BACKFILL VOID. COORDINATE POWER DISCONNECT WITH THE UTILITY COMPANY THROUGH THE ENGINEER.

(30) LABEL EXISTING CONDUCTORS PER WIRING SCHEDULE.

(37) ~~DRILL CONDUIT UNDER ROADWAY.~~ DELETED

(38) PROVIDE ENOUGH CONDUIT AND CONDUCTORS FOR UTILITY COMPANY TO MAKE CONNECTION. COORDINATE POWER CONNECTION WITH UTILITY COMPANY THROUGH THE ENGINEER. INSTALLED NEW POWER POLE PER CHANGE ORDER 2

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NOTE: FOR LEGEND SEE SHEET E1.

0 10 20 30 40 50
SCALE IN METERS

SERVICE BREAKER SCHEDULE - SUA 674

	CIRCUIT	BREAKER RATING	CONTACTOR SIZE	LOAD (KVA)
	MAIN	100AMP TPST	N/A	
1	ILLUMINATION	20AMP DPST	30 AMP	11.0
2	ILLUMINATION	20AMP DPST	30 AMP	10.0
3	ILLUM.(SPARE)	20AMP DPST	30 AMP	0.0
4	ILLUM.(SPARE)	20AMP DPST	30 AMP	0.0
5	ES-163	20AMP DPST	N / A	3.0
6	VMS-164	20AMP DPST	N / A	3.0
7	CC-164	20AMP DPST	N / A	3.0
8	SPARE	20AMP DPST	N / A	0.0
9	SPARE	20AMP DPST	N / A	0.0
		CONTINUOUS		24.3
		PEAK		33.0

DESIGNED BY	K. CALAIS			
ENTERED BY	K. CALAIS			
CHECKED BY	T. THAYER			
PROJ. ENGR.	J.JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

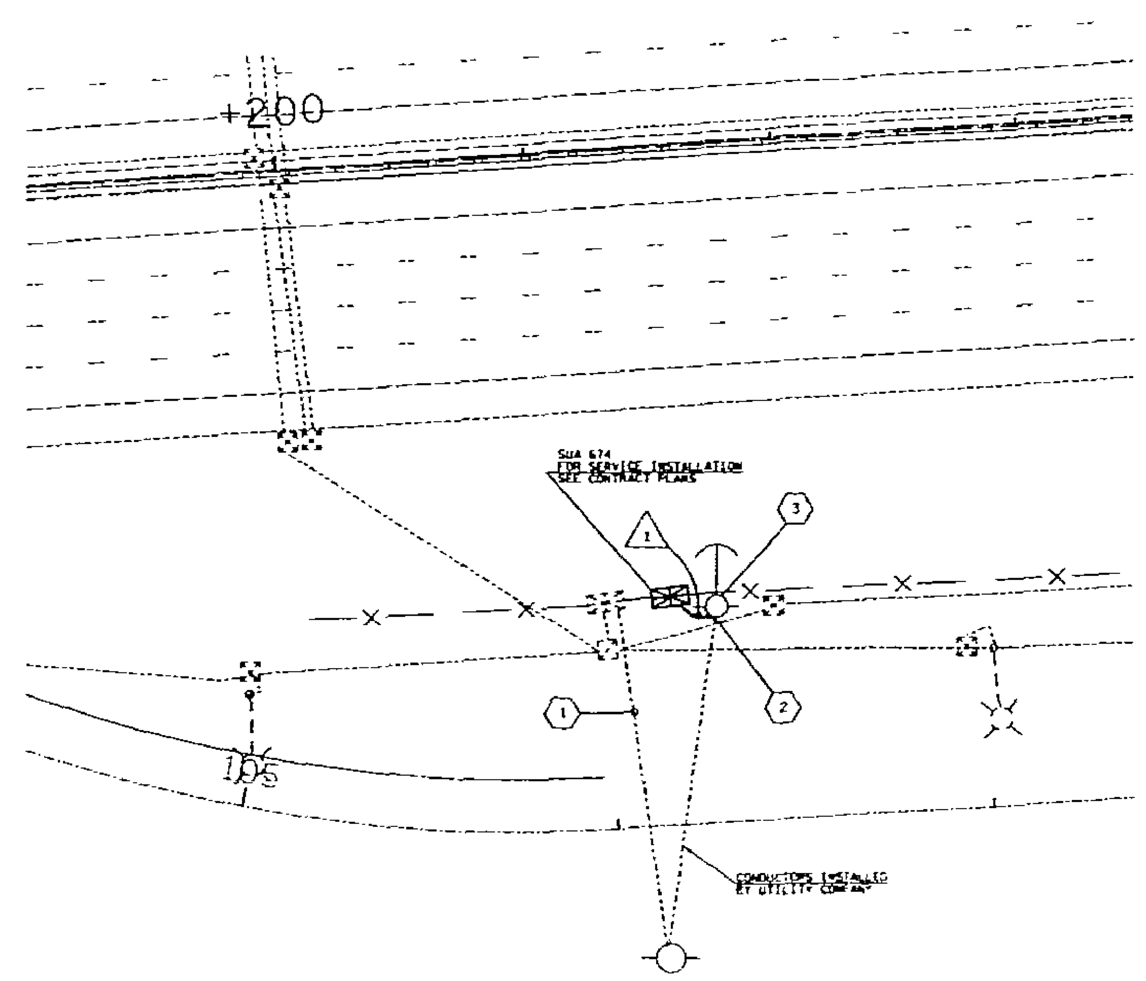
ILLUMINATION PLAN

E10

SHEET 48 OF 138 SHEETS

PLOT11 22 JUL 98 c:\dgn\2538co1.dgn CalaisK

Change Order No. 2
Sheet 3 of 3
Contract 5337



CONSTRUCTION NOTES

1. ABANDON CONDUIT.
2. INSTALL 9.5 METER CLASS 3 WESTERN RED CEDAR TIMBER POLE PER CITY LIGHT CONSTRUCTION GUIDELINE D3-3. INSTALL A "10M" DOWN GUY AND ANCHOR PER CITY LIGHT CONSTRUCTION GUIDELINE D6-4. INSTALL CONDUIT AND CONDUCTORS AS INDICATED IN THE PLANS FROM THE CABINET UP THE POLE PER CITY LIGHT CONSTRUCTION GUIDELINE UT-10 AND UT-10.1. CU?L 5' MINIMUM OF CONDUCTORS AT THE WEATHERHEAD.
3. COORDINATE POWER CONNECTION WITH UTILITY COMPANY THROUGH THE ENGINEER.

WIRING SCHEDULE					SERVICE NO. SAD 674
△ NO.	CONDUIT SIZE	CONDUCTORS EXISTING	CONDUCTORS NEW	CIRCUIT	COMMENTS
1	2"		3-#2	—	UNFUSED POWER

FOR "AS CONSTRUCTED PLANS"

DESIGNED BY	K. CALAIS			
ENTERED BY	K. CALAIS			
CHECKED BY	T. THAYER			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	NH-0053(839)
JOB NUMBER 96W067		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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VIC NORTHGATE WAY TO VIC NE 145TH ST

ILLUMINATION PLAN

E10

SHEET 48A OF 138 SHEETS

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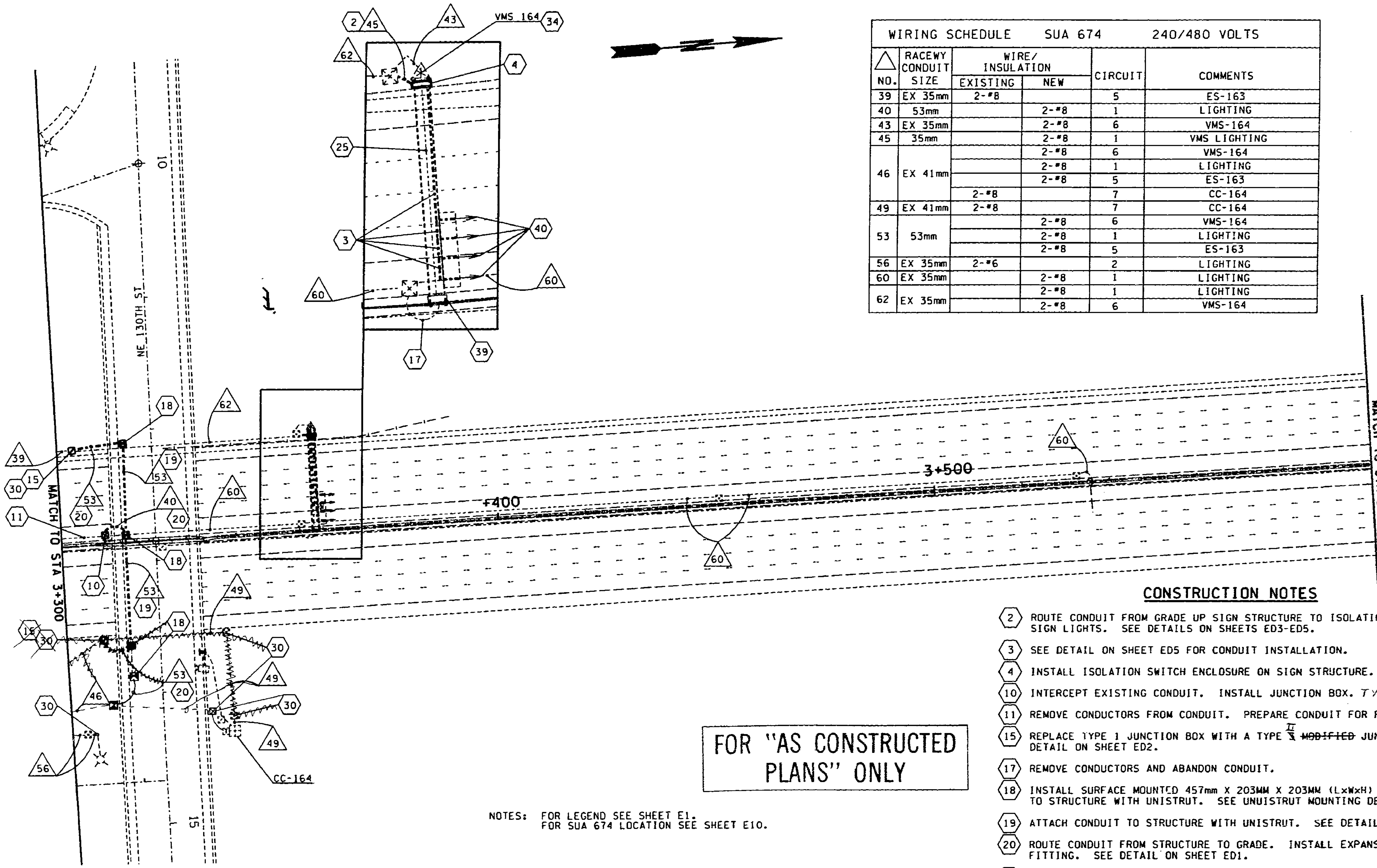

WIRING SCHEDULE SUA 674 240/480 VOLTS					
△ NO.	RACEWY CONDUIT SIZE	WIRE/ INSULATION EXISTING	WIRE/ INSULATION NEW	CIRCUIT	COMMENTS
39	EX 35mm	2-#8		5	ES-163
40	53mm		2-#8	1	LIGHTING
43	EX 35mm		2-#8	6	VMS-164
45	35mm		2-#8	1	VMS LIGHTING
46	EX 41mm		2-#8	6	VMS-164
			2-#8	1	LIGHTING
			2-#8	5	ES-163
		2-#8		7	CC-164
49	EX 41mm	2-#8		7	CC-164
53	53mm		2-#8	6	VMS-164
			2-#8	1	LIGHTING
			2-#8	5	ES-163
56	EX 35mm	2-#6		2	LIGHTING
60	EX 35mm		2-#8	1	LIGHTING
62	EX 35mm		2-#8	1	LIGHTING
			2-#8	6	VMS-164

CONSTRUCTION NOTES

2. ROUTE CONDUIT FROM GRADE UP SIGN STRUCTURE TO ISOLATION SWITCH ENCLOSURE AND SIGN LIGHTS. SEE DETAILS ON SHEETS ED3-ED5.
3. SEE DETAIL ON SHEET ED5 FOR CONDUIT INSTALLATION.
4. INSTALL ISOLATION SWITCH ENCLOSURE ON SIGN STRUCTURE. SEE DETAIL ON SHEET ED5.
10. INTERCEPT EXISTING CONDUIT. INSTALL JUNCTION BOX. TYPE I
11. REMOVE CONDUCTORS FROM CONDUIT. PREPARE CONDUIT FOR FUTURE USE.
15. REPLACE TYPE 1 JUNCTION BOX WITH A TYPE II ~~1 MODIFIED~~ JUNCTION BOX. SEE DETAIL ON SHEET ED2.
17. REMOVE CONDUCTORS AND ABANDON CONDUIT.
18. INSTALL SURFACE MOUNTED 457mm X 203MM X 203MM (LxWxH) NEMA JUNCTION BOX ATTACHED TO STRUCTURE WITH UNISTRUT. SEE UNUISTRUT MOUNTING DETAIL ON SHEET ED2.
19. ATTACH CONDUIT TO STRUCTURE WITH UNISTRUT. SEE DETAIL ON SHEET ED2.
20. ROUTE CONDUIT FROM STRUCTURE TO GRADE. INSTALL EXPANSION/DEFLECTION FITTING. SEE DETAIL ON SHEET ED1.
25. REMOVE UNUSED CONDUIT FROM SIGN STRUCTURE.
30. LABEL EXISTING CONDUCTORS PER WIRING SCHEDULE.
34. MAKE NECESSARY POWER CONNECTIONS.
39. REMOVE ISOLATION SWITCH ENCLOSURE AND UNUSED CONDUIT.
40. ROUTE CONDUIT TO SIGN LIGHTS PER DETAILS ON SHEETS ED3 & ED4.

FOR "AS CONSTRUCTED PLANS" ONLY

NOTES: FOR LEGEND SEE SHEET E1.
FOR SUA 674 LOCATION SEE SHEET E10.

0 10 20 30 40 50
SCALE IN METERS

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PLOT12

DESIGNED BY K. CALAIS				
ENTERED BY K. CALAIS				
CHECKED BY T. THAYER				
PROJ. ENGR. J.JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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SR5
VIC NORTHGATE WAY TO VIC NE 145TH ST

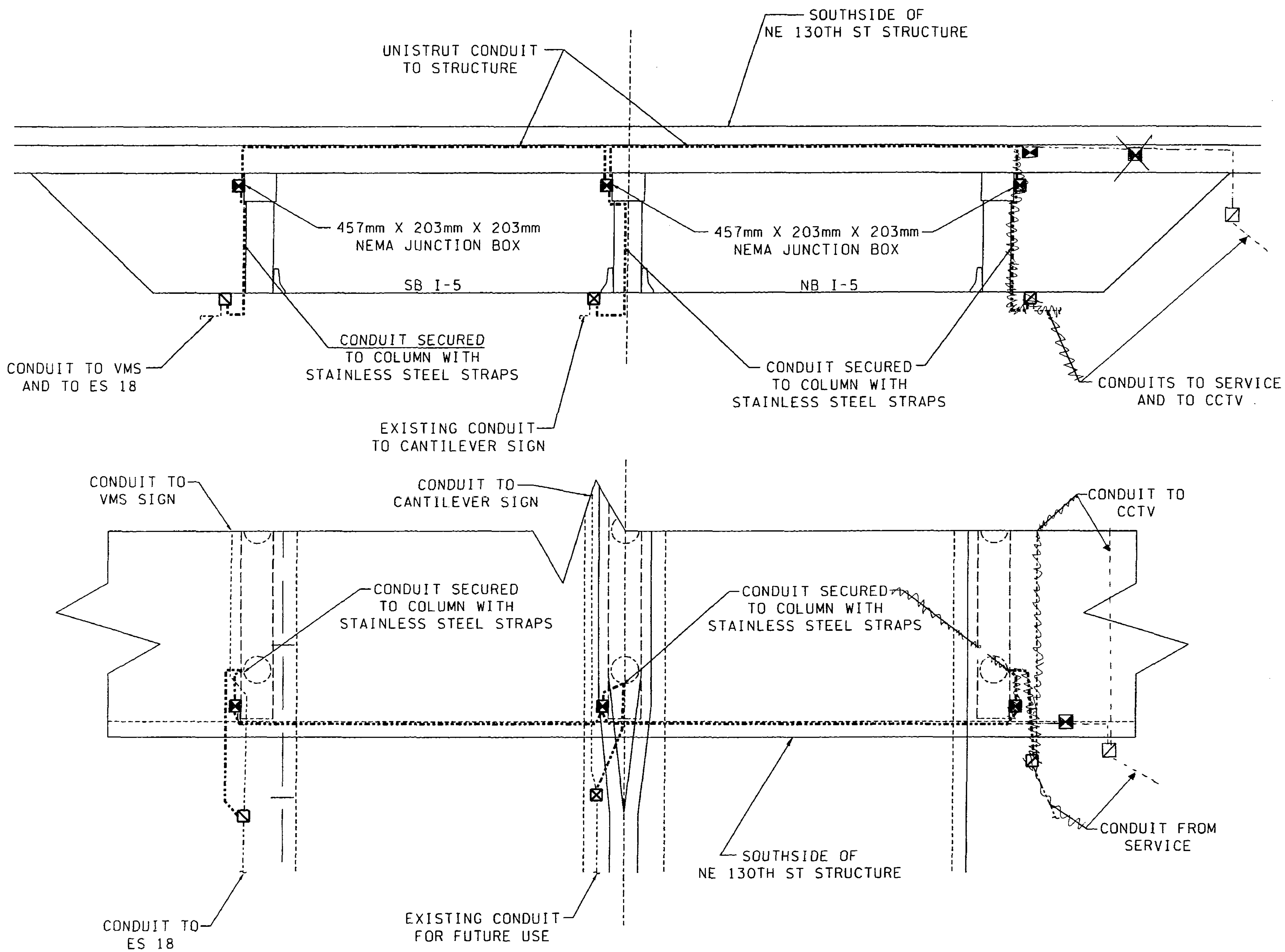
ILLUMINATION PLAN

E11

SHEET 49 OF 138 SHEETS

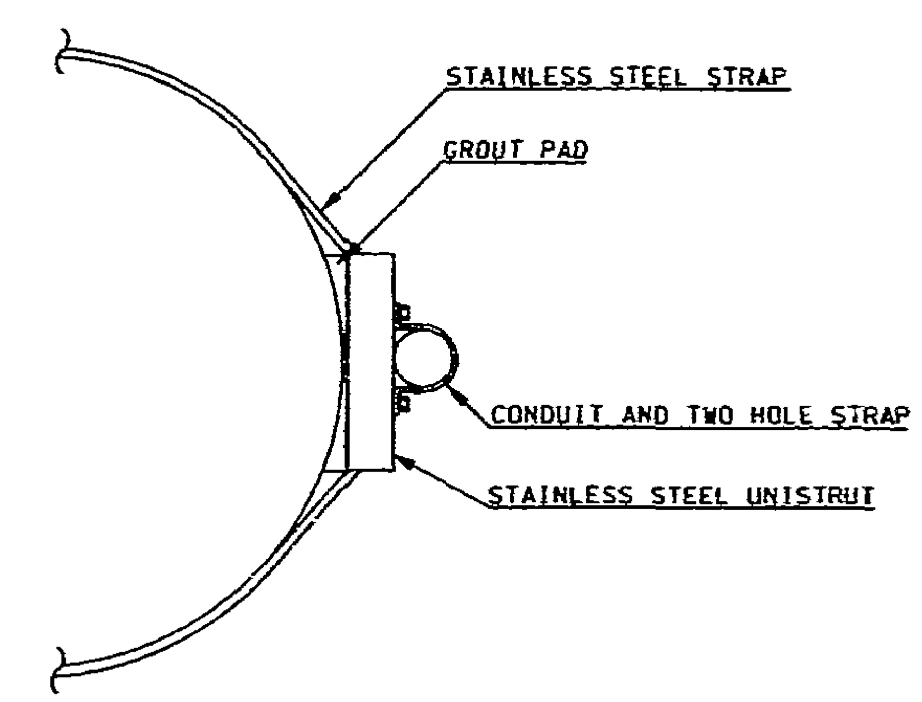
06 JAN 98c:\dgn\current\ol2538\ncwithl\details.dgn calaisk

PLOT5



NE 130TH ST STRUCTURE

NOT TO SCALE



COLUMN MOUNTING DETAIL

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY K. CALAIS				
ENTERED BY K. CALAIS				
CHECKED BY T. THAYER				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		NH-0053(839)
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

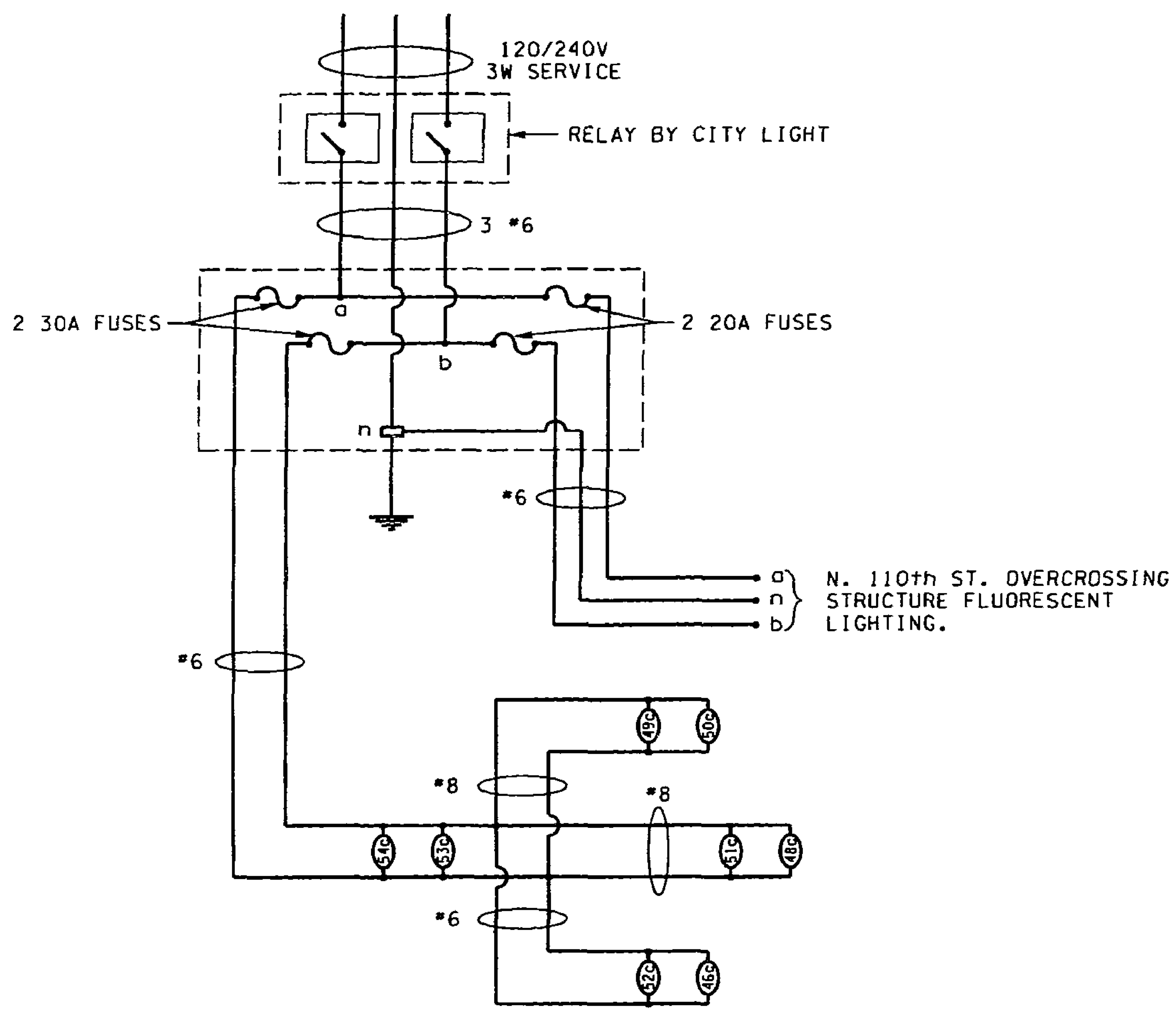
SR5

VIC NORTHGATE WAY TO VIC NE145TH ST

ELECTRICAL DETAILS

ED1

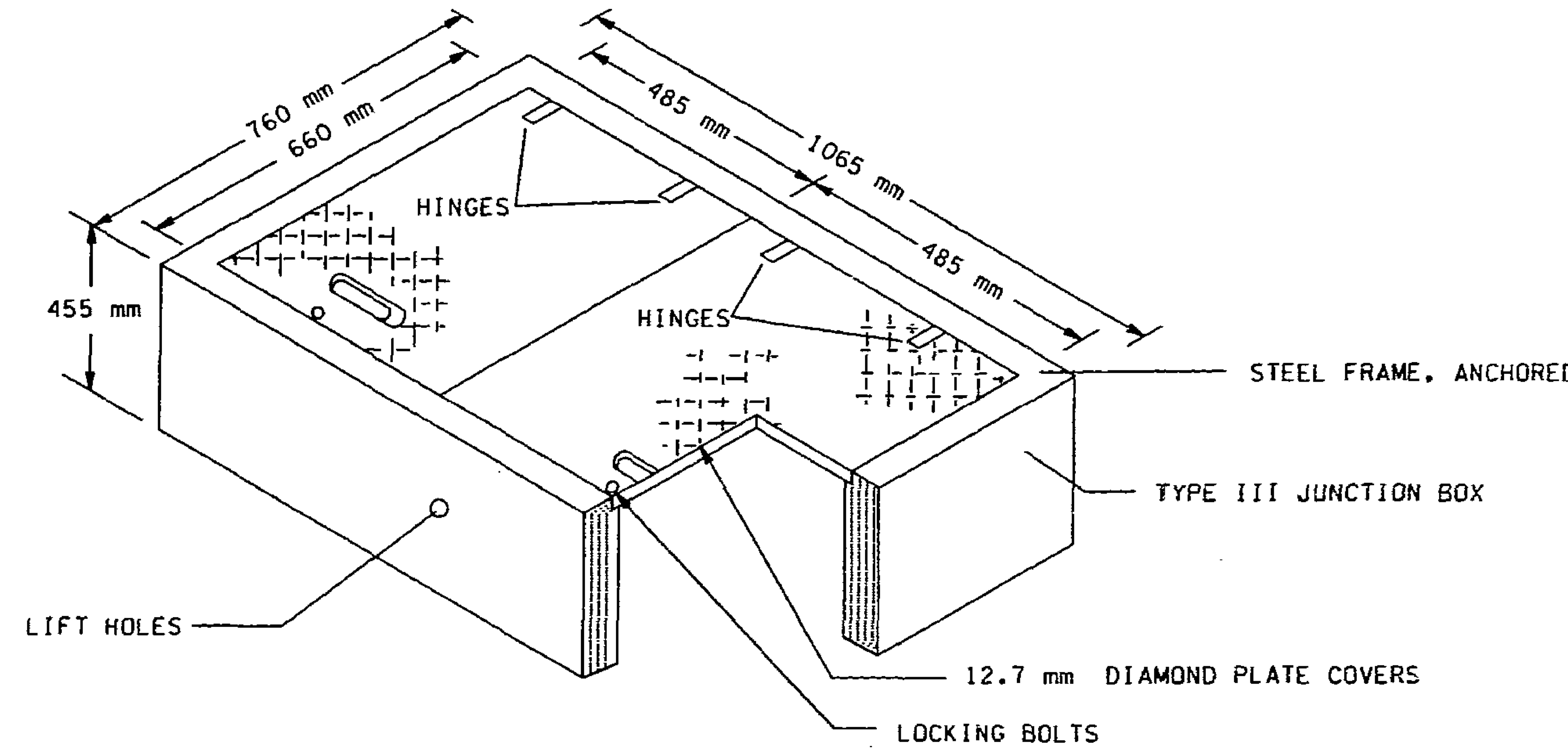
SHEET 50 OF 138 SHEETS



FEEDER CONDUCTORS ARE #6 STRANDED WITH THW INSULATION.
ALL CONDUCTORS UP STANDARD ARE #10 STRANDED WITH THW INSULATION.

LIGHTING WIRING DIAGRAM FOR N. 110th STREET

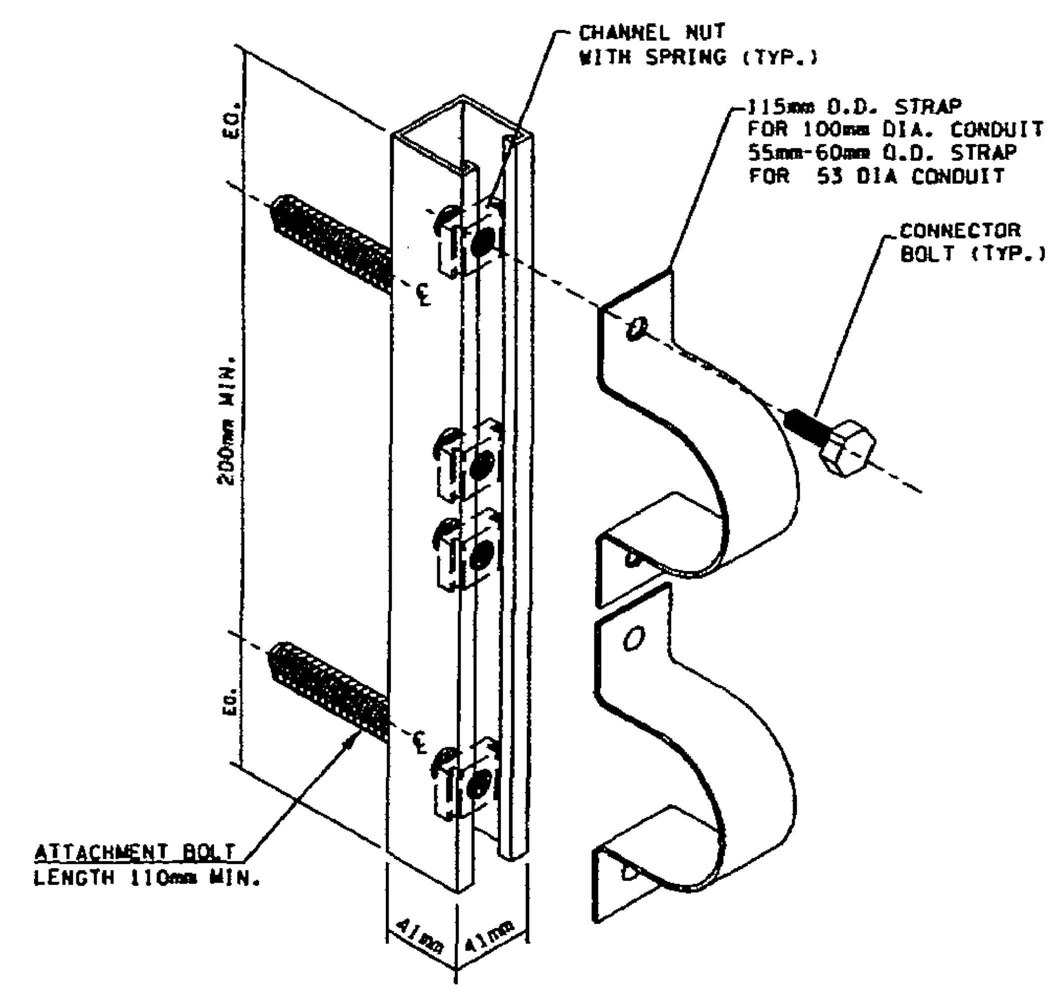
SCL PP#86 120/240V CITY ILLUMINATION SYSTEM



TYPE 3 MODIFIED JUNCTION BOX (DUAL LID)

NOT TO SCALE

ALL TYPE 3 MODIFIED JUNCTION BOX CALLED ON PLANS SHALL MEET ALL SPECIFICATIONS ON STANDARD PLAN J-11a WITH THE EXCEPTION OF THE LID AS SHOWN ON THIS DETAIL.



NOTES

MOUNTING HARDWARE DETAILS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR MAY PROPOSE ATTACHMENT MODIFICATIONS, SUBJECT TO APPROVAL BY THE PROJECT ENGINEER.

DRILLING THROUGH LONGITUDINAL REINFORCING STEEL IS NOT ALLOWED. IF STEEL IS HIT WHILE DRILLING, THE LOCATION MUST BE MOVED AND THE ABANDONED HOLE GROUT FILLED WITH A NON-SHRINK GROUT CONFROMING TO THE REQUIREMENTS OF SECTION 6-03.3(36) OF THE STANDARD SPECIFICATIONS. THERE SHALL BE A MINIMUM 80mm EDGE DISTANCE TO THE CENTERLINE OF BOLT HOLES IN CONCRETE. MOUNT UNISTRUT USING AN APPROVED RESIN BONDED ANCHOR BOLT SYSTEM, INSTALLED PER MANUFACTURERES RECOMMENDATION IN DRY CONDITIONS. ANCHOR BOLTS SHALL BE STAINLESS STEEL AND SHALL BE A MINIMUM OF 14mm DIA. (EXPANSION ANCHORS ARE NOT ALLOWED.)

FOR "AS CONSTRUCTED PLANS" ONLY

UNISTRUT MOUNTING DETAIL

NOT TO SCALE

DESIGNED BY WSDOT				
ENTERED BY WSDOT				
CHECKED BY WSDOT				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

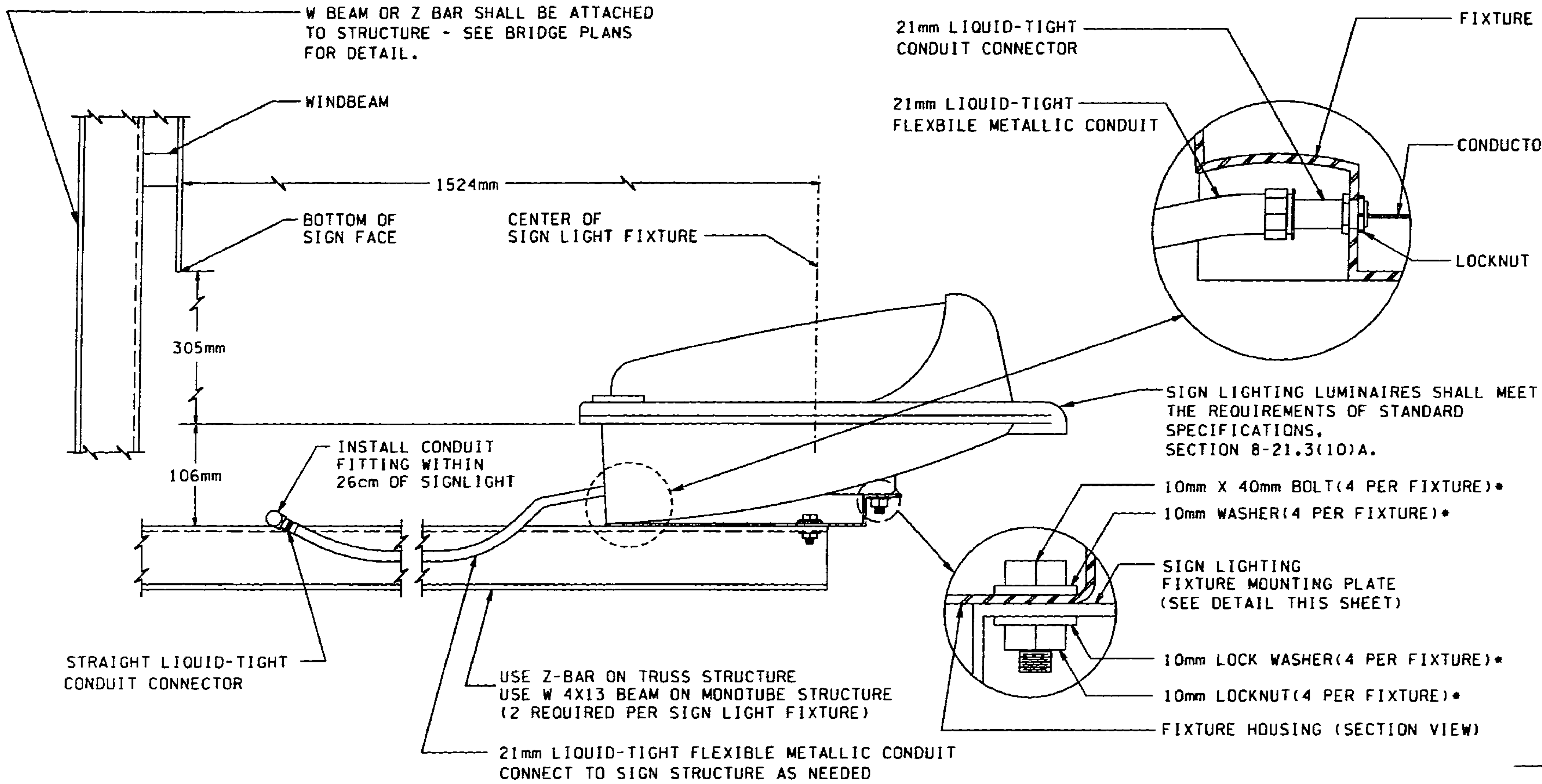
SR5
VIC NORTHGATE WAY TO VIC NE145TH ST

ELECTRICAL DETAILS

ED2

SHEET 51 OF 138 SHEETS

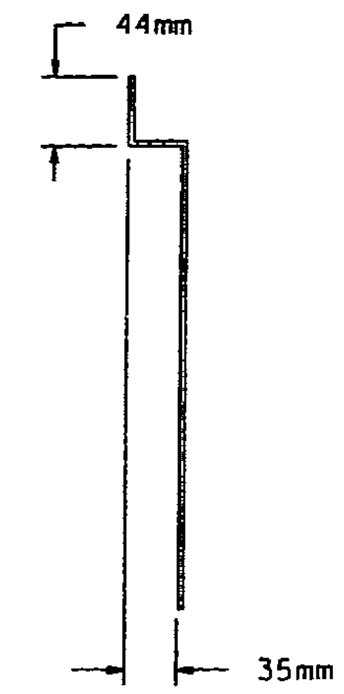
PLOT1 06 JAN 98c:\dgn\current\o12538\ncwithl\details.dgn calaisk



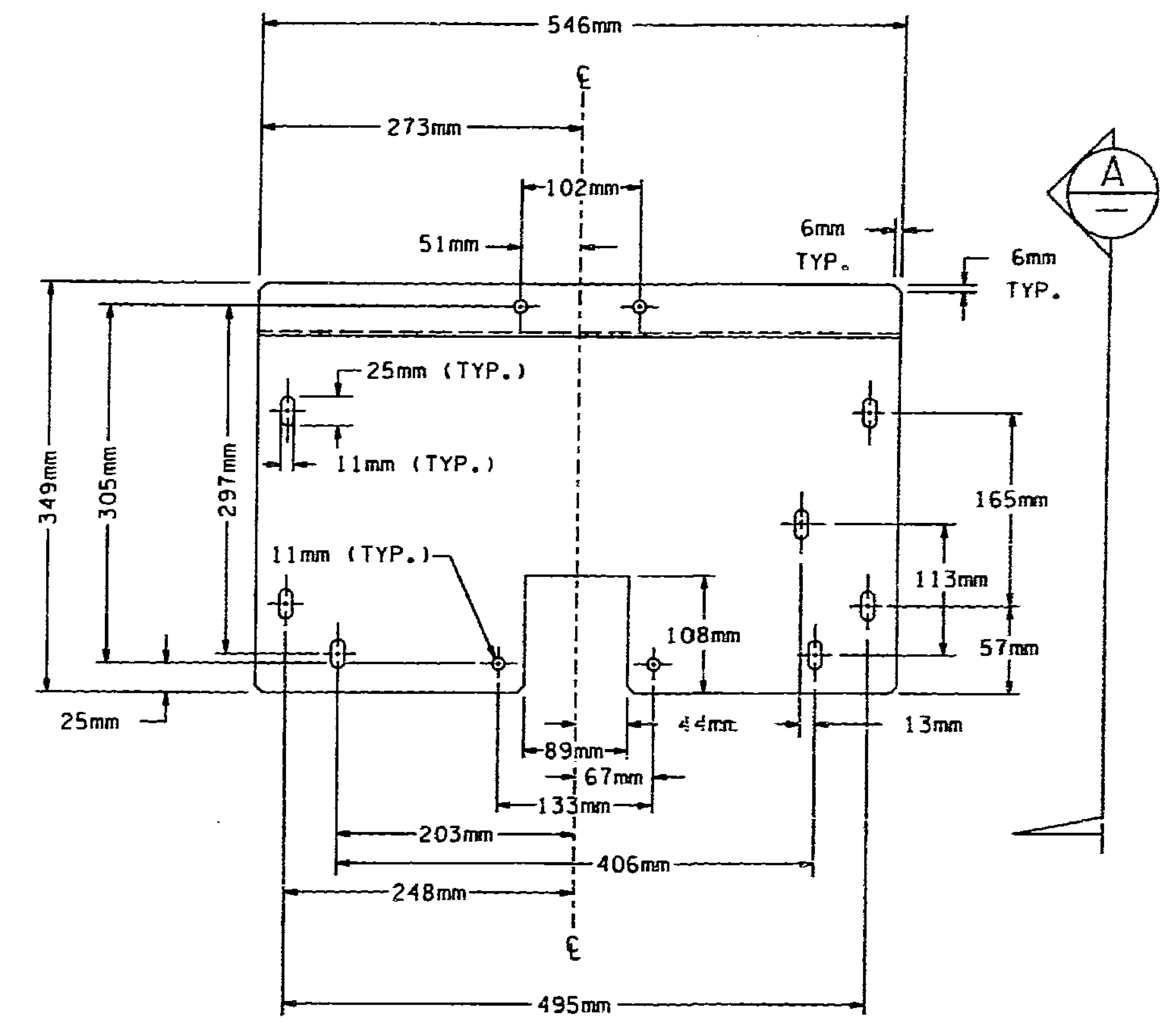
LIGHTING FIXTURE MOUNTING DETAIL

• ITEMS AVAILABLE THRU FIXTURE MANUFACTURER

NOTE: ALL NUTS, BOLTS, WASHERS AND OTHER HARDWARE SHALL BE STAINLESS STEEL.

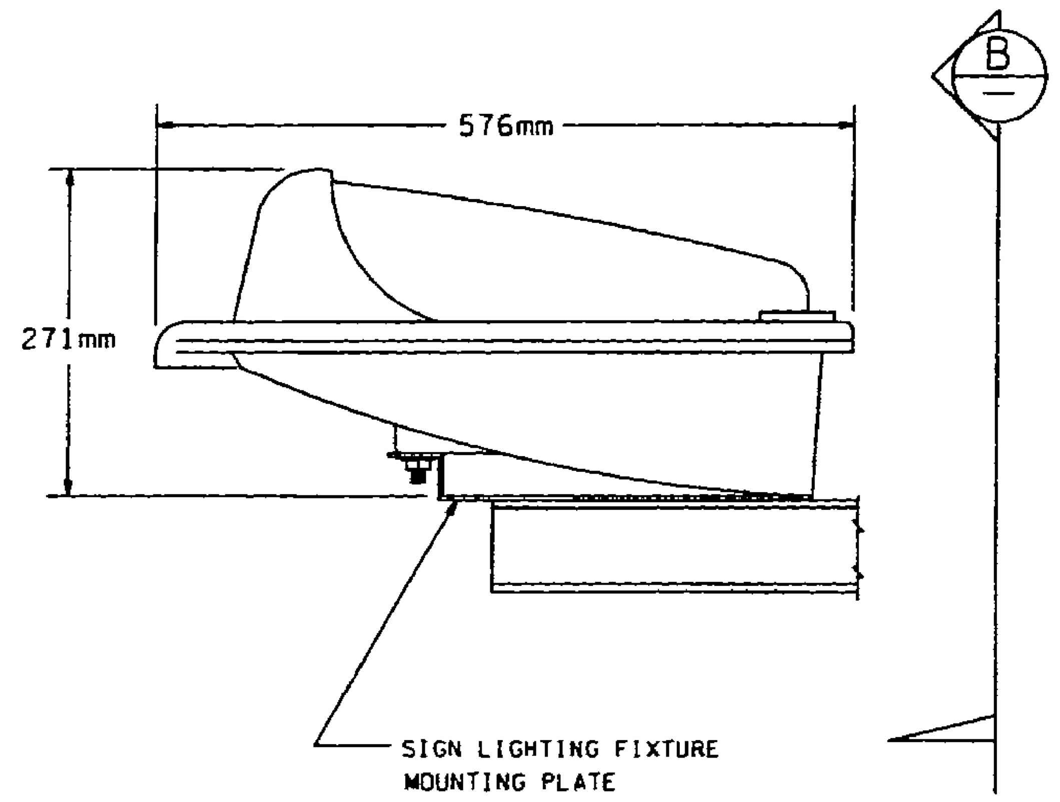


SECTION A

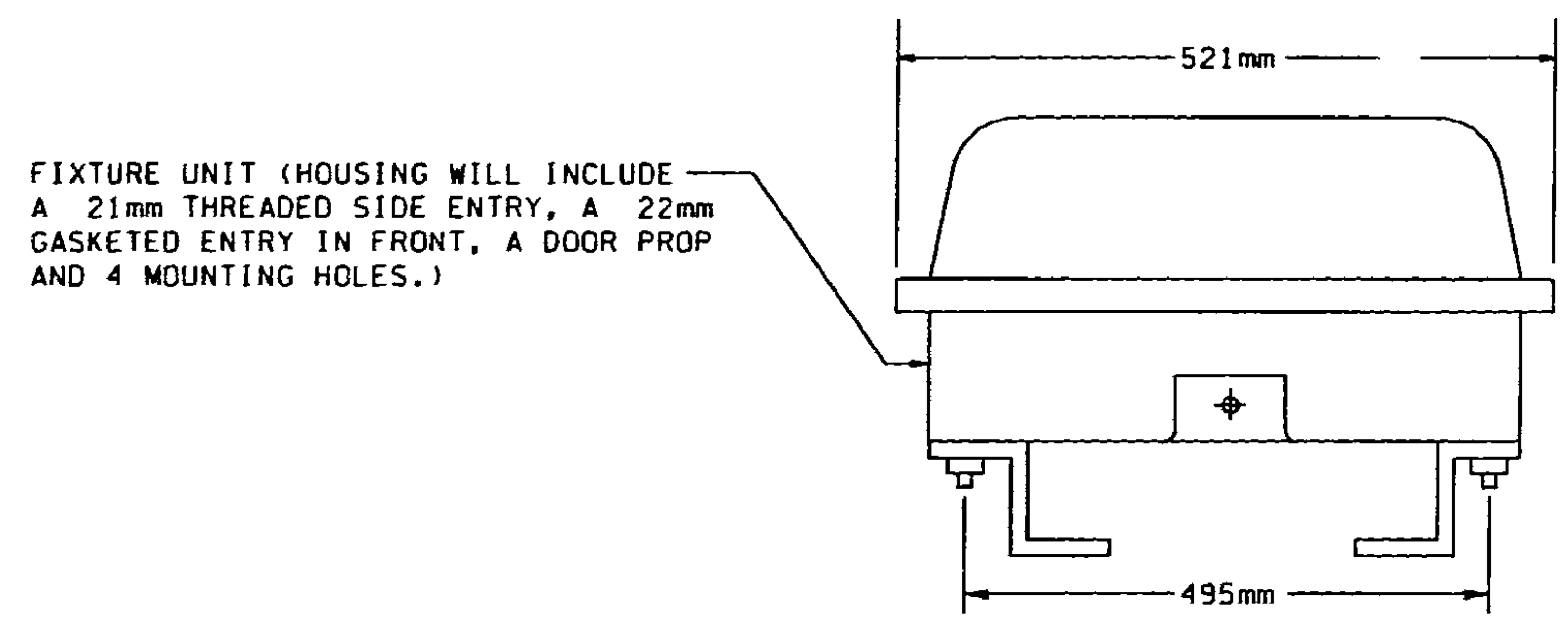


•SIGN LIGHTING FIXTURE MOUNTING PLATE DETAIL

MATERIAL: GALV. 10 GAGE STEEL PLATE

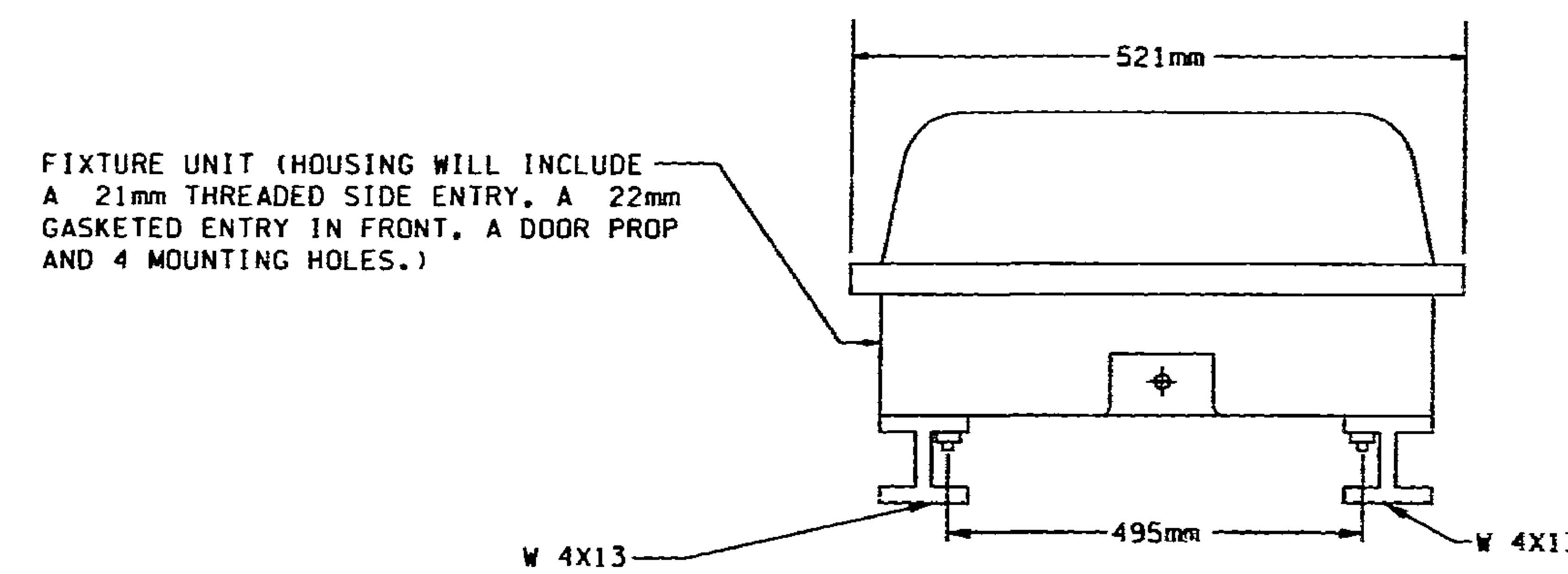


LIGHTING FIXTURE DETAIL



(TRUSS STRUCTURE)

SECTION B



(MONOTUBE STRUCTURE)

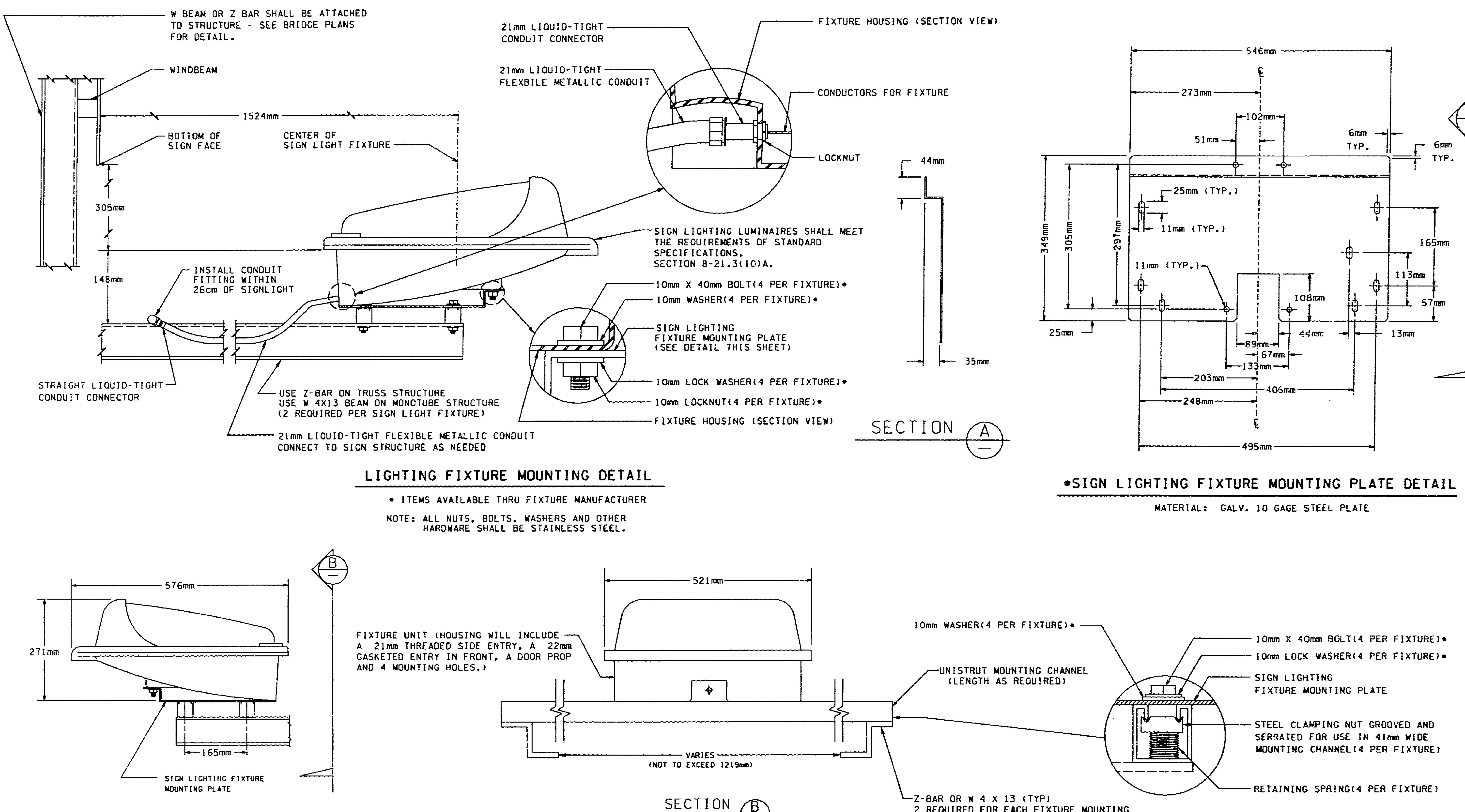
SECTION B

SIGN LIGHT MOUNTING DETAILS

NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY WSDOT					REGION NO. 10	STATE WASH	FED.AID PROJ.NO. NH-0053(839)	ENVIRONMENTAL AND ENGINEERING SERVICE CENTER	Washington State Department of Transportation	SR5 VIC NORTHGATE WAY TO VIC NE145TH ST	ED3
ENTERED BY WSDOT					JOB NUMBER 97W058						
CHECKED BY WSDOT					CONTRACT NO.						
PROJ. ENGR. J. JOHNSON										ELECTRICAL DETAILS	SHEET 52 OF 138 SHEETS
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY							



LIGHTING FIXTURE MOUNTING DETAIL

• ITEMS AVAILABLE THRU FIXTURE MANUFACTURER

NOTE: ALL NUTS, BOLTS, WASHERS AND OTHER HARDWARE SHALL BE STAINLESS STEEL.

•SIGN LIGHTING FIXTURE MOUNTING PLATE DETAIL

MATERIAL: GALV. 10 GAGE STEEL PLATE

LIGHTING FIXTURE DETAIL

SIGN LIGHT RETRO-FIT DETAILS

NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

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REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	NH-0053(839)
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE145TH ST

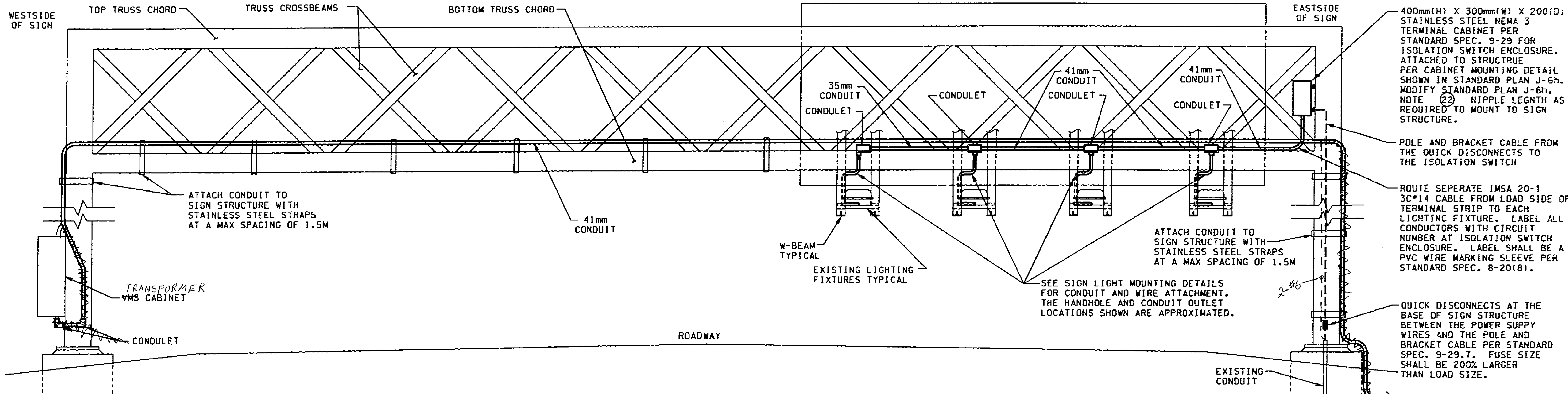
ELECTRICAL DETAILS

ED4

SHEET 53 OF 138 SHEETS

06 JAN 98c:\dgn\current\ol2538\ncwith\details.dgn calaisk

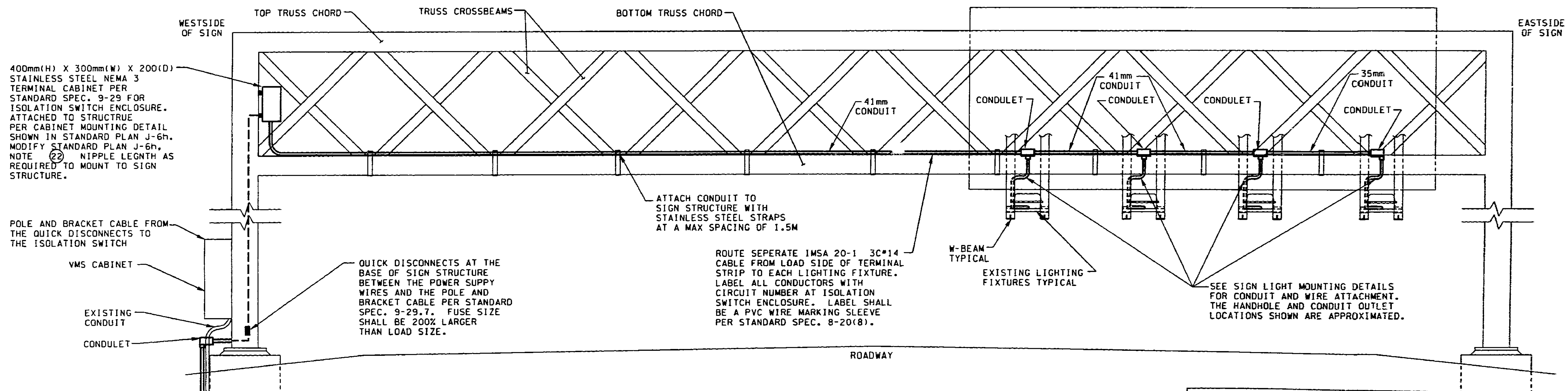
PLOT4



CONDUIT ROUTING DETAILS FOR VMS ~~156~~ & VMS 158

LOOKING AHEAD ON STATION
NOT TO SCALE

*NOTE: 156 TRANSFORMER + VMS CABINET ARE ON THE EASTSIDE OF STRUCTURE.



CONDUIT ROUTING DETAILS FOR VMS 161 & VMS 164

LOOKING AHEAD ON STATION
NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY K. CALAIS					
ENTERED BY K. CALAIS					
CHECKED BY T. THAYER					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		NH-0053(839)
CONTRACT NO.		

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ELECTRICAL DETAILS

ED5

SHEET 54 OF 138 SHEETS

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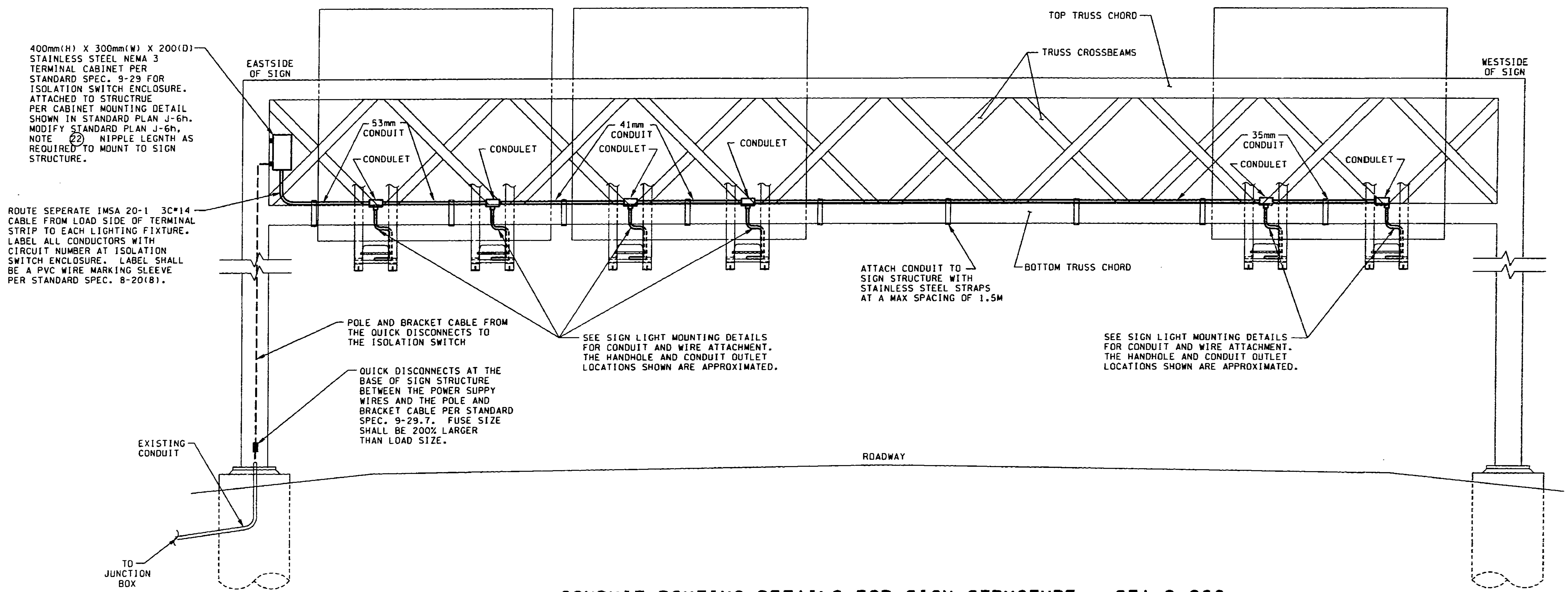

CONDUIT ROUTING DETAILS FOR SIGN STRUCTURE @ STA 2+960

LOOKING BACK ON STATION
NOT TO SCALE

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY K. CALAIS				
ENTERED BY K. CALAIS				
CHECKED BY T. THAYER				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	NH-0053(839)
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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR5
VIC NORTHGATE WAY TO VIC NE145TH ST

ELECTRICAL DETAILS

ED6

SHEET 55 OF 138 SHEETS

CONSTRUCTION NOTES

1 EXISTING TWO 103 mm MAIN LINE COMMUNICATION CONDUITS WITH FIBER OPTIC AND TWISTED PAIR CABLES, LOCATED 6 m FROM THE EDGE OF TRAVELED WAY.

2 EXISTING TWO 103 mm MAIN LINE COMMUNICATION CONDUITS WITH FIBER OPTIC. THE CONDUIT TRANSITIONS FROM 1.5 m OFFSET TO 6 m FROM EXISTING EDGE OF TRAVELED WAY.

3 EXISTING TWO 103 mm MAIN LINE COMMUNICATION CONDUITS WITH FIBER OPTIC AND TWISTED PAIR CABLES, LOCATED 1.5 m FROM THE EDGE OF TRAVELED WAY.

4 EXISTING SWING GATE CABINET.

5 EXISTING GATE CONTROLLER CABINET GC-155. PROVIDE AND INSTALL LLM1000 TRANSMITTER, RELAY AND ~~TYPE 66 TERMINAL BLOCK~~ FOR 6 TWP CABLE PER SPECIAL PROVISION. TERMINATE THE 6 TWP ~~ON THE TERMINAL BLOCK~~ AND MAKE REQUIRED COMMUNICATION CONNECTION TO VMS AND CMS SIGNS. REMOVE EX. 3-#12 CONTROL CONDUCTORS AND EX. 2-#8 POWER TO VMS-156.

6 EXISTING TRANSFORMER CABINET. MAKE REQUIRED POWER CONNECTION TO SC&DI EQUIPMENT.

7 EXISTING COMMUNICATION CABLE VAULT. PROVIDE AND INSTALL A 50 mm DRAIN PIPE FROM THE DRAIN HOLE UNDER THE VAULT TO DRAINAGE TANK AND OPEN THE DRAIN HOLE. INSTALL 150mm DRAIN GRID IN THE SUMP.

8 EXISTING COMMUNICATION CABLE VAULT. REMOVE EXISTING LID AND PROVIDE AND INSTALL A LID WITH H-35 LOADING PER MANUFACTURE RECOMMENDATION. SEE SHEET SCD-8 FOR DETAIL.

9 EXISTING TRANSFORMER CABINET. MAKE REQUIRED POWER CONNECTION FOR 3-6 CONDUCTORS, 480V-3 PHASE TO EXISTING DRAGNET BREAKER.

10 RETROFIT EXISTING VMS SIGN WITH LED PER SPECIAL PROVISIONS AND SIGNING DETAIL.

11 EXISTING VMS CONTROLLER CABINET. REMOVE EXISTING 1 KVA TRANSFORMER FROM VMS#156, VMS#158 AND VMS#161. PROVIDE AND INSTALL RECEIVER LLM1000, ~~RELAY AND TERMINAL BLOCK~~ IN THE CABINET. INSTALL EXISTING MODEM ON THE BACK PANEL AND MAKE REQUIRED POWER AND COMMUNICATION CONNECTION IN THE CABINET. SEE SHEET SCD-7 FOR DETAILS. REMOVE EX. 3-#12 CONTROL CONDUCTORS.

12 INSTALL A TYPE 2 (2m x 2m) INDUCTION LOOP VEHICLE DETECTOR PER STANDARD PLAN J-8a AND DETAIL SHEET SCD-8.

13 MODIFY OR REMOVE EXISTING CABINET FOUNDATION AND INSTALL MULTIPLE CABINET FOUNDATION WITH TRANSFORMER PER SC&DI DETAILS SHEET SCD-5.

14 PROVIDE AND INSTALL 480V /120V, 5 KVA TRANSFORMER AND CABINET FOR SC&DI EQUIPMENT, ON CONCRETE FOUNDATION. SEE SPECIAL PROVISIONS AND SC&DI DETAILS SCD-4.

15 REMOVE EXISTING TRAFFIC DATA ACCUMULATION CABINET AND DELIVER IT TO SIGNAL SHOP. PROVIDE AND INSTALL A MODEL 334 CONTROLLER CABINET COMPLETE PER SPECIAL PROVISIONS. MAKE REQUIRED POWER AND COMMUNICATION CONNECTION TO THE CABINET. SEE SHEET SCD-1, SCD-2 AND SCD-3 FOR DETAILS. THE EXISTING 170 CONTROLLER WILL BE INSTALLED IN THE NEW CABINET BY STATE FORCES.

16 MODIFY OR REMOVE EXISTING CABINET FOUNDATION AND INSTALL SINGLE CABINET FOUNDATION PER SC&DI DETAILS SHEET SCD-5.

~~17 EXISTING ES-161. CONNECT THE NEW LOOP LEAD-IN CONDUCTORS TO THE TERMINAL STRIPS.~~ DELETED

18 REROUTE ONE 53 mm DIAMETER CONDUIT FROM EXISTING CONTROLLER CABINET FOUNDATION TO THE TYPE 1 JUNCTION BOX AND INSTALL POWER PER WIRE SCHEDULE.

19 EXISTING TERMINAL CABINET T20N. PULL BACK THE EXISTING 2-25 TWP TO THE EXISTING VAULT. REROUTE THE CONDUCTORS TO THE NEW TERMINAL CABINET TC-168 PER WIRE NOTES.

20 EXISTING LED CMS OPEN/CLOSED SIGN.

21 EXISTING CMS CONTROLLER CABINET. PROVIDE AND INSTALL RECEIVER LLM1000, ~~RELAY AND TERMINAL BLOCK IN THE CABINET.~~ MAKE REQUIRED COMMUNICATION CONNECTION IN THE CABINET.

22 EXISTING SC&DI CABINET. INSTALL TYPE 66 TERMINAL BLOCK FOR 6 TWP CABLE AS REQUIRED. TERMINATE THE 6 TWP ON A TYPE 66 TERMINAL BLOCK IN THE CABINET.

23 MAKE REQUIRED LOOP SPLICE IN THE JUNCTION BOX. UNCOIL THE EXISTING 2-C(SH) FROM NB LOOPS 1,2 & 3 AND INSTALL PER WIRE SCHEDULE.

24 REMOVE EXISTING JUNCTION BOX. PROVIDE AND INSTALL TYPE 1 JUNCTION BOX. PULL BACK EXISTING 2-2C(SH) TO THIS JUNCTION BOX AND INSTALL PER WIRE NOTES.

25 EXTEND THE EXISTING CONDUIT PER STANDARD PLAN J8a FOR NEW LOOPS.

26 PULL BACK ALL CONDUCTORS TO THE JUNCTION BOX AND INSTALL PER WIRE NOTES. ALL ADDITIONAL EXISTING 25 TWP CABLES SHALL BE COILED AND RACK MOUNTED IN THE CABLE VAULT PER SPECIAL PROVISIONS.

27 REMOVE EXISTING CONDUITS.

28 PROVIDE AND INSTALL 610mm HIGH X 457mm WIDE X 203mm DEEP TERMINAL CABINET AND TYPE 66 TERMINAL BLOCK ON EXISTING COLUMN. SEE SPECIAL PROVISIONS AND DETAILS.

~~29 THE EXISTING CONDUITS ARE BLOCKED. REMOVE ALL CABLES BY PULLING THE CABLES VERTICALLY UPWARD BY USING TAGGER AND TRIPOD OR SIMILAR OPERATION. CLEAN THE CONDUITS AND INSTALL CONDUCTORS PER WIRE SCHEDULE. SEAL THE CONDUIT AFTER INSTALLING CONDUCTORS AND CAP SPARE CONDUIT.~~ DELETED

30 SEE ILLUMINATION PLAN SHEET FOR CONTINUATION OF POWER.

31 INTERCEPT EXISTING 53mm CONDUIT AND INSTALL TYPE 2 JUNCTION BOX. INSTALL CONDUIT TO EXISTING VMS CABINET PER WIRE NOTES.

32 INTERCEPT EXISTING 23mm CONDUIT FROM THE FOUNDATION AND EXTEND IT TO THE EXISTING TYPE 3 JUNCTION BOX.

33 MAKE REQUIRED COMMUNICATION CONNECTION IN THE EXISTING TERMINAL CABINET.

~~34 IF THE EXISTING CONDUITS CAN NOT BE CLEANED, INSTALL 53mm CONDUIT UNDER THE ROADWAY BY APPROVED JACKING OR BORING METHOD. OPEN CUT ON ROADWAY IS NOT ALLOWED. SEE STANDARD SPECIFICATIONS SECTION 8-20.3(5) AND SPECIAL PROVISIONS.~~

35 REMOVE EXISTING TERMINAL CABINET T19N, FOUNDATION AND ALL ASSOCIATED CONDUIT TO THE JUNCTION BOX.

36 EXISTING TERMINAL CABINET T18N. PULL BACK THE EXISTING 2-25TWP TO EXISTING CABLE VAULT. REROUTE THE CONDUCTORS TO THE NEW TERMINAL CABINET TC-164 PER WIRE NOTES.

37 PROVIDE AND INSTALL SINGLE CABINET FOUNDATION FOR TERMINAL CABINET. SEE SHEET SCD-6 FOR DETAILS.

38 PROVIDE AND INSTALL 610mm HIGH X 457mm WIDE X 305mm DEEP TERMINAL CABINET AND TYPE 66 TERMINAL BLOCKS PER SPECIAL PROVISIONS.

39 EXISTING TERMINAL CABINET T~~18~~ 20 N-A PULL BACK THE EXISTING 2-25 TWP TO EXISTING CABLE VAULT. REROUTE THE CONDUCTORS TO THE NEW TERMINAL CABINET TC-170 PER WIRE NOTES.

40 INSTALL CONTROLLER CABINET ON EXISTING FOUNDATION.

41 REROUTE/RELOCATE EXISTING CONDUIT AND CONDUCTORS AROUND THE DRAGNET FOUNDATION PER WIRE NOTES. MAKE REQUIRED POWER SPLICE IN THE JUNCTION BOXES.

42 EXISTING VMS CONTROLLER CABINET (1220mm HIGH X 915mm WIDE X 305mm DEEP). REMOVE RUST, CHIPPED PAINT AND CLEAN THE CABINET AND EXTERIOR CABINET COVER (HEAT SHIELD). PAINT THE CABINET AND HEAT SHIELD. SEE STANDARD SPECIFICATIONS SECTION 6-07 AND SHEET SCD-7 FOR DETAILS.

WORK DELETED BY CHANGE ORDER # 11

~~43 PROVIDE AND INSTALL TWO 203mm FLASHING BEACONS AND AN ELECTRONIC FLASHING DEVICE CAPABLE OF PRODUCING UP TO 30 FLASHES PER MINUTE ON VMS 164. MAKE REQUIRED POWER CONNECTION TO FLASHER, AND BEACONS. MAKE REQUIRED CONTROL CONNECTION TO VMS CONTROLLER. THE BEACONS SHALL FLASH ALTERNATELY.~~

44 EXISTING COMMUNICATION CABLE VAULT. CORE DRILL THROUGH THE EXISTING END WALL AND PROVIDE AND INSTALL A 50mm DRAIN PIPE TO THE DRAIN HOLE UNDER THE VAULT. INSTALL 150mm DRAIN GRID IN THE SUMP.

45 EXISTING CAMERA CABINET. REMOVE EXISTING FIBER OPTIC SPLICE. PULL BACK THE MULTIMODE FIBER OPTIC CABLE TO THE CABLE VAULT. INSTALL EXISTING MULTIMODE FIBER OPTIC PER WIRE SCHEDULE AND MAKE REQUIRED FUSION SPLICE.

46 EXISTING COMMUNICATION CABLE VAULT. REMOVE ALL SPLICES FROM THE EXISTING 25 TWP CABLES. UNCOIL EXISTING 25 TWP CABLES AND INSTALL PER WIRE SCHEDULE. ALL ADDITIONAL EXISTING 25 TWP CABLES SHALL BE COILED AND RACK MOUNTED IN THE CABLE VAULT PER SPECIAL PROVISIONS.

47 EXISTING SC&DI CONDUIT. REMOVE THE EXISTING 25 TWP CABLE FROM ES-163 CONTROLLER CABINET TO T18N TERMINAL CABINET.

48 INSTALL A MODIFIED TYPE 2 (3m x 2m) INDUCTION LOOP VEHICLE DETECTOR PER STANDARD PLAN J-8A AND SHEET SCD-8.

49 MAKE REQUIRED SPLICE IN THE JUNCTION BOX.

50 INTERCEPT EXISTING CONDUITS WHEN PLACING CABINETS

SC&DI Legend

Existing New

- Type 1 Junction Box
- Type 2 Junction Box
- Type 3 Junction Box
- NEMA 4X Junction Box
- Controller Cabinet (Ramp Meter or Data Station)
- Transformer Cabinet
- SC&DI Cable Vault
- SC&DI Pull Box
- Terminal Cabinet
- Har Controller Cabinet
- Communications Hub
- Electrical Service Cabinet
- CCTV Controller Cabinet
- Type 2 (2m x 2m) Induction Loop Vehicle Detector
- Modified Type 2 (2m x 3m) Induction Loop Vehicle Detector
- 2m x 5m Type 1 Induction Loop Vehicle Detector
- CCTV Camera
- Conduit
- VMS Controller Cabinet
- Type 1 Signal Standard with Signal Heads
- Advanced Warning Sign
- Variable Message Sign
- Swing Gate

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA					
ENTERED BY H. MOSTAGHIMI					
CHECKED BY M. BANDY					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO. 5334		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI CONSTRUCTION NOTES

SCN1

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WIRE NOTES

• 120V POWER CONDUCTORS TO SC&DI CABINET SHALL BE ONE BLACK AND ONE WHITE.

•• SEE CONSTRUCTION NOTE 34.

	RUN	CONDUIT METRIC	CONDUIT ENGLISH	DUCT	CONDUCTOR EXISTING	CONDUCTOR NEW	REMARKS
	1	EX 103mm PVC	EX 4" PVC	A	1-48 SMFO		MAINLINE COMMUNICATION
				B	1-25 TWP		DATA COMMUNICATIONS
				C	1-12 MMFO		CCTV VIDEO/CONTROL
				D			EMPTY
		EX 103mm PVC	EX 4" PVC	A			EMPTY
				B			EMPTY
				C			EMPTY
	2	EX 53mm	EX 2"		1-6 TWP		DATA TO GC-154
	3	EX 53mm	EX 2"		10-2C(SH)		LOOP LEAD-IN
		EX 53mm	EX 2"		2-6 TWP		REMOVE
						1-6 TWP	DATA COMM TO TC-156
		EX 53mm	EX 2"		EMPTY		
	4	EX 53mm	EX 2"		2-2C(SH)		LOOP LEAD-IN
	5	EX 53mm	EX 2"			EX 6-2C(SH)	LOOP LEAD-IN
		EX 53mm	EX 2"			EX 9-2C(SH)	LOOP LEAD-IN
		EX 53mm	EX 2"			EX 1-6 TWP	DATA COMMUNICATIONS
	6	EX 53mm	EX 2"		2#8		POWER 480V TO TRANSFORMER
•	7	53mm	2"			2#8	POWER 120V TO ES CABINET
	8	EX 53mm	EX 2"			EX 2#8	POWER 480V TO TRANSFORMER
		53mm	2"				EMPTY
	9	53mm	2"			4-#14	LOOP WIRE
	10	EX 53mm	EX 2"		1-6 TWP		REMOVE
	11	63mm	2 1/2"		2-2C(SH)		LOOP LEAD-IN
		EX 53mm	EX 2"		EMPTY		
	12	EX 41mm	EX 1 1/2"		8-2C(SH)		LOOP LEAD-IN
		EX 53mm	EX 2"		2 COAX		REMOVE
					1-12 TWP		REMOVE
						1-6 TWP	DATA COMM ES-165 TO TC-164
	13	EX 53mm	EX 2"		10-2C(SH)		LOOP LEAD-IN
		EX 53mm	EX 2"		2 COAX		REMOVE CABLES
		EX 53mm	EX 2"		1-12 TWP		REMOVE
						1-6 TWP	DATA COMM TC164 TO ES 165
	14	EX 78mm	EX3"		3-2C(SH)		LOOP LEAD-IN
	15	41mm	1 1/2"			1-6 TWP	DATA COMM VMS-164 TO TC-164
	16	EX 53mm	EX 2"		5-2C(SH)		REMOVE CABLES & CAP CONDUIT
					1-50 TWP		REMOVE CABLES
		EX 53mm	EX 2"		1-50 TWP		REMOVE CABLES
••		53mm	2"			5-2C(SH)	LOOP LEAD-IN
						EX 3-2C(SH)	LOOP LEAD-IN COILED IN MEDIAN J. BOX
	17	EX 78mm	EX3"		8-2C(SH)		REMOVE
						8-2C(SH)	LOOP LEAD-IN
						EX 3-2C(SH)	LOOP LEAD-IN COILED IN MEDIAN J. BOX
		EX 78mm	EX3"		1-25 TWP		DATA COMM TO TC-163
					1-6 TWP		DATA COMM TO VMS 161
	18	EX 41mm	EX 1 1/2"		1-5C		FUTURE SIGNAL HEAD
	19	EX 41mm	EX 1 1/2"		1-5C		FUTURE SIGNAL HEAD
					2-2C(SH)		LOOP LEAD-IN
	20	EX 41mm	EX 1 1/2"		1-12 TWP		REMOVE
						1-6 TWP	DATA COMM ES-167 TO TC-168
		EX 53mm	EX 2"			EX 10-2C(SH)	LOOP LEAD-IN
						EX 1-5C	FUTURE SIGNAL HEAD
		EX 53mm	EX 2"			EMPTY	
		EX 53mm	EX 2"			EMPTY	
	21	EX 41mm	EX 1 1/2"			EX 1-5C	FUTURE SIGNAL HEAD
						3-2C(SH)	LOOP LEAD-IN
•	22	53mm	2"			EX 2#8	POWER 120V SUA-675 TO ES-167
						EX 1-3C	FUTURE ADVANCE WARNING SIGN
•	23	EX 53mm	EX 2"		2#8		POWER 120V SUA-675 TO ES-167
					1-3C		FUTURE ADVANCE WARNING SIGN
	24	EX 53mm	EX 2"		7-2C(SH)		LOOP LEAD-IN
					1-12 TWP		REMOVE
						1-6 TWP	DATA COMM TO ES-167
	25	EX 53mm	EX 2"		2-2C(SH)		LOOP LEAD-IN
	26	EX 53mm	EX 2"		2-2C(SH)		LOOP LEAD-IN
					1-12 TWP		REMOVE
	27	EX 53mm	EX 2"		1-25 TWP		DATA COMM TO ES-161 TO TC-163

RUN	CONDUIT METRIC	CONDUIT ENGLISH	DUCT	CONDUCTOR EXISTING	CONDUCTOR NEW	REMARKS
28	EX 41mm	EX 1 1/2"		1-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM TO ES-167
29	EX 41mm	EX 1 1/2"		2-2C(SH)		LOOP LEAD-IN
30	EX 53mm	EX 2"		1-25 TWP		REMOVE
					1-6 TWP	DATA COMM ES-165 TO TC-164
31	EX 53mm	EX 2"		1-25 TWP		REMOVE
				1-12 TWP		REMOVE
32	EX 53mm	EX 2"			1-6 TWP	DATA COMM VMS-156 TO CC-157
	EX 78mm	EX3"		1-25 TWP		DATA COMM TC-155 TO CC-157
33	23mm	1"			1-6 TWP	DATA COMM GC155 TO VMS156
34	EX 53mm	EX 2"			1-6 TWP	DATA COMM GC-155 TO VMS-156
	EX 78mm	EX3"		1-25 TWP		DATA COMM TC-155 TO CC-157
35	EX 53mm	EX 2"		10-#12		POWER 120V TO GATES
	EX 53mm	EX 2"		7-#12		POWER 120V TO GATES
				2-# 8		REMOVE
					3-# 2	POWER 480 TO GC-155
					1-# 8	GROUND
36	EX 53mm	EX 2"				EMPTY
	EX 78mm	EX3"		1-25 TWP		DATA COMM TC-155 TO CC-157
37	EX 53mm	EX 2"		7-# 12		POWER 120V & 480V TO GATES
				3-# 2		POWER 480V TO TRANSFORMER
38	NOT USED					
39	EX 41mm	EX 1 1/2"		1-12 TWP		REMOVE
				1-25 TWP		REMOVE
					1-6 TWP	DATA COMM ES-159 TO TC-158
40	EX 103mm PVC	EX 4" PVC	A	1-48 SMFO		MAINLINE COMMUNICATION
			B	1-25 TWP		PULL BACK TO CABLE VAULT
			B		EX 1-25 TWP	DATA COMM TC-170 TO NORTH
			C			EMPTY
			D		1-6 TWP	DATA COMM ES-170 TO TC-170
	EX 103mm PVC	EX 4" PVC	A	1-12 MMFO		CCTV VIDEO/CONTROL
			B			EMPTY
			C			EMPTY
41	EX 66mm	EX 2 1/2"		1-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-156 TO CC-157
	EX 66mm	EX 2 1/2"		9-2C(SH)		LOOP LEAD-IN
42	EX 53mm	EX 2"		5-2C(SH)		LOOP LEAD-IN
43	EX 53mm	EX 2"		1-2 MMFO		FIBER OPTIC CC-156 TO CC-157
				1-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-156 TO CC-157
44	EX 78mm	EX3"		1-25 TWP		DATA COMM TC-155 TO CC-157
				1-25 TWP		DATA COMM CC-157 TO TC-158
	EX 53mm	EX 2"			1-6 TWP	DATA COMM VMS 156 TO CC-157
					1-6 TWP	DATA COMM ES-156 TO CC-157/REMOVE EX.
	EX 53mm	EX 2"		1-2 MMFO		FIBER OPTIC CC-156 TO CC-157
				1-2 MMFO		FIBER OPTIC CC-157 TO MAIN LINE F.O.
45	EX 35mm	EX 1 1/4"				SEE ILUMINATION PLAN
46	EX 23mm	EX 1"		1-# 8		REMOVE
					1-6 TWP	DATA COMM GC155 TO VMS156
47	EX 53mm	EX 2"		1-12 TWP		DATA COMM ES-154 TO TC-154
				1-6 TWP		DATA COMM GC-154 TO TC-154
48	EX 53mm	EX 2"		1-12 TWP		REMOVE
					1-6 TWP	DATA COMM ES-165 TO TC-164
49	53mm	2"			EX 2-25 TWP	DATA COMM MAIN LINE
				1-2 MMFO		PULL BACK TO CABLE VAULT
				2-25 TWP		PULL BACK TO CABLE VAULT
					EX 1-2 MMFO	FIBER OPTIC CC-164 TO TC-164
50	EX 53mm	EX 2"		1-2 MMFO		PULL BACK TO CABLE VAULT
				2-25 TWP		PULL BACK TO CABLE VAULT
					EX 1-2 MMFO	FIBER OPTIC CC-164 TO TC-164
					1-6 TWP	DATA COMM CC-164 TO TC-164
					1-6 TWP	DATA COMM ES-165 TO TC-164
51	EX 53mm	EX 2"		2-25 TWP		PULL BACK TO CABLE VAULT
				1-25 TWP		REMOVE
					1-6 TWP	DATA COMM ES-165 TO TC-164

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
CHECKED BY M. BANDY
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI WIRE NOTES

SCW1

SHEET 57 OF 138 SHEETS

PLOT12 15 DEC 97 c:\dgn\sr5\sr512538\ngatscdt.dgn mostagh

RUN	CONDUIT METRIC	CONDUIT ENGLISH	DUCT	CONDUCTOR EXISTING	CONDUCTOR NEW	REMARKS
52	EX 53mm	EX 2"		1-2 MMFO		PULL BACK TO CABLE VAULT
				1-25 TWP		REMOVE
					EX 1-2 MMFO	FIBER OPTIC CC-164 TO TC-164
					1-6 TWP	DATA COMM CC-164 TO TC-164
53	EX 53mm	EX 2"		1-12 TWP		REMOVE
				1-2 MMFO		PULL BACK TO CABLE VAULT
					EX 1-2 MMFO	FIBER OPTIC CC-168 TO TC-168
					1-6 TWP	DATA COMM CC-168 TO TC-168
54	EX 53mm	EX 2"		2-25 TWP		PULL BACK TO CABLE VAULT
				1-2 MMFO		PULL BACK TO CABLE VAULT
					EX 1-2 MMFO	FIBER OPTIC CC-168 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM CC-168 TO TC-168
					1-6 TWP	DATA COMM ES-168 TO TC-168
55	EX 53mm	EX 2"		1-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-168 TO TC-168
56	EX 53mm	EX 2"		2-25 TWP		PULL BACK TO CABLE VAULT
				1-2 MMFO		PULL BACK TO CABLE VAULT
					EX 2-25 TWP	DATA COMM TO TC-168
					EX 1-2 MMFO	FIBER OPTIC CC-168 TO TC-168
57	EX 23mm	EX 1"		1-1TWP		DATA COMM CMS-168 TO ES-168
58	EX 41mm	EX 1 1/2"		1-2C(SH)		LOOP LEAD-IN
59	23mm	1"			1-6 TWP	DATA COMM ES-167 TO TC-168
60	EX 53mm	EX 2"		1-2 MMFO		FIBER OPTIC CC-156 TO CC-157
61	EX 66mm	EX 2 1/2"		1-2 MMFO		FIBER OPTIC CC-156 TO CC-157
				4-2C(SH)		LOOP LEAD-IN
62	EX 78mm	EX 3"		1-25 TWP		DATA COMM CC-157 TO TC-158
				1-2 MMFO		FIBER OPTIC CC-157 TO MAIN LINE FIBER
63	EX 53mm	EX 2"		2-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-156 TO CC-156
	EX 78mm	EX 3"		21-2C(SH)		LOOP LEAD-IN
64	EX 78mm	EX 3"		1-25 TWP		REMOVE
				1-25 TWP		DATA COMM CC-157 TO TC-158
				1-2 MMFO		FIBER OPTIC CC-157 TO MAIN LINE FIBER
				1-2 MMFO		FIBER OPTIC CC-160 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM ES-159 TO CC-158
					1-6 TWP	DATA COMM CC-160 TO TC-158
65	53mm	2"			EX 2-25 TWP	DATA COMM SB MAIN LINE
	53mm	2"			EX 1-25 TWP	DATA COMM CC-157 TO TC-158
	53mm	2"			1-6 TWP	DATA COMM ES-158 TO TC-158
					1-6 TWP	DATA COMM VMS-158 TO TC-158
	53mm	2"			1-6 TWP	DATA COMM ES-159 TO TC-158
					1-6 TWP	DATA COMM CC-160 TO TC-158
66	EX 53mm	EX 2"		1-25 TWP		REMOVE
				1-2 MMFO		FIBER OPTIC CC-160 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM ES-159 TO TC-158
	EX 53mm	EX 2"				EMPTY
					1-6 TWP	DATA COMM CC-160 TO TC-158
67	53mm	2"			1-6 TWP	DATA COMM ES-158 TO TC-158
					1-6 TWP	DATA COMM VMS-158 TO TC-158
68	EX 53mm	EX 2"		1-6 TWP		REMOVE
					1-6 TWP	DATA COMM VMS-158 TO TC-158
69	EX 53mm	EX 2"		1-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-158 TO TC-158
70	EX 53mm	EX 2"		1-6 TWP		REMOVE
				1-12 TWP		REMOVE
				7-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM ES-158 TO TC-158
71	EX 53mm	EX 2"		1-12 TWP		REMOVE
				3-2C(SH)		LOOP LEAD-IN
72	EX 53mm	EX 2"		1-6 TWP		REMOVE
				1-12 TWP		REMOVE
				5-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM ES-158 TO TC-158
73	EX 78mm	EX3"		1-6 TWP		REMOVE
					1-6 TWP	DATA COMM ES-159 TO TC-158

WIRE NOTES

- 120V POWER CONDUCTORS TO SC&DI CABINET SHALL BE ONE BLACK AND ONE WHITE.

FOR "AS CONSTRUCTED PLANS" ONLY

RUN	CONDUIT METRIC	CONDUIT ENGLISH	DUCT	CONDUCTOR EXISTING	CONDUCTOR NEW	REMARKS
74	EX 78mm	EX3"		1-6 TWP		REMOVE
				15-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM ES-159 TO TC-158
75	EX 53mm	EX 2"		1-6 TWP		REMOVE
				10-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM ES-159 TO TC-158
76	EX 35mm	EX 1 1/4"		7-# 12		POWER 120V & 480V TO GATES
77	EX 53mm	EX 2"		1-6 TWP		REMOVE
				6-2C(SH)		LOOP LEAD-IN
					1-6 TWP	DATA COMM ES-159 TO TC-158
78	EX 53mm	EX 2"		1-25 TWP		REMOVE
				1-12 TWP		REMOVE
	REMOVE ALL	CONDUCTORS		1-6 TWP		REMOVE
	FROM T-17N			~~1-2 MMFO~~	DELETED	FIBER OPTIC CC-160 TO MAIN LINE FIBER
				DELETED	~~1-6 TWP~~	DATA COMM CC-160 TO TC-158
	EX 53mm	EX 2"				EMPTY
79	EX 53mm	EX 2"		~~1-25 TWP~~	DELETED	REMOVE
				1-12 TWP		REMOVE
				~~1-6 TWP~~	DELETED	REMOVE
				1-2 MMFO		FIBER OPTIC CC-160 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM CC-160 TO TC-158
	EX 53mm	EX 2"				EMPTY
80	EX 41mm	EX 1 1/2"		1-6 TWP		DATA COMM VMS-161TO TC-161
81	EX 66mm	EX 2 1/2"		1-12 TWP		REMOVE
				1-2 MMFO		FIBER OPTIC CC-160 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM CC-160 TO TC-158
82	EX 53mm	EX 2"		8-2C(SH)		LOOP LEAD-IN
	EX 41mm	EX 1 1/2"		1-12 TWP		REMOVE
					1-6 TWP	DATA COMM CC-170 TO TC-170
83	EX 78mm	EX 3"		2-25 TWP		PULL BACK TO CABLE VAULT
					1-6 TWP	DATA COMM CC-170 TO TC-170
84	EX 78mm	EX 3"		2-25 TWP		PULL BACK TO CABLE VAULT
				1-12 TWP		REMOVE
85	EX 53mm	EX 2"				EMPTY
	EX 53mm	EX 2"				EMPTY
86	EX 53mm	EX 2"		2-#8		POWER 480V -SEE ILLUMINATION
87	EX 35mm	EX 1 1/4"		7-# 12		POWER 120V & 480V TO GATES
88	EX 35mm	EX 1 1/4"		7-# 12		POWER 120V & 480V TO GATES
89	53mm	2"			1-6 TWP	DATA COMM GC-155 TO VMS-156
					1-6 TWP	DATA COMM VMS-156 TO CC-157
90	53mm	2"			EX 1-25 TWP	DATA COMM SB MAIN LINE TO TC-170
					EX 1-25 TWP	DATA COMM NB MAIN LINE TO TC-170
	53mm	2"			EX 2-25 TWP	DATA COMM TC-170 TO TSMC
	53mm	2"			1-6 TWP	DATA COMM ES-170 TO TC-170
	53mm	2"				EMPTY
91	EX 53mm	EX 2"		1-6 TWP		DATA COMM ES-163 TO TC-163
• 92	53mm	2"			EX 2#8	POWER 120V SUA-2239 TO ES-165
93	EX 53mm	EX 2"		2#8		POWER 120V SUA-2239 TO ES-165
94	EX 103mm PVC	EX 4" PVC	A	1-48 SMFO		S. 'MAINLINE COMMUNICATION TO TSMC
			B	1-25 TWP		S. DATA COMM TC-170 TO TSMC
			C	1-12 MMFO		S. CCTV VIDEO/CONTROL TO TSMC
			D			EMPTY
	EX 103mm PVC	EX 4" PVC	A	1-48 SMFO		N. 'MAINLINE COMMUNICATION TO TSMC
			B	1-25 TWP		N. DATA COMM TC-170 TO TSMC
			C	1-12 MMFO		N. CCTV VIDEO/CONTROL TO TSMC
95	EX 103mm PVC	EX 4" PVC	A	1-48 SMFO		MAINLINE COMMUNICATION
			B	1-25 TWP		PULL BACK TO CABLE VAULT
			C			EMPTY
	EX 103mm PVC	EX 4" PVC	A	1-12 MMFO		CCTV VIDEO/CONTROL
			B			EMPTY
			C			EMPTY
96	EX 53mm	EX 2"		1-25 TWP		REMOVE
				1-6 TWP		REMOVE
				1-2 MMFO		FIBER OPTIC CC-160 TO MAIN LINE FIBER
					1-6 TWP	DATA COMM CC-160 TO TC-158
	EX 53mm	EX 2"				EMPTY

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
CHECKED BY M. BANDY
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

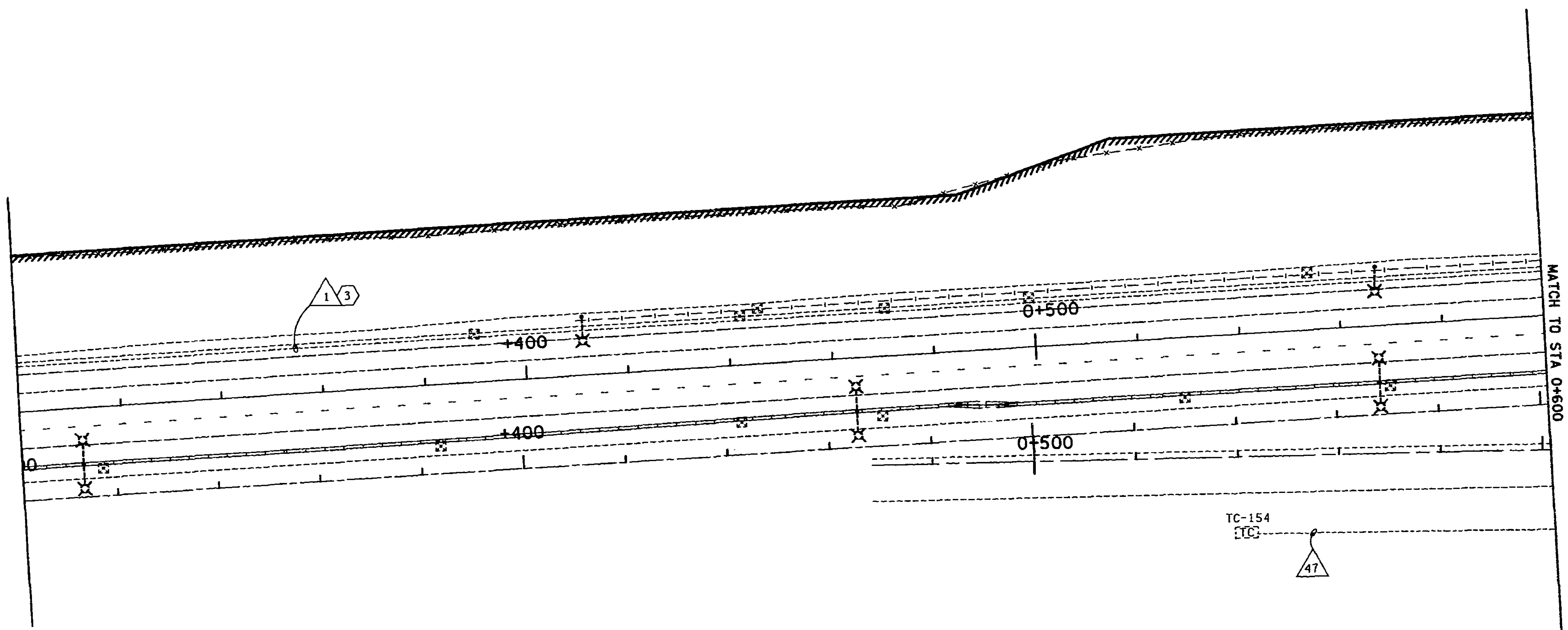
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI WIRE NOTES

SCW2

SHEET 58 OF 138 SHEETS

T. 26N. R. 4E. W. M.



NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

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SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

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					REGION NO.	STATE	FED.AID PROJ.NO.
DESIGNED BY M. JANKA					10	WASH	
ENTERED BY H. MOSTAGHIMI					JOB NUMBER 97W058		
CHECKED BY M. BANDY					CONTRACT NO.		
PROJ. ENGR. J. JOHNSON							
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY			

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC1

SHEET 59 OF 138 SHEETS

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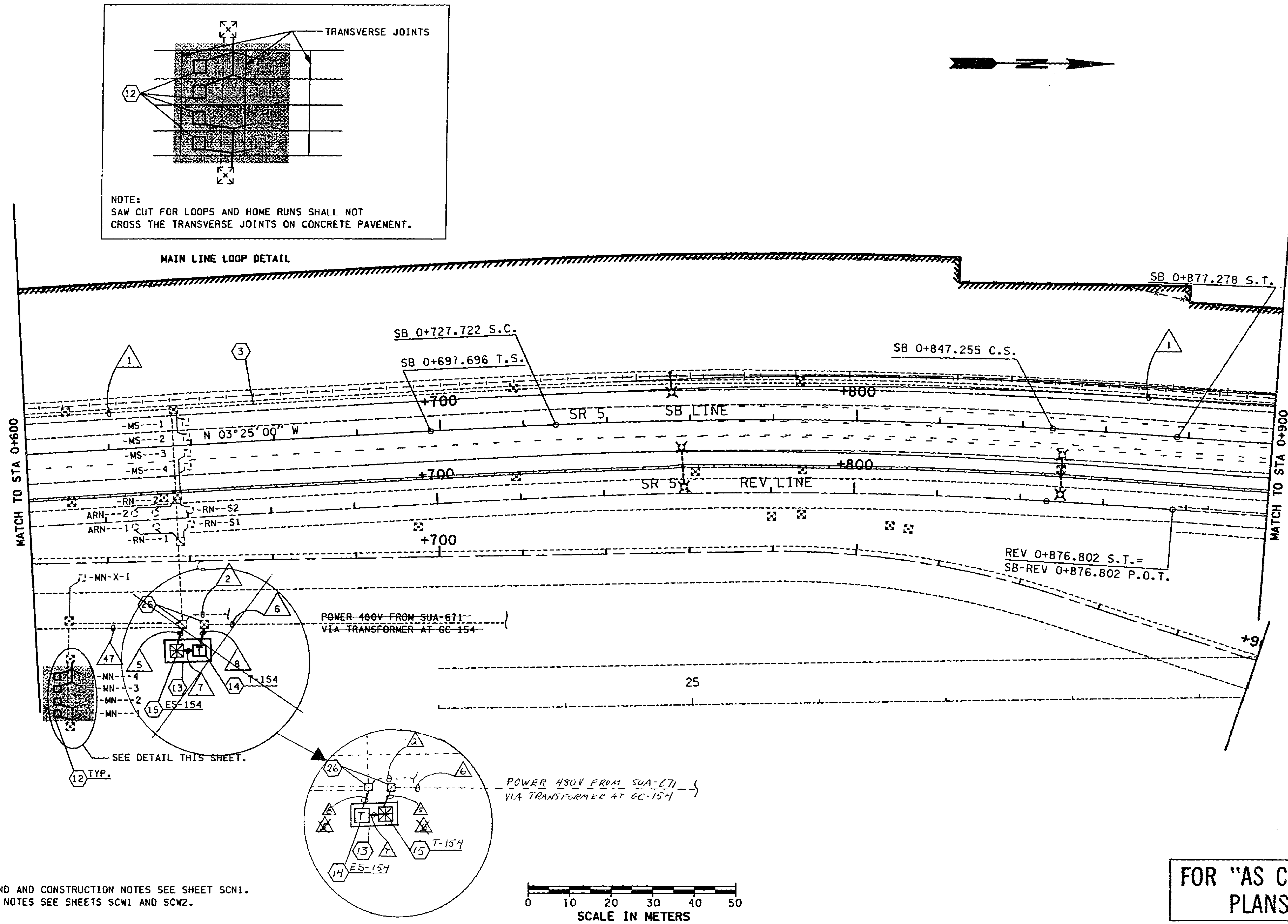
T. 26N. R. 4E. W. M.



NOTES:
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2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

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CHECKED BY M. BANDY					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO		1-19-98	REVISED LOOP LOCATION	MJ
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC2

SHEET 60 OF 138 SHEETS

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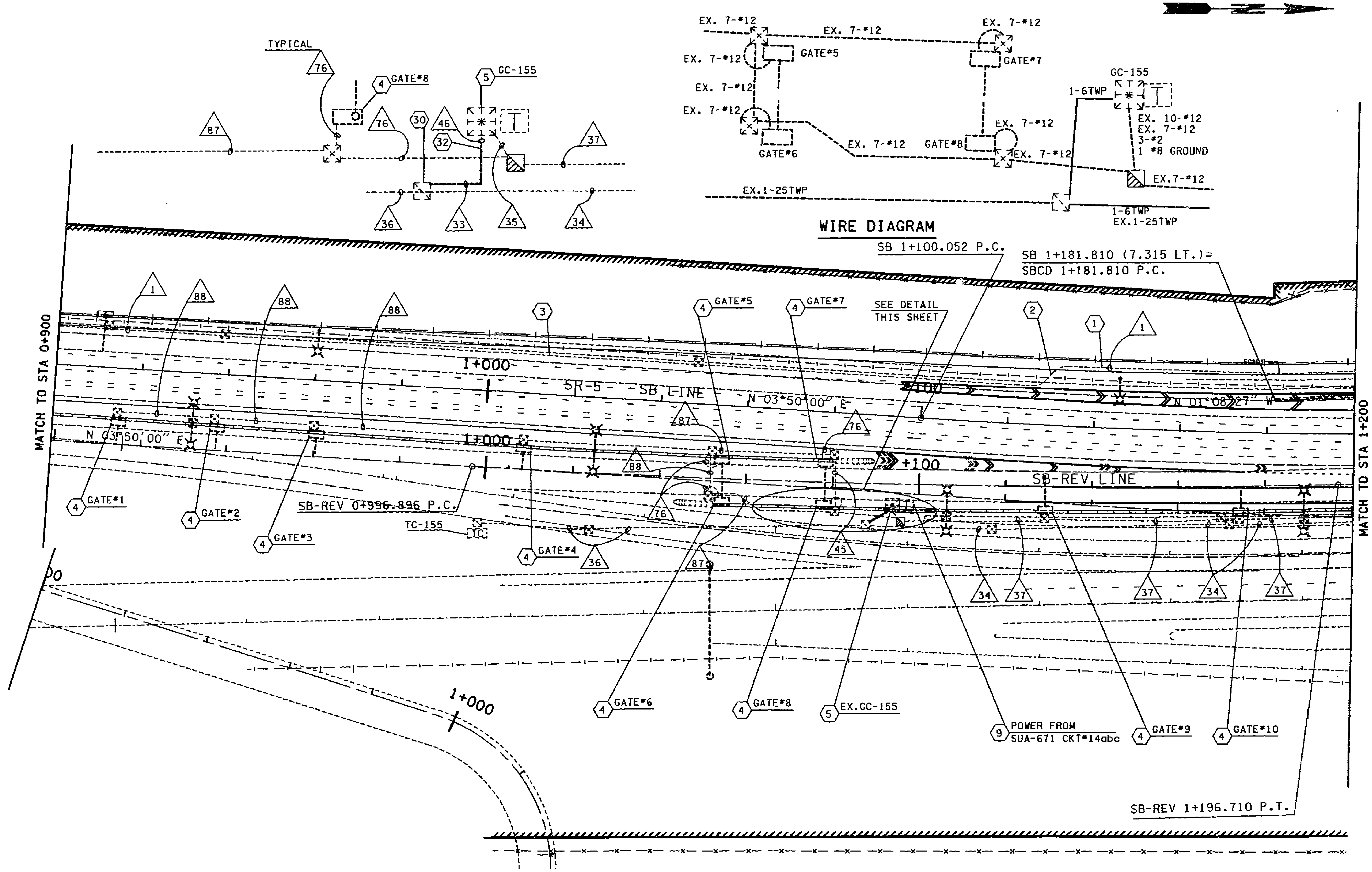

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SCALE IN METERS

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REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
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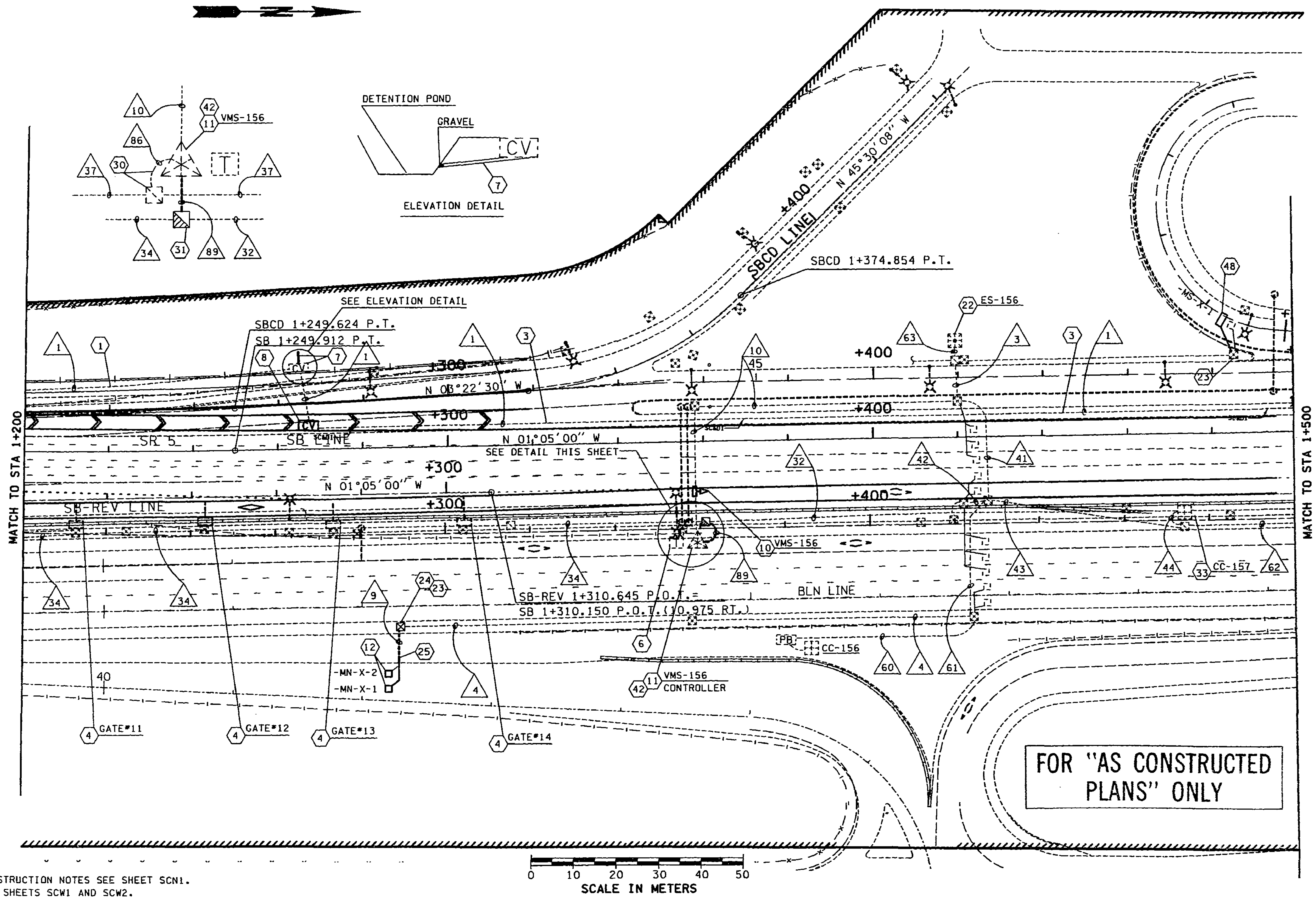
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC3

SHEET 61 OF 138 SHEETS

T. 26N. R. 4E. W. M.



NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

DESIGNED BY M. JANKA					REGION NO. 10	STATE WASH
ENTERED BY H. MOSTAGHIMI					JOB NUMBER 97W058	FED.AID PROJ.NO.
CHECKED BY M. BANDY					CONTRACT NO.	
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY		

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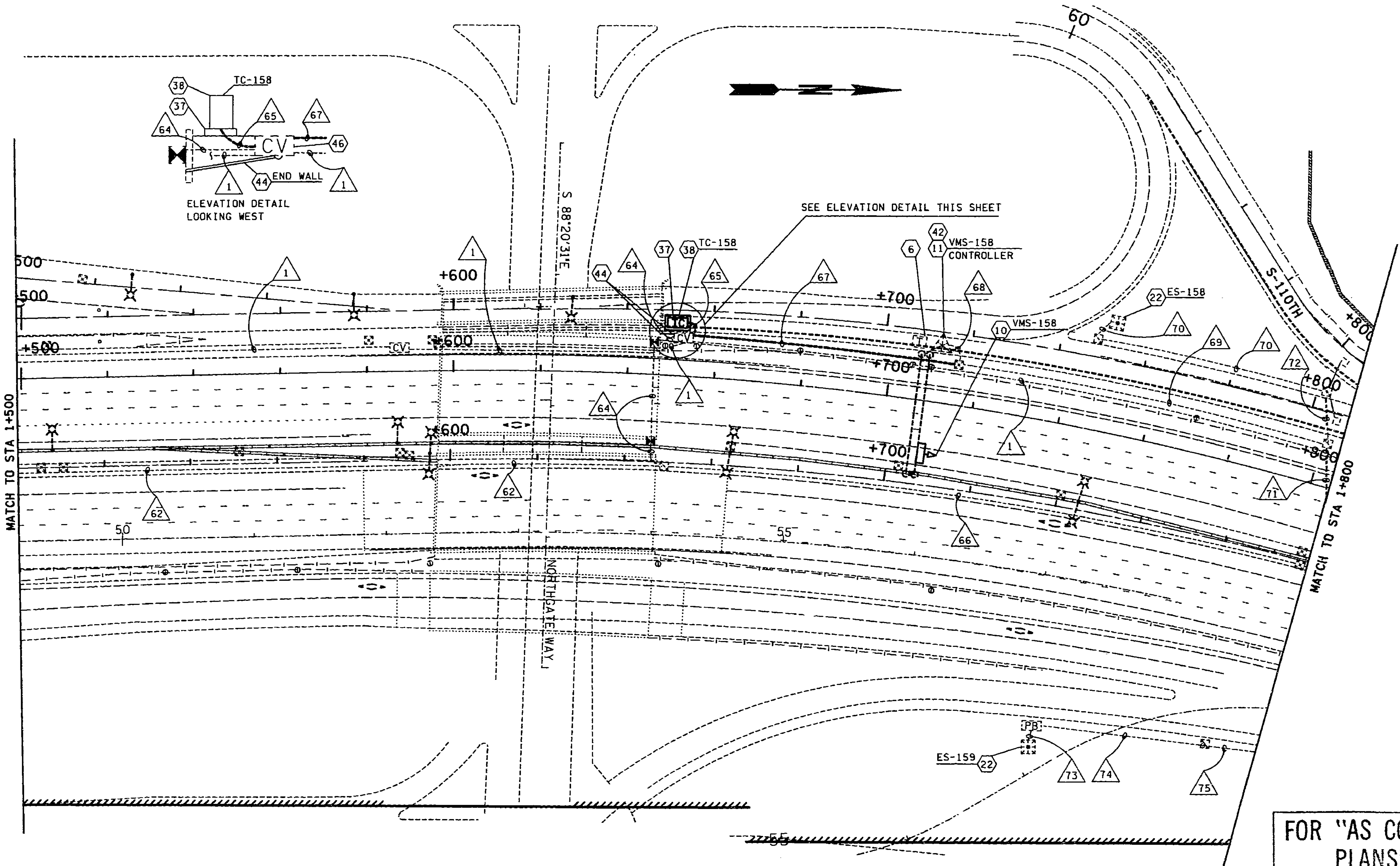
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC4

SHEET 62 OF 138 SHEETS

T. 26N. R. 4E. W. M.



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SCALE IN METERS

NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

DESIGNED BY M. JANKA				
ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC5

SHEET 63 OF 138 SHEETS

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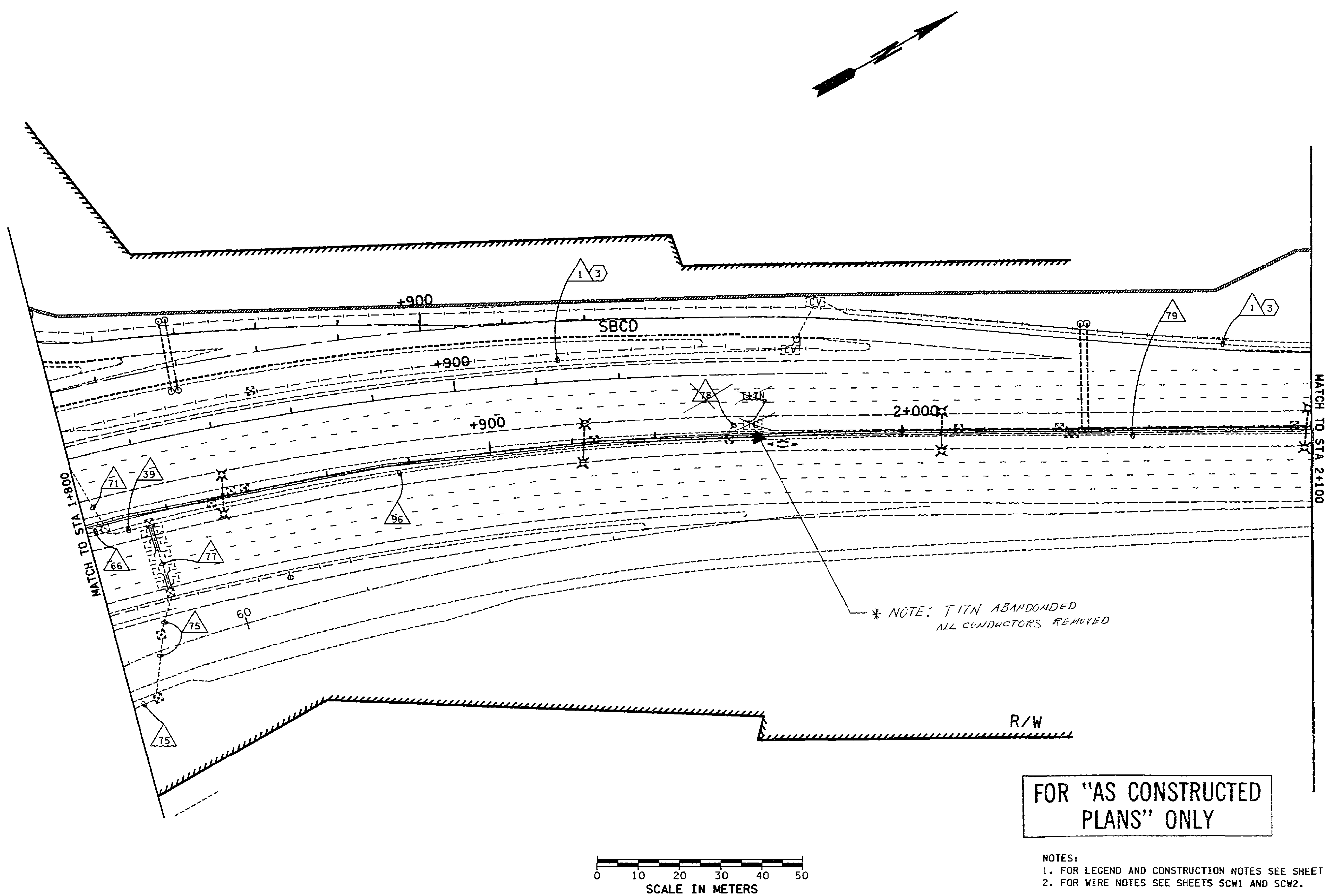

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NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

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PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC6

SHEET 64 OF 138 SHEETS

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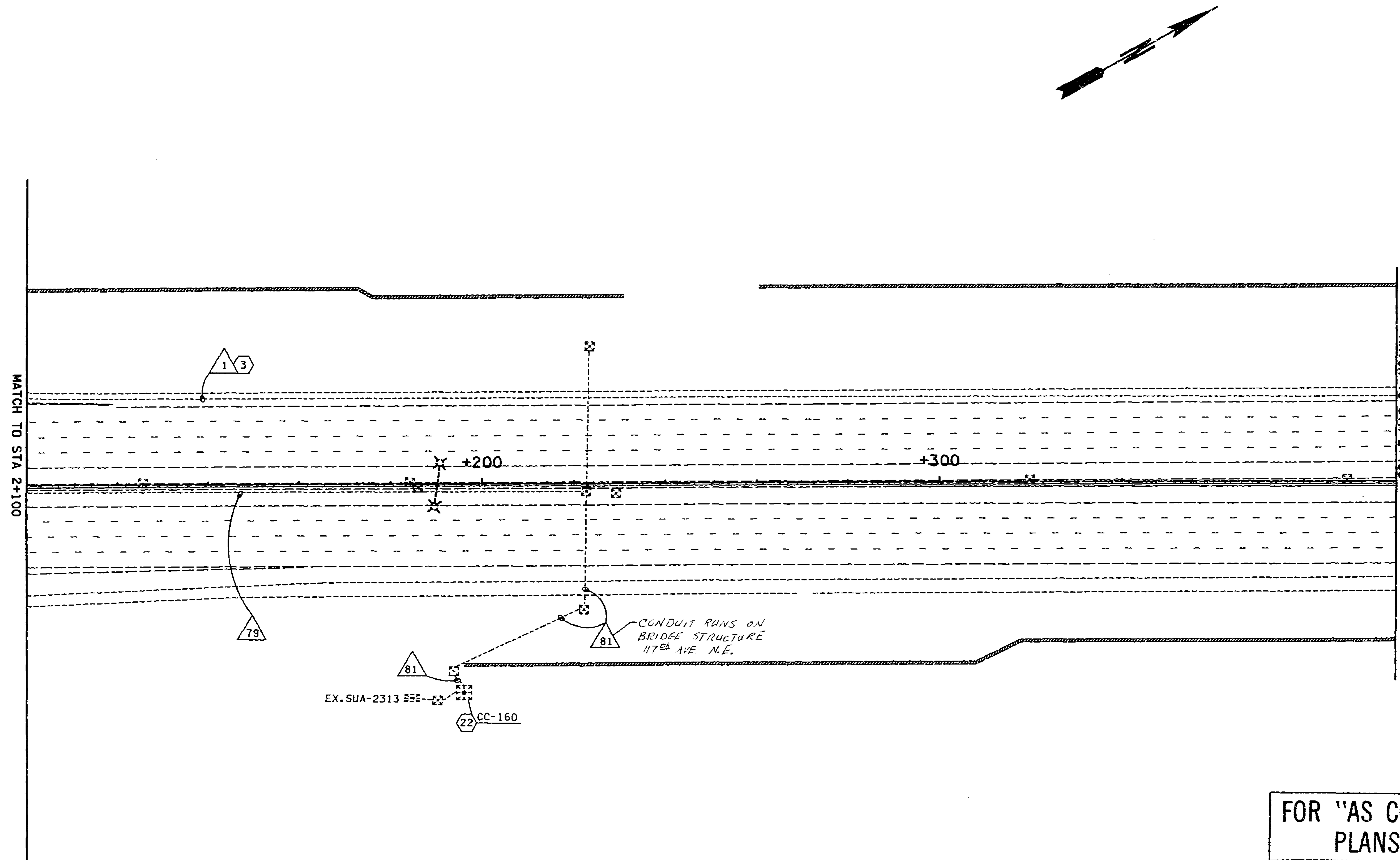
T. 26N. R. 4E. W. M.



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0 10 20 30 40 50
SCALE IN METERS

NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

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ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC7

SHEET 65 OF 138 SHEETS

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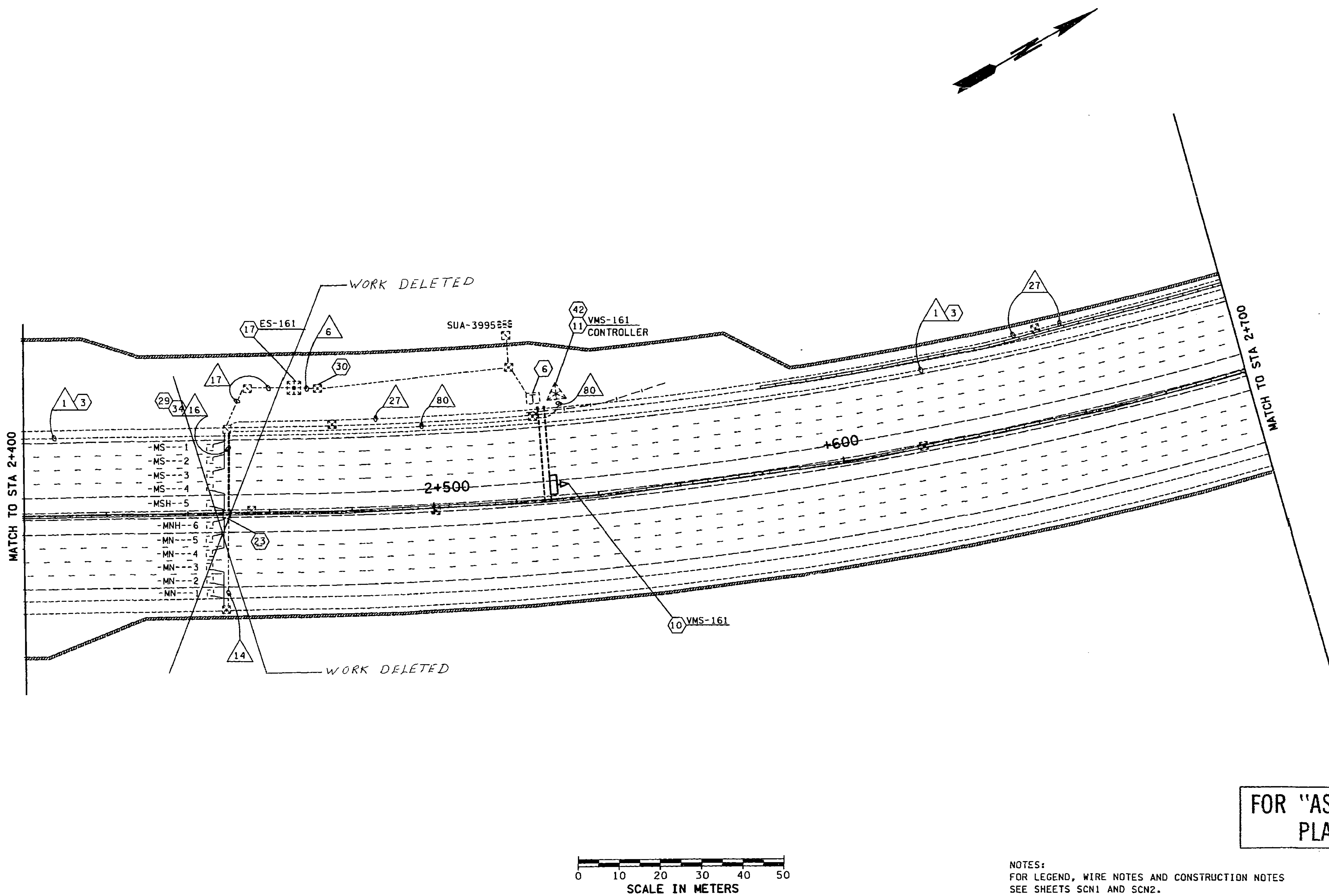
T. 26N. R. 4E. W. M.



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NOTES:
FOR LEGEND, WIRE NOTES AND CONSTRUCTION NOTES
SEE SHEETS SCN1 AND SCN2.

DESIGNED BY M. JANKA				
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CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
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JOB NUMBER 97W058
CONTRACT NO.

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC8

SHEET 66 OF 138 SHEETS

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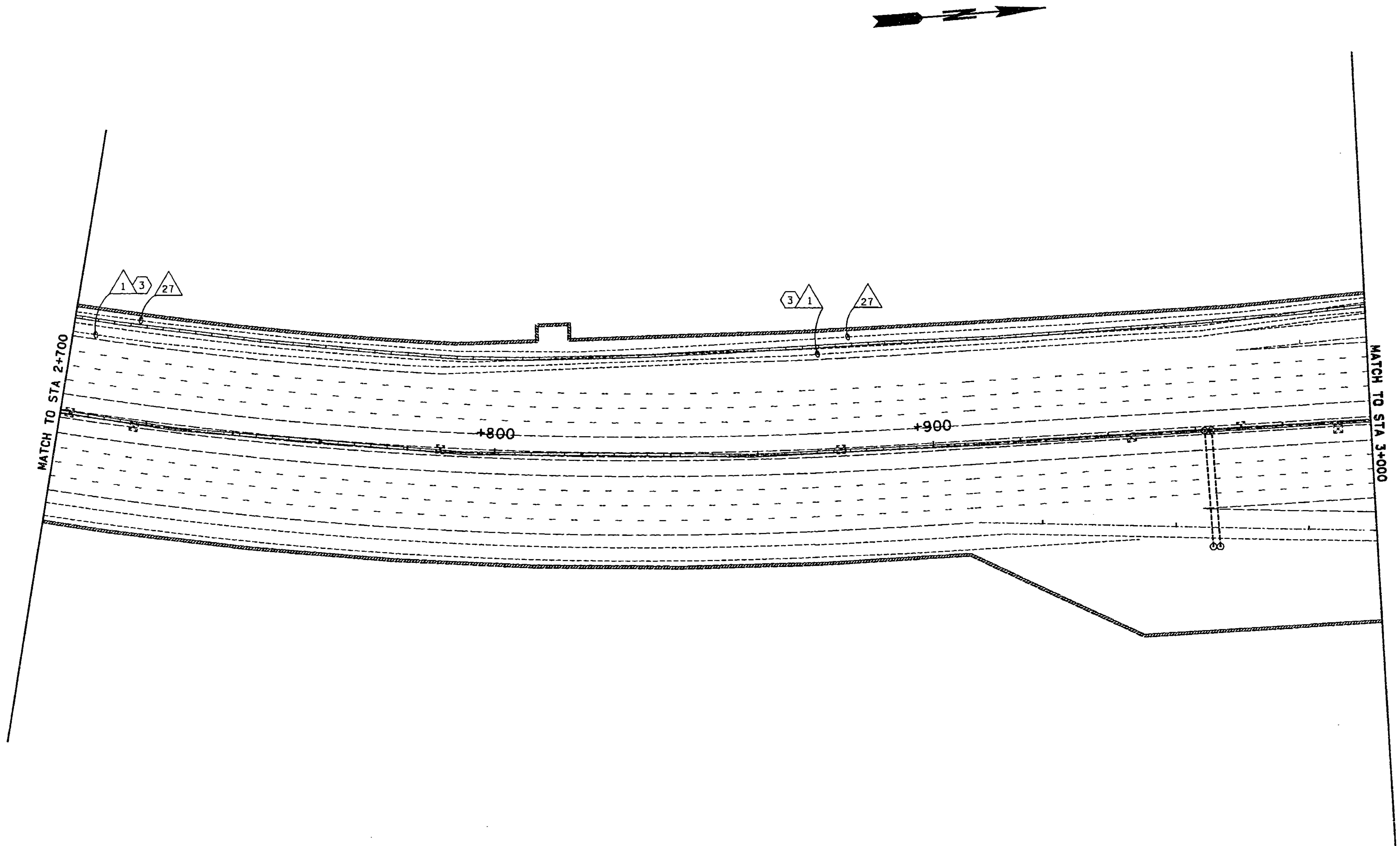

NOTES:
FOR LEGEND, WIRE NOTES AND CONSTRUCTION NOTES SEE SHEETS SCN1 AND SCN2.

0 10 20 30 40 50
SCALE IN METERS

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CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

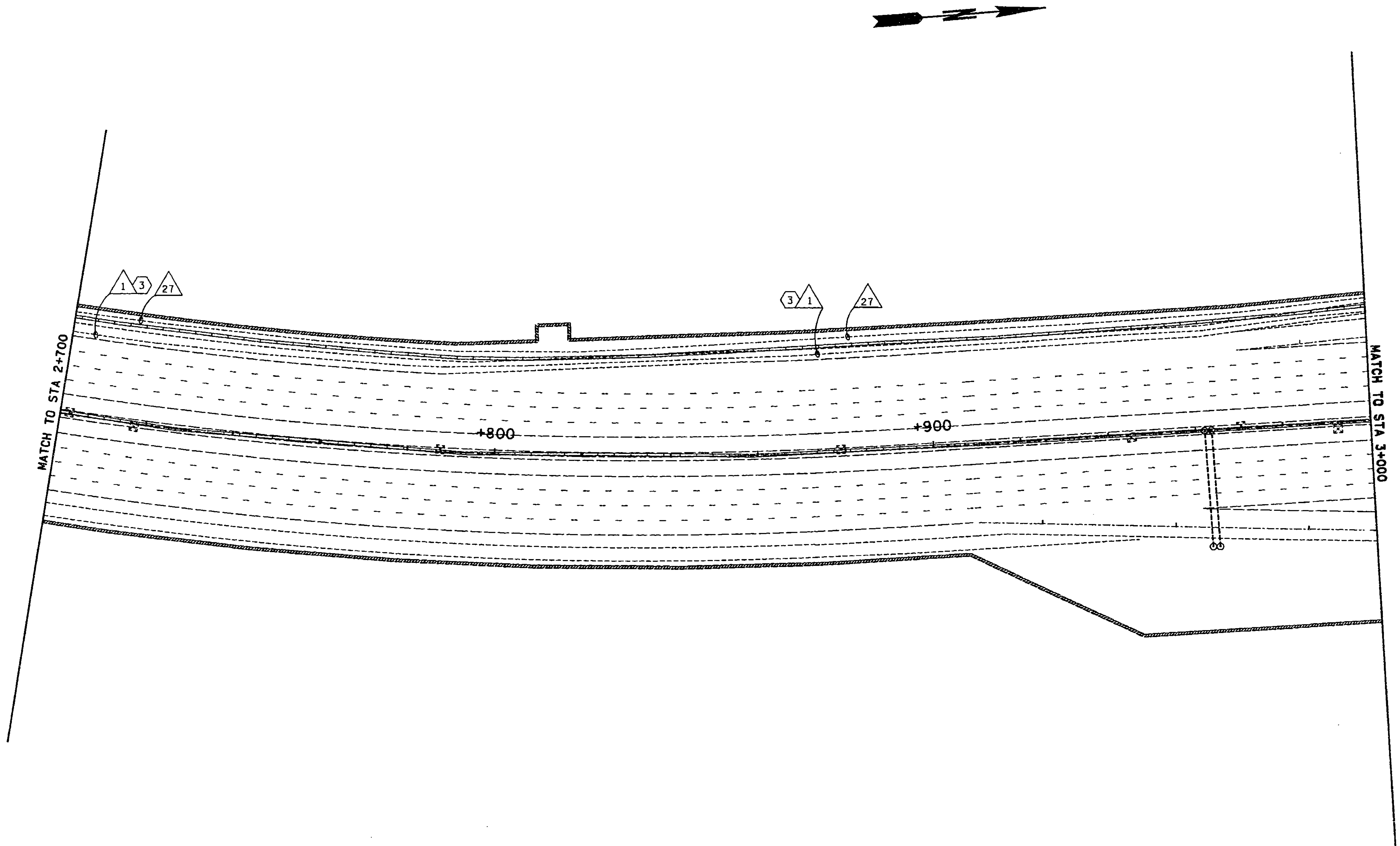
SC&DI PLAN

SC9

SHEET 67 OF 138 SHEETS

PLOT10 15 DEC 97 c:\dgn\sr5\sr5|2538\2538scsh.dgn mostagh

T. 26N. R. 4E. W. M.



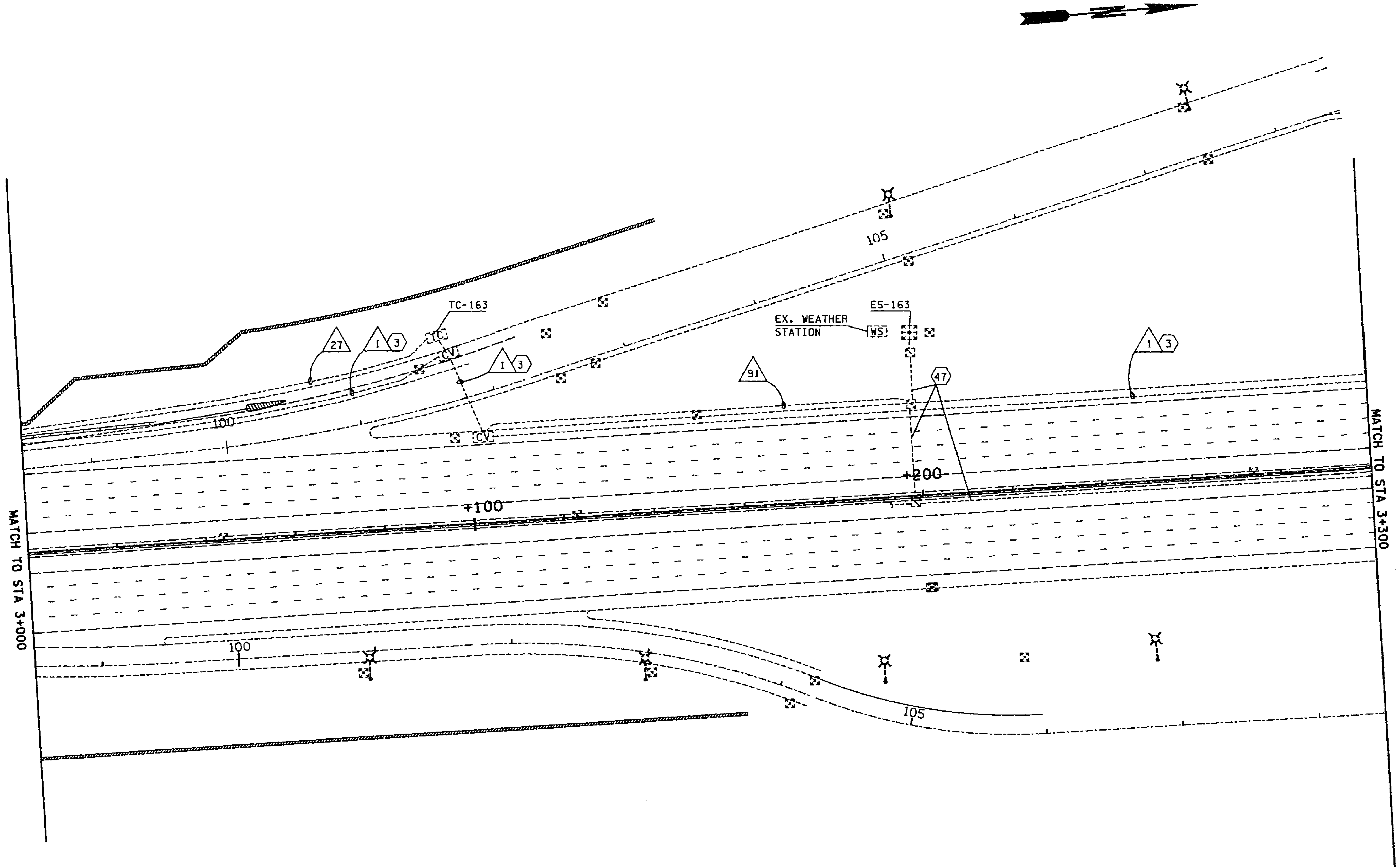
NOTES:
FOR LEGEND, WIRE NOTES AND CONSTRUCTION NOTES
SEE SHEETS SCN1 AND SCN2.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA	REGION NO. 10	STATE WASH	FED.AID PROJ.NO.	ENVIRONMENTAL AND ENGINEERING SERVICE CENTER	Washington State Department of Transportation	SR 5 VIC NORTHGATE WAY TO VIC NE 145TH ST
ENTERED BY H. MOSTAGHIMI	JOB NUMBER 97W058					SC9
CHECKED BY M. BANDY	CONTRACT NO.					SHEET 67 OF 138 SHEETS
PROJ. ENGR. J. JOHNSON						SC&DI PLAN
REGIONAL ADM. J. OKAMOTO						
DATE	DATE	REVISION	BY			

T. 26N. R. 4E. W. M.



NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

FOR "AS CONSTRUCTED PLANS" ONLY

PLOT11 15 DEC 97 c:\dgn\sr5\sr5l2538\2538scsh.dgn mostagh

DESIGNED BY M. JANKA				
ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

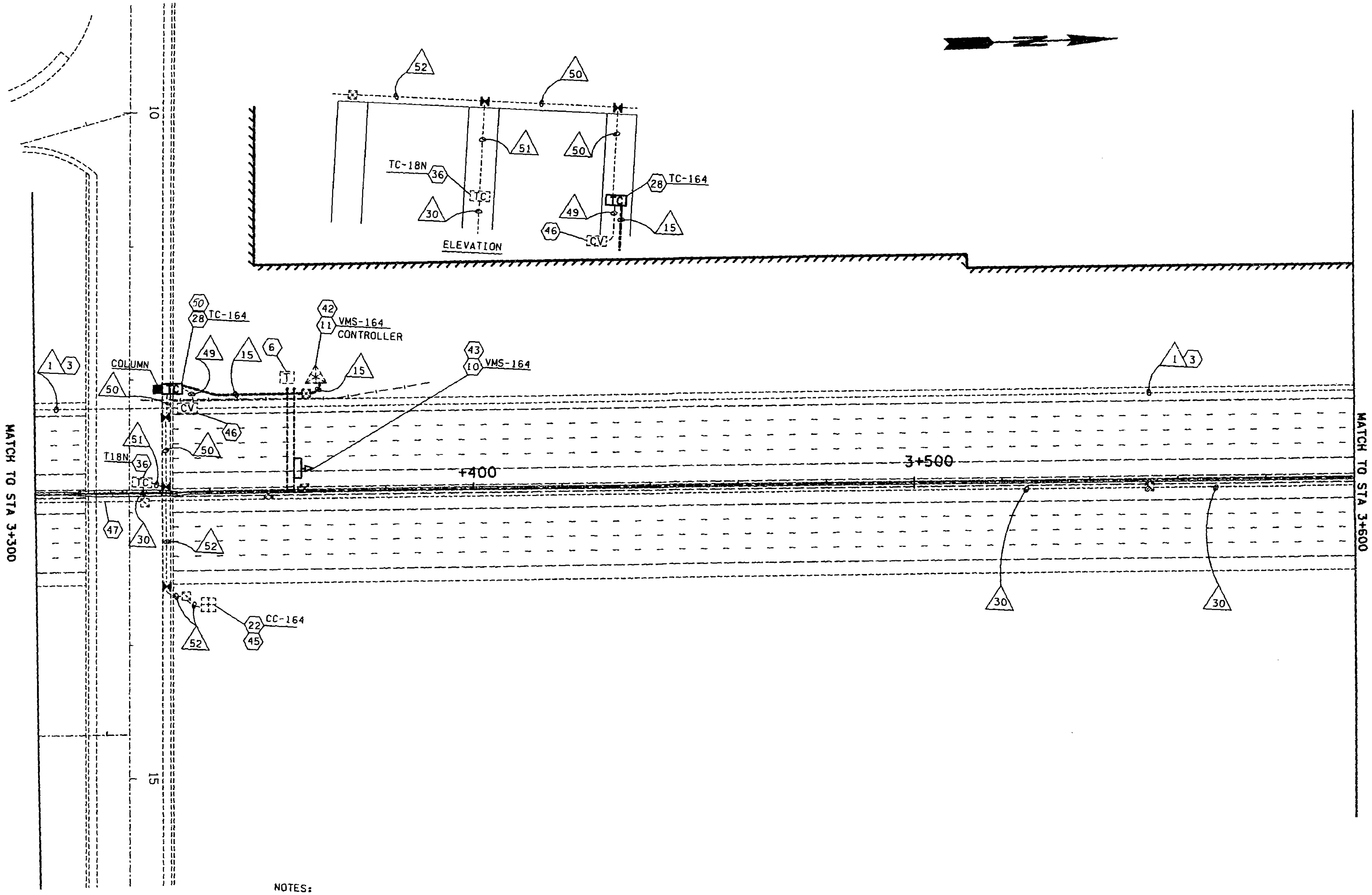
SC&DI PLAN

SC10

SHEET 68 OF 138 SHEETS

PLDT12 15 DEC 97 c:\dgn\sr5\sr512538\2538scsh.dgn mostagh

T. 26N. R. 4E. W. M.



NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA				
ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

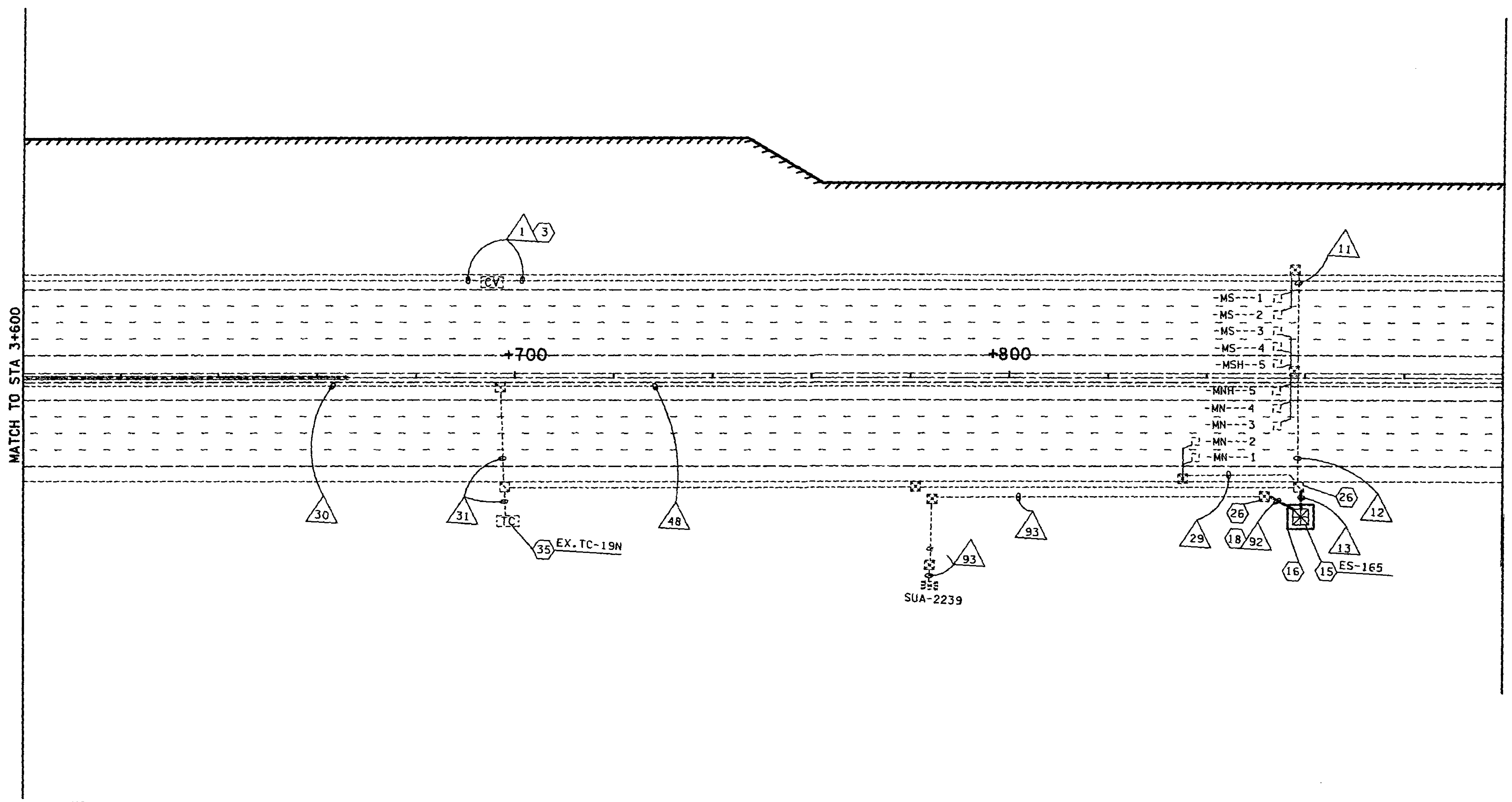
SC&DI PLAN

SC11

SHEET 69 OF 138 SHEETS

mostagh c:\dgn\sr5\sr5i2538\2538scsh.dgn 15 DEC 97 PLOT13

T. 26N. R. 4E. W. M.



NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA				
ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

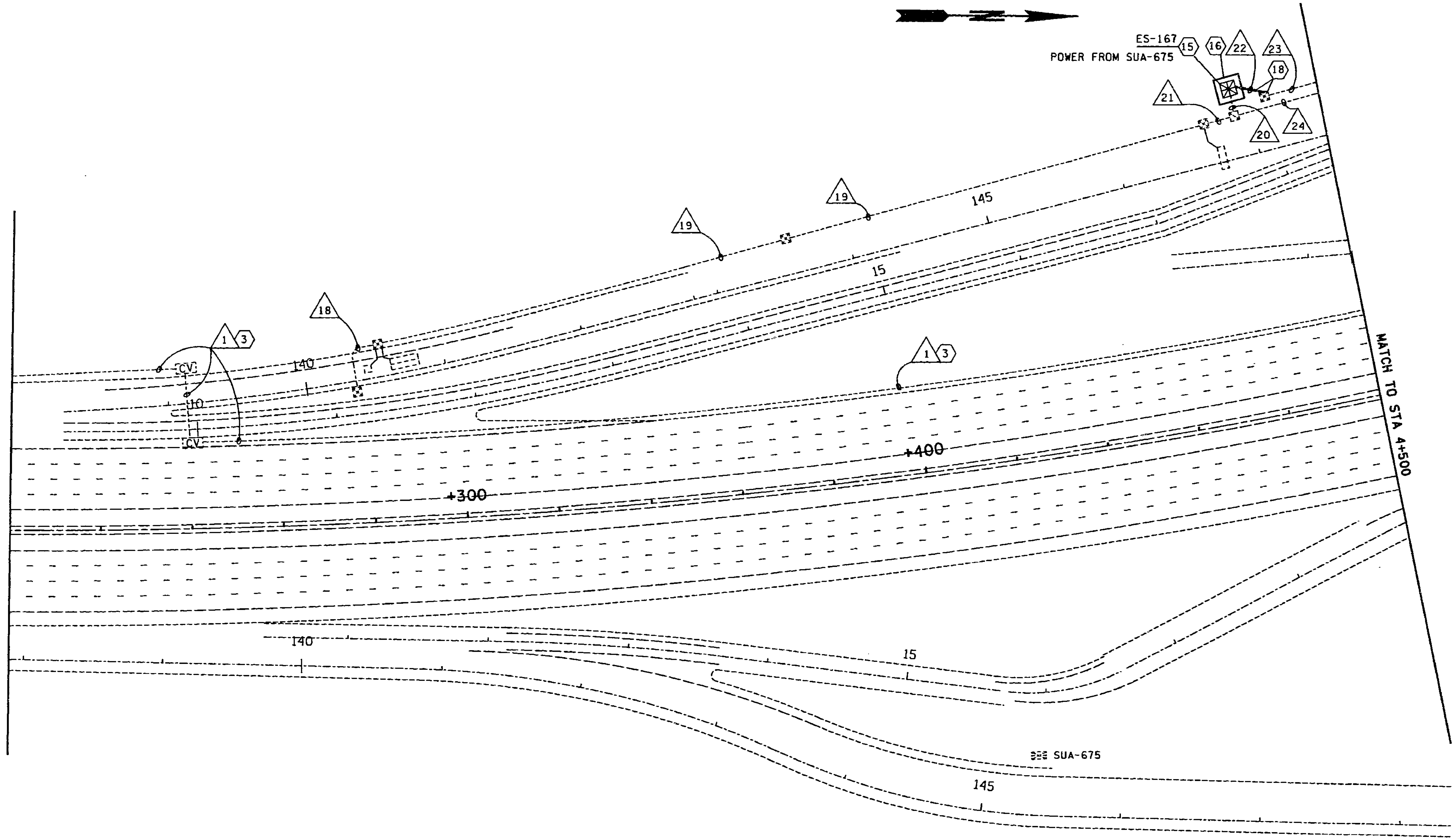
SC&DI PLAN

SC12

SHEET 70 OF 138 SHEETS

PLOT15 30 DEC 97 c:\dgn\sr5\sr512538\2538scsh.dgn mostagh

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

0 10 20 30 40 50
SCALE IN METERS

NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
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PROJ. ENGR. J. JOHNSON
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DATE	DATE	REVISION	BY

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ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

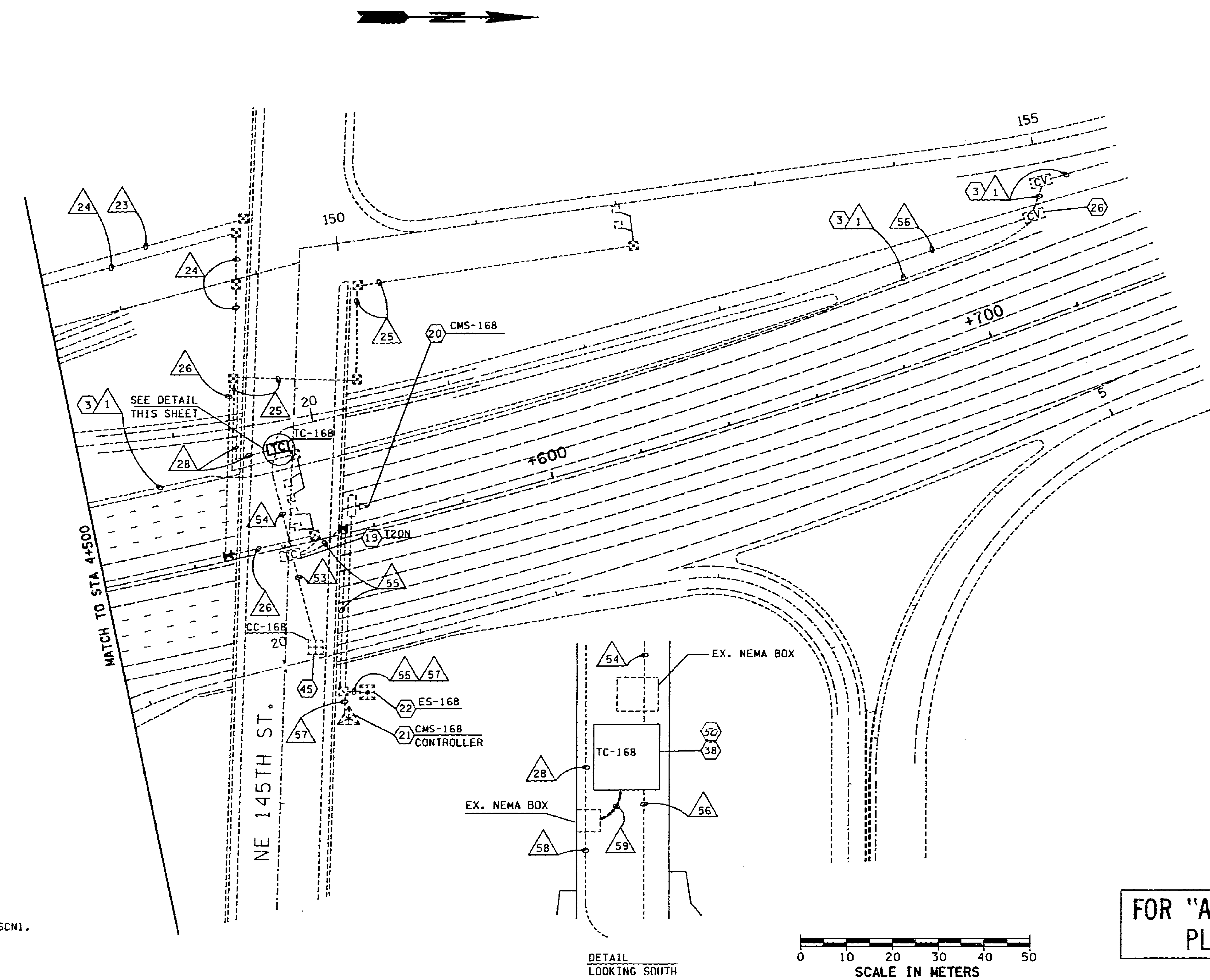
SC&DI PLAN

SC13

SHEET 71 OF 138 SHEETS

PLOT16 15 DEC 97 c:\dgn\sr5\sr512538\2538scsh.dgn mostagh

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
CHECKED BY M. BANDY
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

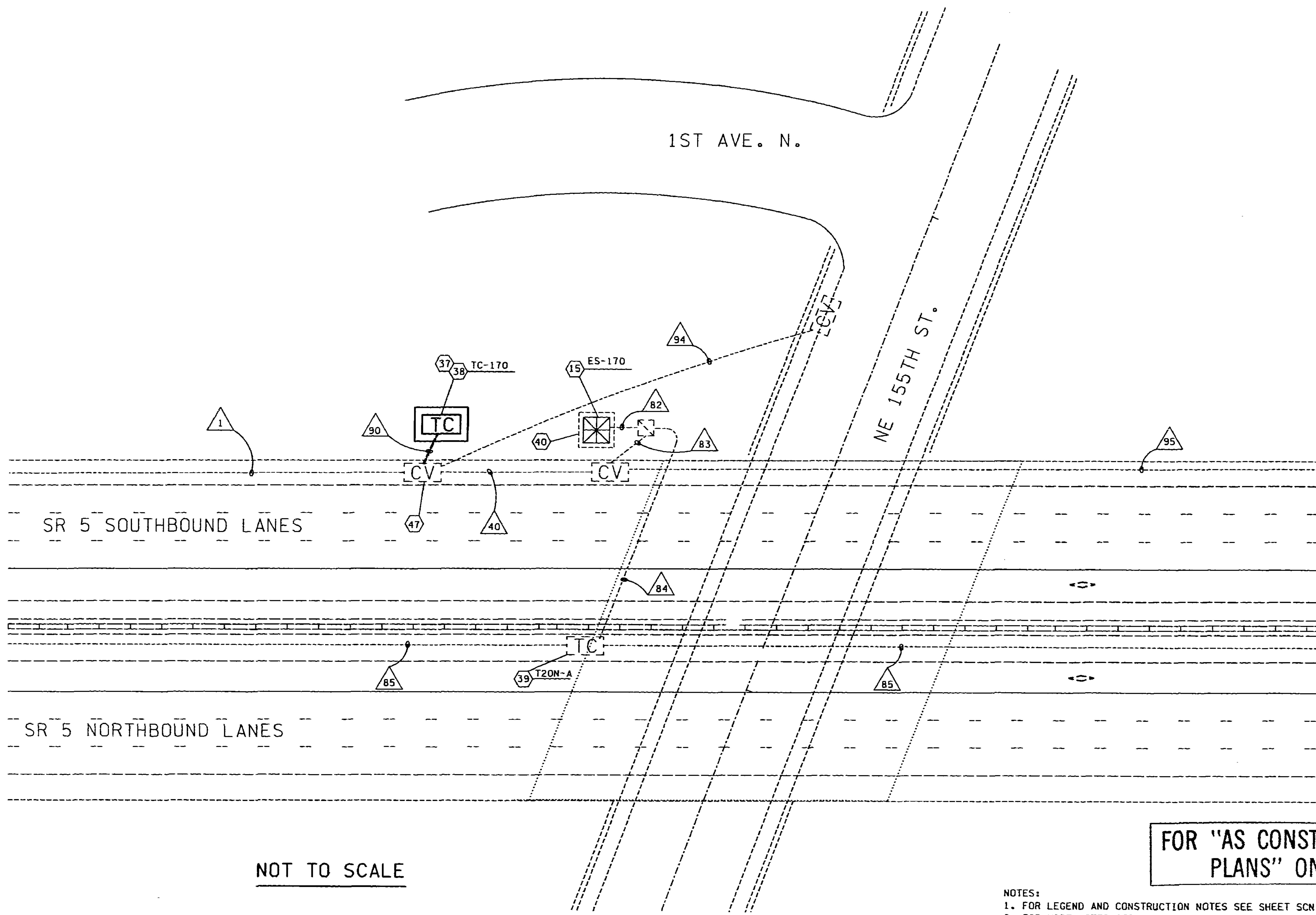
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI PLAN

SC14

SHEET 72 OF 138 SHEETS

PLOT17 15 DEC 97 c:\dgn\sr5\sr5l2538\2538scsh.dgn mostagh



FOR "AS CONSTRUCTED PLANS" ONLY

NOTES:
1. FOR LEGEND AND CONSTRUCTION NOTES SEE SHEET SCN1.
2. FOR WIRE NOTES SEE SHEETS SCW1 AND SCW2.

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
CHECKED BY M. BANDY
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

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CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

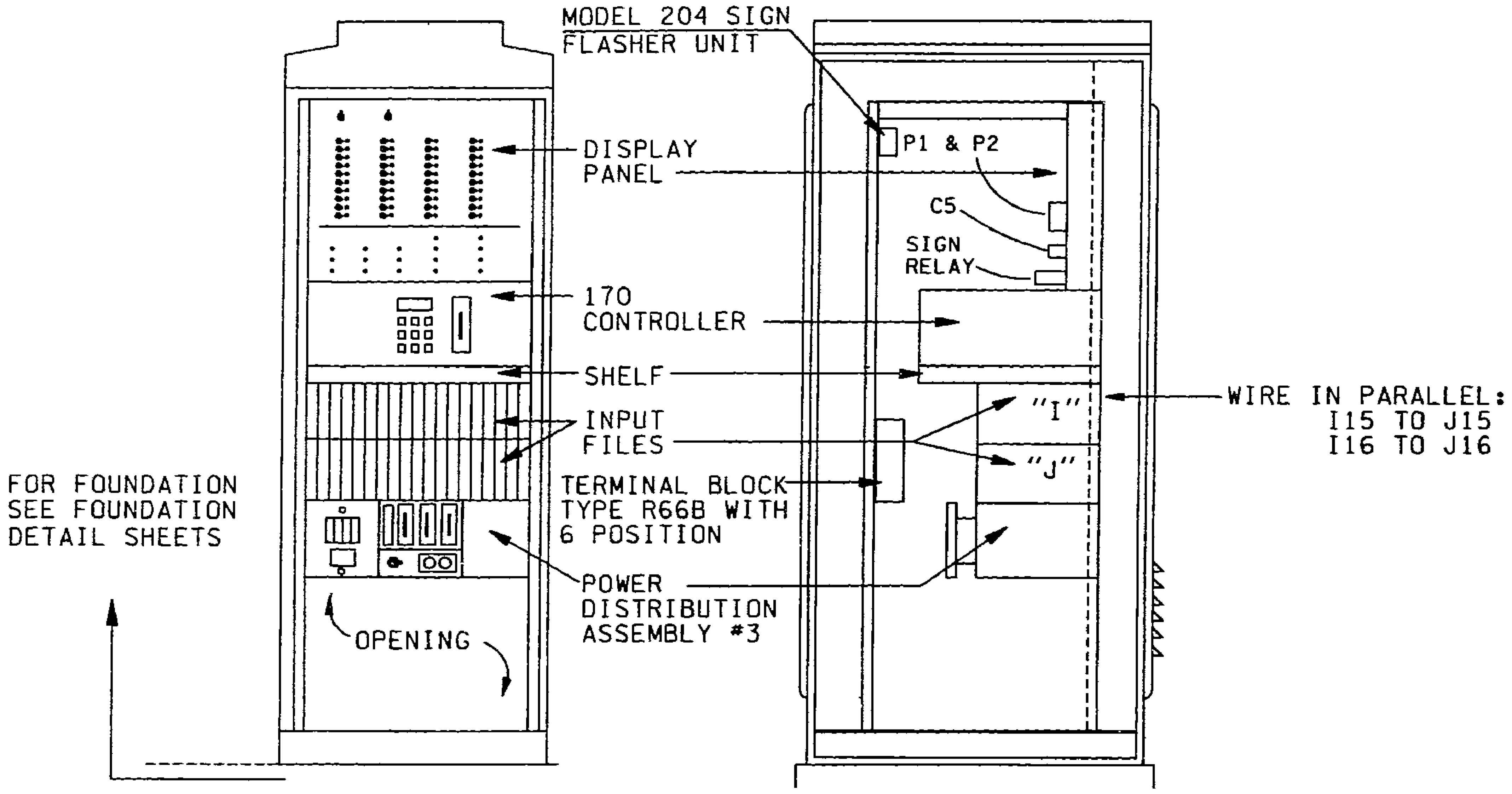
SC&DI PLAN

SC15

SHEET 73 OF 138 SHEETS

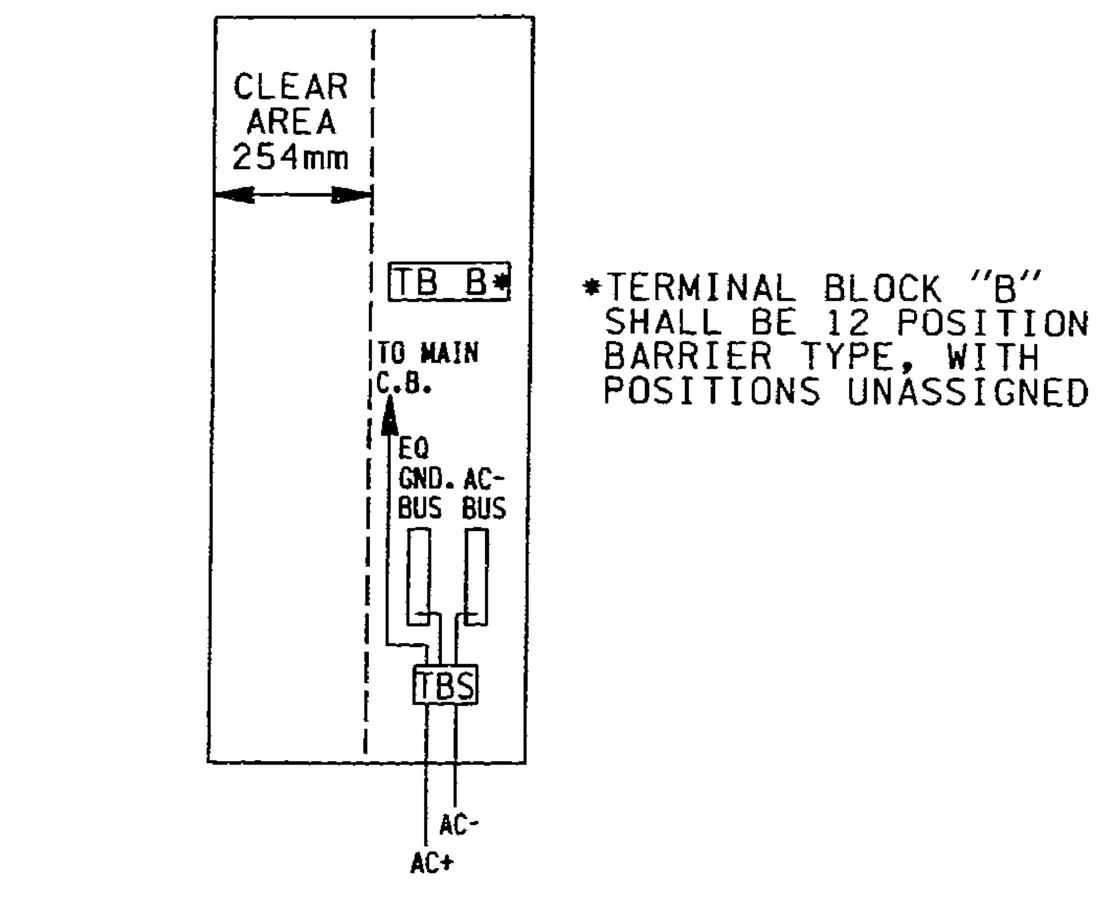
PLOT2 15 DEC 97 c:\dgn\sr5\sr512538\ngatscdt.dgn mostagh

MODEL 334 CABINET DETAILS



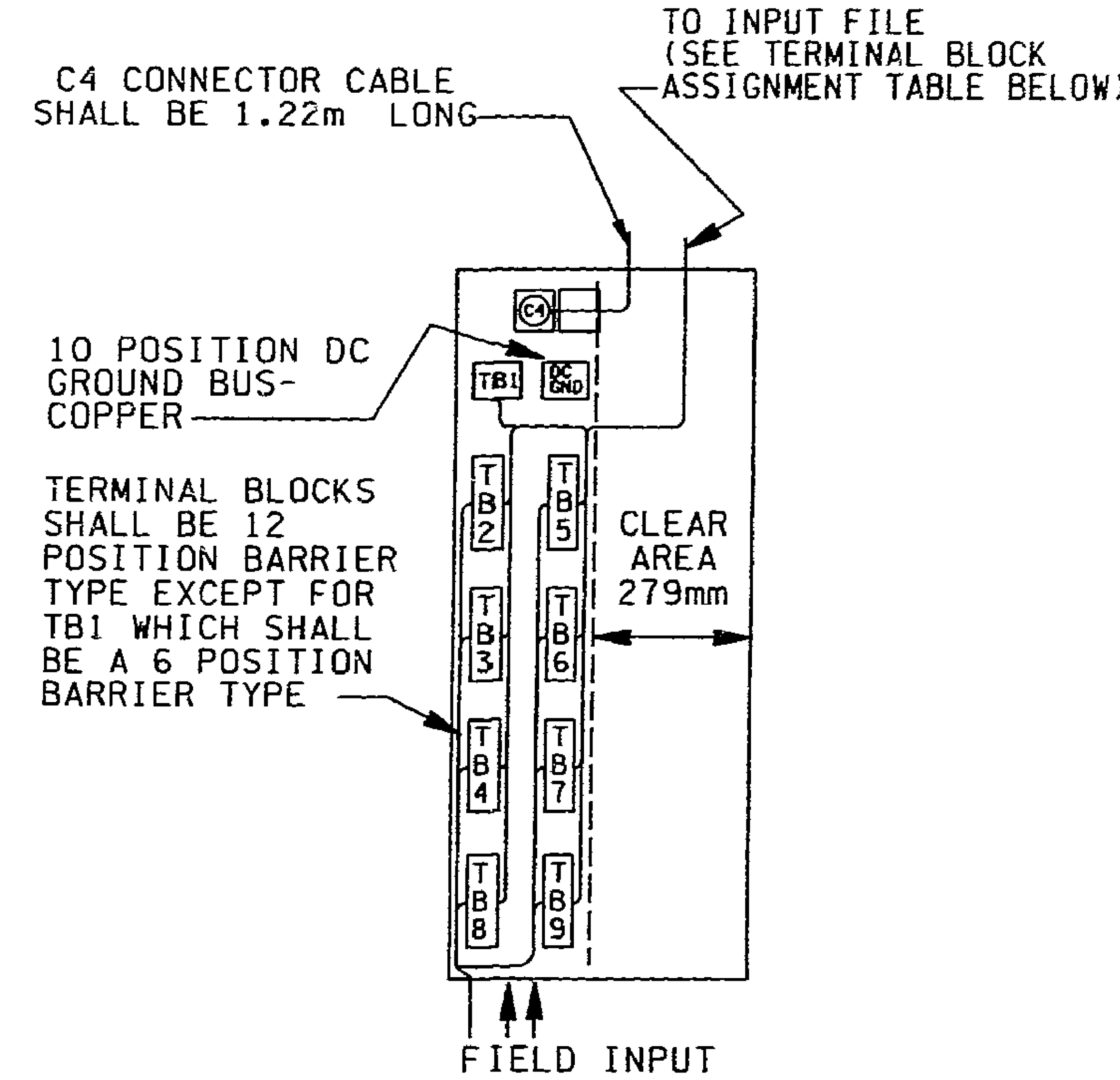
FRONT VIEW

SIDE VIEW



*TERMINAL BLOCK "B" SHALL BE 12 POSITION BARRIER TYPE, WITH POSITIONS UNASSIGNED

SERVICE PANEL DETAIL



INPUT PANEL DETAIL

INPUT PANEL TERMINAL BLOCK ASSIGNMENT TABLE

POSITION	A	B
TB1 1	T3-1	C4
TB1 2	TB1 1	C5, I15-1
TB1 3	TB1 2	C6
TB1 4	N/A	N/A
TB1 5	N/A	N/A
TB1 6	N/A	N/A
TB2 1	FIELD DET*	I1D
TB2 2	#1	I1E
TB2 3	FIELD DET*	I1J
TB2 4	#2	I1K
TB2 5	FIELD DET*	I2D
TB2 6	#3	I2E
TB2 7	FIELD DET*	I2J
TB2 8	#4	I2K
TB2 9	FIELD DET*	I3D
TB2 10	#5	I3E
TB2 11	FIELD DET*	I3J
TB2 12	#6	I3K
TB3 1	FIELD DET*	I4D
TB3 2	#7	I4E
TB3 3	FIELD DET*	I4J
TB3 4	#8	I4K
TB3 5	FIELD DET*	I5D
TB3 6	#9	I5E
TB3 7	FIELD DET*	I5J
TB3 8	#10	I5K
TB3 9	FIELD DET*	I6D
TB3 10	#11	I6E
TB3 11	FIELD DET*	I6J
TB3 12	#12	I6K

POSITION	A	B
TB4 1	FIELD DET*	I7D
TB4 2	#13	I7E
TB4 3	FIELD DET*	I7J
TB4 4	#14	I7K
TB4 5	FIELD DET*	I8D
TB4 6	#15	I8E
TB4 7	FIELD DET*	I8J
TB4 8	#16	I8K
TB4 9	FIELD DET*	I9D
TB4 10	#17	I9E
TB4 11	FIELD DET*	I9J
TB4 12	#18	I9K
TB5 1	FIELD DET*	I10D
TB5 2	#19	I10E
TB5 3	FIELD DET*	I10J
TB5 4	#20	I10K
TB5 5	FIELD DET*	I11D
TB5 6	#21	I11E
TB5 7	FIELD DET*	I11J
TB5 8	#22	I11K
TB5 9	FIELD DET*	I12D
TB5 10	#23	I12E
TB5 11	FIELD DET*	I12J
TB5 12	#24	I12K

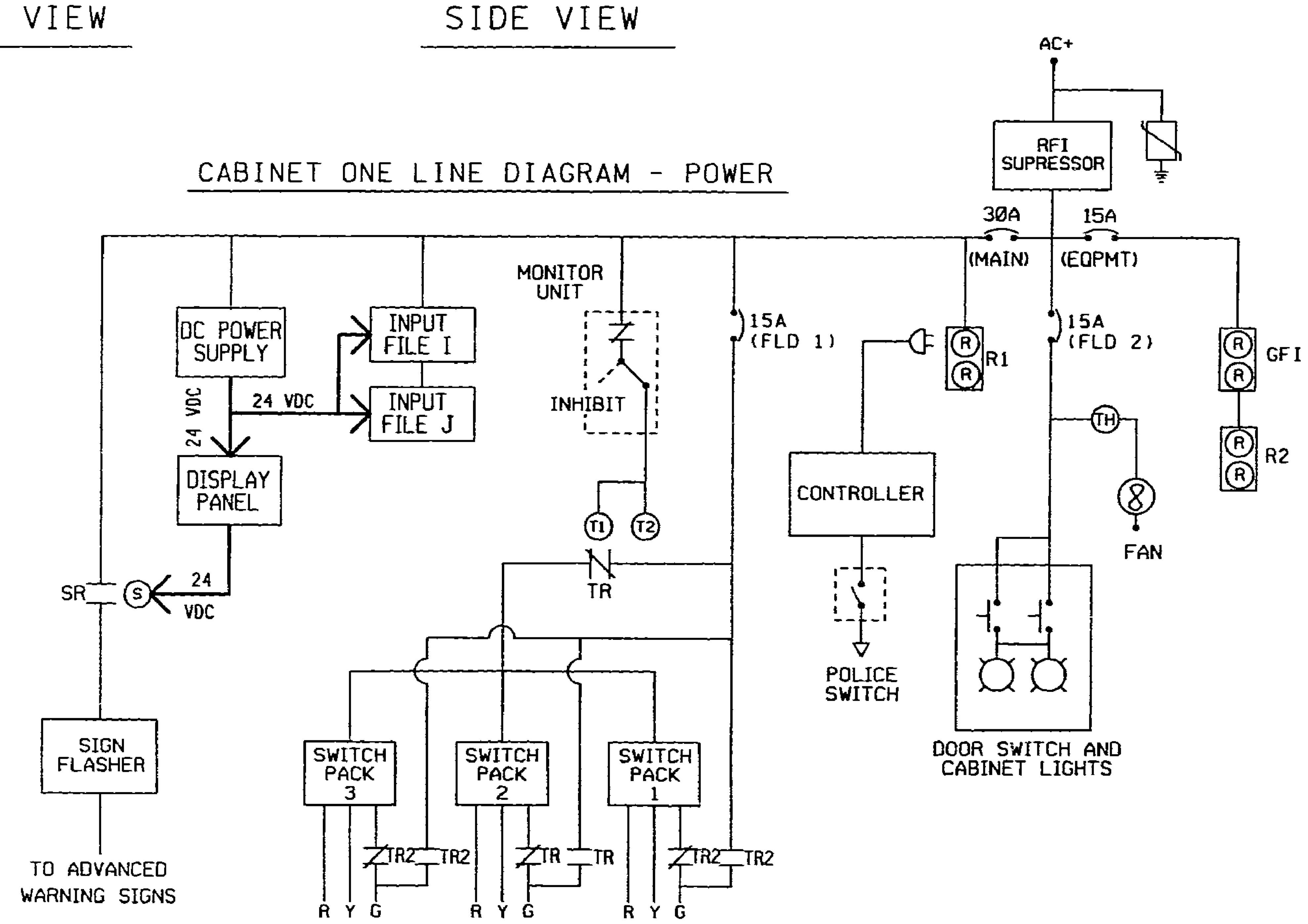
POSITION	A	B
TB6 1	FIELD DET*	I13D
TB6 2	#25	I13E
TB6 3	FIELD DET*	I13J
TB6 4	#26	I13K
TB6 5	FIELD DET*	I14D
TB6 6	#27	I14E
TB6 7	FIELD DET*	I14J
TB6 8	#28	I14K
TB6 9	FIELD DET*	J1D
TB6 10	#29	J1E
TB6 11	FIELD DET*	J1J
TB6 12	#30	J1K
TB7 1	FIELD DET*	J2D
TB7 2	#31	J2E
TB7 3	FIELD DET*	J2J
TB7 4	#32	J2K
TB7 5	FIELD DET*	J3D
TB7 6	#33	J3E
TB7 7	FIELD DET*	J3J
TB7 8	#34	J3K
TB7 9	FIELD DET*	J4D
TB7 10	#35	J4E
TB7 11	FIELD DET*	J4J
TB7 12	#36	J4K

POSITION	A	B
TB8 1	FIELD DET*	J5D
TB8 2	#37	J5E
TB8 3	FIELD DET*	J5J
TB8 4	#38	J5K
TB8 5	FIELD DET*	J6D
TB8 6	#39	J6E
TB8 7	FIELD DET*	J6J
TB8 8	#40	J6K
TB8 9	N/A	N/A
TB8 10	N/A	N/A
TB8 11	N/A	N/A
TB8 12	N/A	N/A
TB9 1	AUDIO IN	C2-A
TB9 2	(FROM CENTRAL)	C2-B
TB9 3	AUDIO OUT	C2-C
TB9 4	(TO CENTRAL)	C2-D
TB9 5	N/A	N/A
TB9 6	N/A	N/A
TB9 7	N/A	N/A
TB9 8	N/A	N/A
TB9 9	N/A	N/A
TB9 10	N/A	N/A
TB9 11	N/A	N/A
TB9 12	N/A	N/A

LEGEND

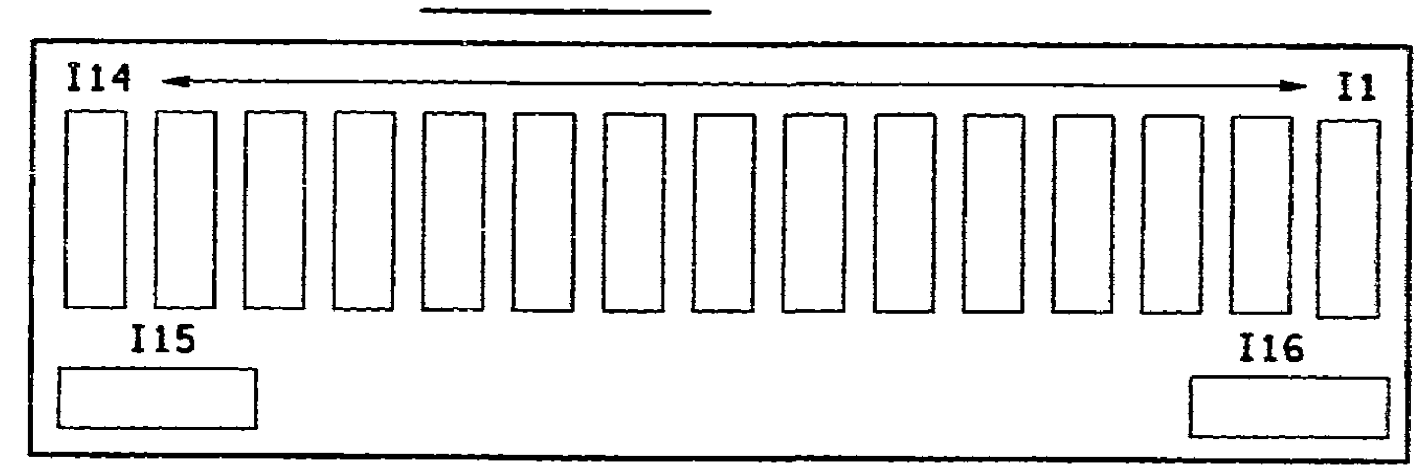
- TH THERMOSTAT
- CIRCUIT BREAKER
- R RECEPTACLE
- RELAY COIL
  - S = SIGN
  - T = TRANSFER
- RELAY, CONTACT N.C.
- RELAY, CONTACT N.O.
- SURGE PROTECTION
- SWITCH
- SWITCH, N.C.
- DC GROUND
- EQUIPMENT GROUND
- TR TRANSFER RELAY
- SR SIGN RELAY

CABINET ONE LINE DIAGRAM - POWER



FOR "AS CONSTRUCTED PLANS" ONLY

INPUT FILE (REAR VIEW)



NOTE: INPUT FILE "I" TERMINAL BLOCKS "I1" - "I16"
INPUT FILE "J" TERMINAL BLOCKS "J1" - "J16"

DESIGNED BY M. JANKA			
ENTERED BY H. MOSTAGHIMI			
CHECKED BY M. BANDY			
PROJ. ENGR. J. JOHNSON			
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-1

SHEET 74 OF 138 SHEETS

mostagh c:\dgn\sr5\sr512538\ngatscdt.dgn 15 DEC 97 PLOT3

CONNECTOR C1P AND C1S

PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION
1	DC GRD	DC GROUND	27	NC	NA	53	DP 55	DET 15	79	DP 77/C4-6	DET37/CM1G
2	C6-1	SWPK1-RED	28	NC	NA	54	DP 56	DET 16	80	DP 78/C4-7	DET38/CM3R
3	C6-2	SWPK1-GRN	29	NC	NA	55	DP 57	DET 17	81	DP 79/C4-8	DET39/CM3Y
4	C6-3	SWPK2-RED	30	NC	NA	56	DP 58	DET 18	82	DP 80/C4-9	DET40/CM3G
5	C6-4	SWPK2-YEL	31	NC	NA	57	DP 59	DET 19	83	C5-1	DP REMOTE
6	C6-5	SWPK2-GRN	32	NC	NA	58	DP 60	DET 20	84	C5-2	NA
7	C6-6	SWPK3-RED	33	NC	NA	59	DP 61	DET 21	85	C5-3	DP TRAFFIC
8	C6-7	SWPK3-YEL	34	NC	NA	60	DP 62	DET 22	86	C5-4	DP CLOCK
9	C6-8	SWPK3-GRN	35	NC	NA	61	DP 63	DET 23	87	C5-5	DP TELEMETRY
10	NC	NA	36	NC	NA	62	DP 64	DET 24	88	C5-6	DP ECHO
11	NC	NA	37	C6-9	SWPK1-YEL	63	C4-1	CM2-RED	89	C5-7	DP CONFLICT
12	NC	NA	38	NC	NA	64	C4-2	CM2-YEL	90	C5-8	DP DET FAILED
13	NC	NA	39	DP 41	DET 1	65	C4-3	CM2-GRN	91	C5-9	DP RED L1
14	I15-4	INPUT GND	40	DP 42	DET 2	66	PC-3	POLICE CONTROL	92	DC GND	OUTPUT GND
15	NC	NA	41	DP 43	DET 3	67	DP 65	DET 25	93	C5-10	SIGN-AUTO/DP METER
16	NC	NA	42	DP 44	DET 4	68	DP 66	DET 26	94	C5-11	DP RED L2
17	NC	NA	43	DP 45	DET 5	69	DP 67	DET 27	95	C5-12	DP YEL L2
18	NC	NA	44	DP 46	DET 6	70	DP 68	DET 28	96	C5-13	DP GRN L2
19	NC	NA	45	DP 47	DET 7	71	DP 69	DET 29	97	C5-14	DP YEL L1
20	NC	NA	46	DP 48	DET 8	72	DP 70	DET 30	98	C5-15	DP GRN L1
21	NC	NA	47	DP 49	DET 9	73	DP 71	DET 31	99	C5-16	DP RED L3
22	NC	NA	48	DP 50	DET 10	74	DP 72	DET 32	100	C5-17	DEP YEL L3
23	NC	NA	49	DP 51	DET 11	75	DP 73	DET 33	101	C5-18	DP GRN L3
24	NC	NA	50	DP 52	DET 12	76	DP 74	DET 34	102	I15-3	DET RESET
25	NC	NA	51	DP 53	DET 13	77	DP 75/C4-4	DET35/CM1R	103	C6-10	WATCHDOG
26	NC	NA	52	DP 54	DET 14	78	DP 76/C4-5	DET36/CM1Y	104	DC GND	INPUT GND

P1 CONNECTOR - FEMALE INPUT FILE TO DISPLAY PANEL

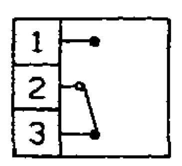
P1 PIN*	CONNECTION	FUNCTION
1	DP1	DET. 1
2	DP2	DET. 2
3	DP3	DET. 3
4	DP4	DET. 4
5	DP5	DET. 5
6	DP6	DET. 6
7	DP7	DET. 7
8	DP8	DET. 8
9	DP9	DET. 9
10	DP10	DET.10
11	DP11	DET.11
12	DP12	DET.12
13	DP13	DET.13
14	DP14	DET.14
15	DP15	DET.15
16	DP16	DET.16
17	DP17	DET.17
18	DP18	DET.18
19	DP19	DET.19
20	DP20	DET.20
21	DP21	DET.21
22	DP22	DET.22
23	DP23	DET.23
24	DP24	DET.24
25	DP25	DET.25
26	DP26	DET.26
27	DP27	DET.27
28	DP28	DET.28
29	DP29	DET.29
30	DP30	DET.30
31	DP31	DET.31
32	DP32	DET.32
33	DP33	DET.33
34	DP34	DET.34
35	DP35	DET.35
36	DP36	DET.36
37	DP37	DET.37
38	DP38	DET.38
39	DP39	DET.39
40	DP40	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	+24 VDC	POWER
50	LOGIC GND	GROUND

P2 CONNECTOR - MALE DISPLAY PANEL TO C1

P2 PIN*	CONNECTION	FUNCTION
1	DP41	DET. 1
2	DP42	DET. 2
3	DP43	DET. 3
4	DP44	DET. 4
5	DP45	DET. 5
6	DP46	DET. 6
7	DP47	DET. 7
8	DP48	DET. 8
9	DP49	DET. 9
10	DP50	DET.10
11	DP51	DET.11
12	DP52	DET.12
13	DP53	DET.13
14	DP54	DET.14
15	DP55	DET.15
16	DP56	DET.16
17	DP57	DET.17
18	DP58	DET.18
19	DP59	DET.19
20	DP60	DET.20
21	DP61	DET.21
22	DP62	DET.22
23	DP63	DET.23
24	DP64	DET.24
25	DP65	DET.25
26	DP66	DET.26
27	DP67	DET.27
28	DP68	DET.28
29	DP69	DET.29
30	DP70	DET.30
31	DP71	DET.31
32	DP72	DET.32
33	DP73	DET.33
34	DP74	DET.34
35	DP75	DET.35
36	DP76	DET.36
37	DP77	DET.37
38	DP78	DET.38
39	DP79	DET.39
40	DP80	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	NC	NA
50	NC	NA

SIGN SWITCH

CONNECT TO	FUNCTION
C5-23	DC GND
SR-7	SR COIL
C5-10	AUTO METER

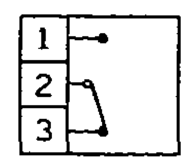


SHOWN IN AUTOMATIC MODE

NOTE: SIGN SWITCH SHALL BE 3-POSITION STATIONARY TYPE WITH 10 A CONTACT RATING.

POLICE CONTROL SWITCH

CONNECT TO	FUNCTION
NC	NA
DC GND	DC GND
C1-66	POLICE CTRL

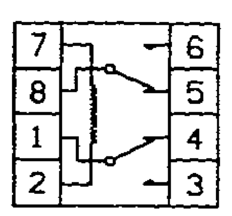


SHOWN IN ON MODE

NOTE: POLICE CONTROL SWITCH SHALL BE 2-POSITION STATIONARY TYPE WITH 10 A CONTACT RATING.

SIGN RELAY

CONNECT TO	FUNCTION	CONNECT TO	FUNCTION
SS-2	SIGN CONTROL	NC	NA
NC	NA	NC	NA
T2-7	AC+	T1-3	SIGN OFF FIELD
C5-24	+24 VDC	T1-1	SIGN ON FIELD



SHOWN DE-ENERGIZED (NOT METERING)

NOTE: RELAY SHALL OPERATE ON GROUND OUTPUT FROM 170 CONTROLLER. RELAY COIL SHALL DRAW LESS THAN 50 MILLIAMPERES.

RELAY SHALL BE DPDT AS SHOWN AND HAVE CONTACT RATING NOT LESS THAN 10 A CONTINUOUS DUTY.

AC WIRING FROM SIGN RELAY TO PDA SHALL BE 14 AWG.

KEY TO ABBREVIATIONS

CB = CIRCUIT BREAKER
CM = CURRENT MONITOR
DP = DISPLAY PANEL
MU = MONITOR UNIT
NA = NOT ASSIGNED
NC = NOT CONNECTED
PC = POLICE CONTROL SWITCH
SR = SIGN RELAY
SS = SIGN SWITCH
SWPK = SWITCH PACK
TR = TRANSFER RELAY

C4 CONNECTOR (TO CURRENT MONITOR)

PIN	CONNECTION	FUNCTION
1	C1-63	CM2-RED
2	C1-64	CM2-YEL
3	C1-65	CM2-GRN
4	C1-77	CM1-RED
5	C1-78	CM1-YEL
6	C1-79	CM1-GRN
7	C1-80	CM3-RED
8	C1-81	CM3-YEL
9	C1-82	CM3-GRN
10	C1-36	NA
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	C1-70	NA
18	C1-71	NA
19	C1-72	NA
20	NC	NA
21	C5-19	NA
22	C5-20	NA
23	DC GND	DC GROUND
24	TB1-1B	+24 VDC

C5 CONNECTOR (TO DISPLAY PANEL)

PIN	CONNECTION	FUNCTION
1	C1-83	DP -REMOTE
2	C1-84	DP -NA
3	C1-85	DP -STANDBY TRAFFIC
4	C1-86	DP -STANDBY CLOCK
5	C1-87	DP -TELEMETRY
6	C1-88	DP -ECHO
7	C1-89	DP -CONFLICT
8	C1-90	DP -DET. FAILED
9	C1-91	DP -RED LANE 1
10	C1-93	DP -METERING, SS-3
11	C1-94	DP -RED LANE 2
12	C1-95	DP -YELLOW LANE 2
13	C1-96	DP -GREEN LANE 2
14	C1-97	DP -YELLOW LANE 1
15	C1-98	DP -GREEN LANE 1
16	C1-99	DP -RED LANE 3
17	C1-100	DP -YELLOW LANE 3
18	C1-101	DP -GREEN LANE 3
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	SS-1
24	TB1-2B	+24 VDC

C6 CONNECTOR (TO PDA)

PIN	CONNECTION	FUNCTION
1	C1-2	SWPK1-RED
2	C1-3	SWPK1-GRN
3	C1-4	SWPK2-RED
4	C1-5	SWPK2-YEL
5	C1-6	SWPK2-GRN
6	C1-7	SWPK3-RED
7	C1-8	SWPK3-YEL
8	C1-9	SWPK3-GRN
9	C1-37	SWPK1-YEL
10	C1-103	WATCHDOG MU
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	NC	NA
18	NC	NA
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	DC GROUND
24	TB1-3B	+24 VDC

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. JANKA
ENTERED BY H. MOSTAGHIMI
CHECKED BY M. BANDY
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-2

SHEET 75 OF 138 SHEETS

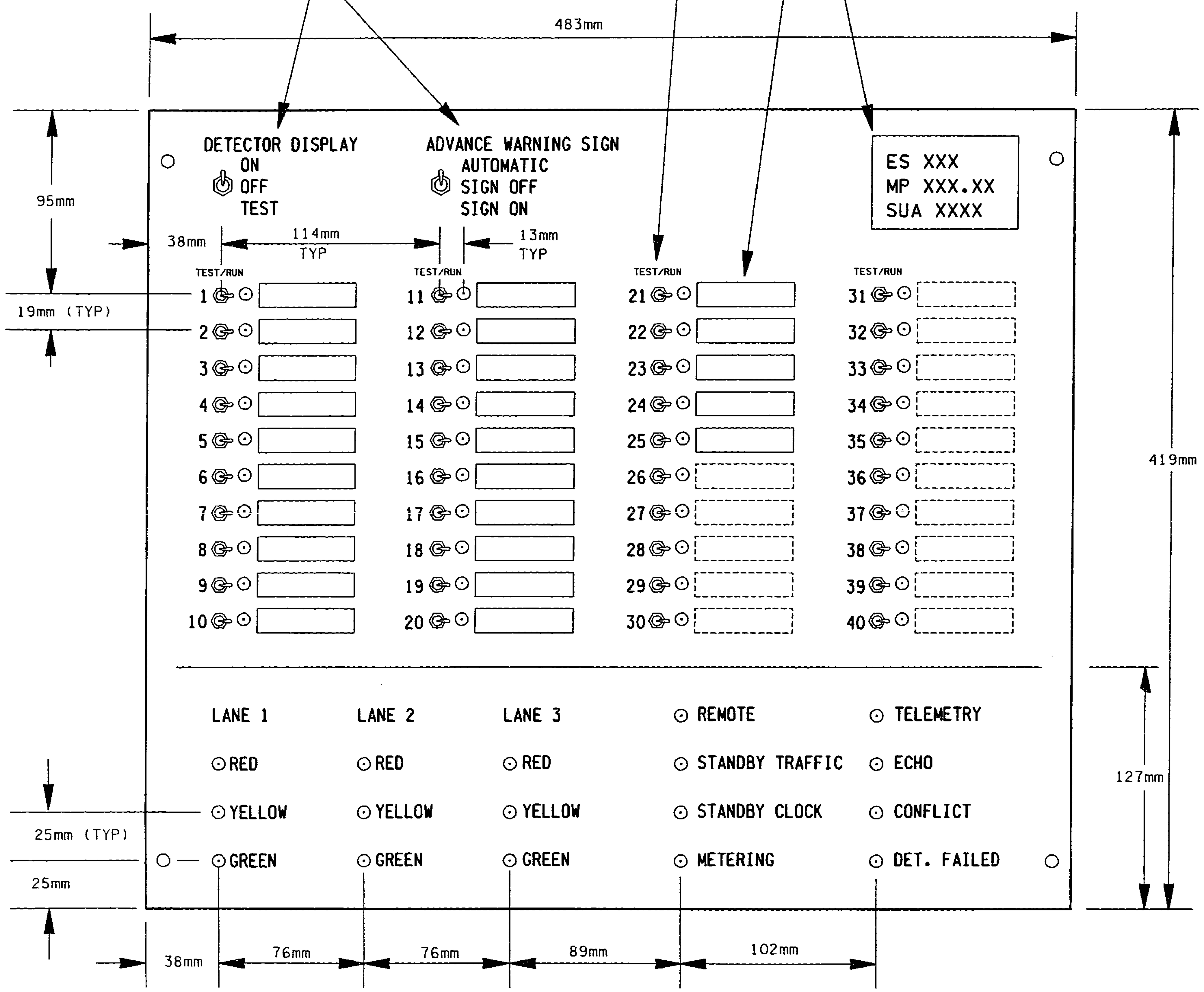
mostagh c:\dgn\sr5\sr512538\ngatscd+.dgn 15 DEC 97 PLOT4

6mm SCREENED TEXT. SEE NOTE BELOW.

3mm SCREENED TEXT

ENGRAVED PHENOLIC DETECTOR NAMEPLATE 51mm X 13mm TYPICAL. SEE FIELD WIRING CHART.

ENGRAVED PHENOLIC CABINET NAMEPLATE 76mm X 38mm TYPICAL. SEE SPECIALS.



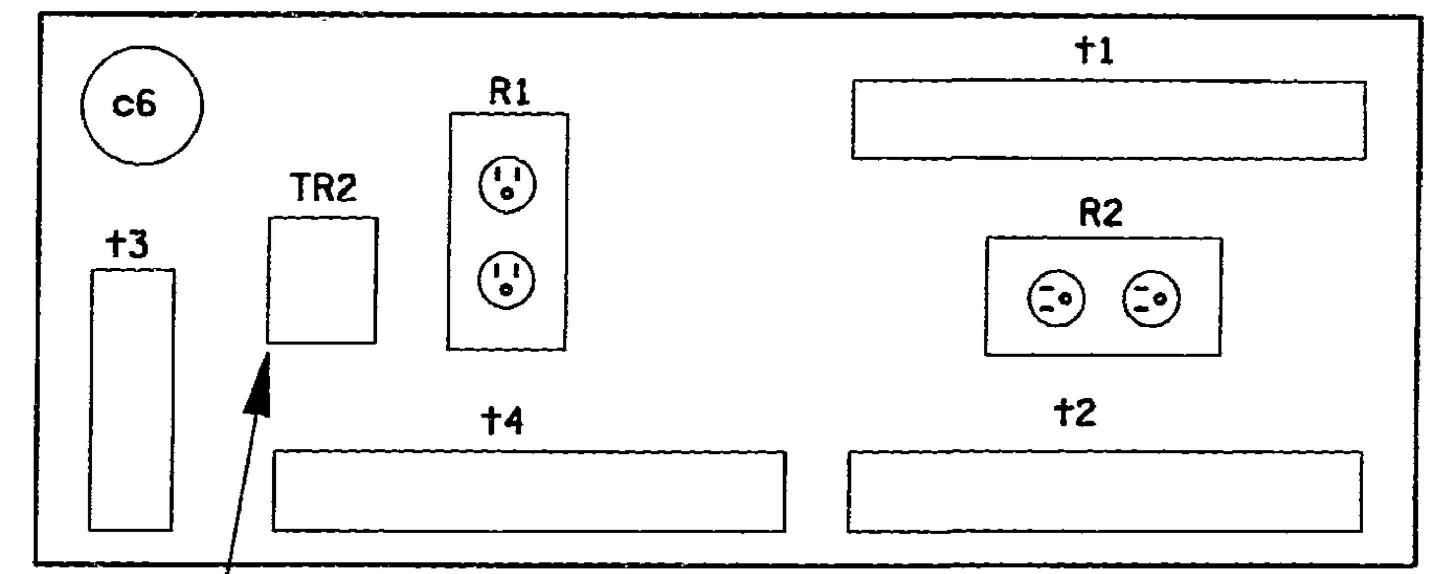
DISPLAY PANEL

NO SCALE

UNLESS OTHERWISE NOTED, ALL TEXT SHALL BE SCREENED DIRECTLY ON THE PANEL. TEXT SHALL BE 6mm MINIMUM.

POWER DISTRIBUTION ASSEMBLY (PDA) #3

(REAR VIEW)



INSTALL MODEL 430 TRANSFER RELAY. WIRE AS SHOWN BELOW.

PDA #3 MODIFICATIONS

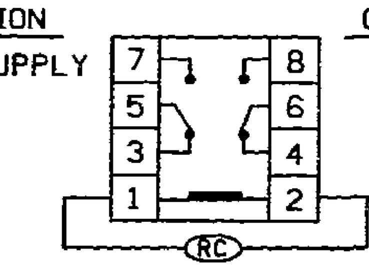
CONNECT:			FUNCTION
T2-8	TO	T4-6	TR OUTPUT TO FIELD GRN 2
T2-6	TO	MU-3	ENERGIZE TR WHEN MU IS NORMAL
T1-1, T1-2	TO	SR-3	FIELD OUTPUT - SIGN ON
T1-3, T1-4	TO	SR-4	FIELD OUTPUT - SIGN OFF

ADD TRANSFER RELAY #2 AS SHOWN.

TRANSFER RELAY

(FRONT PANEL OF PDA #3)

CONNECT TO	FUNCTION	TERMINAL	TERMINAL	CONNECT TO	FUNCTION
SWPK1-1	AC+ SUPPLY	7	8	SWPK2-7	GRN-2
CB 3	AC+	5	6	T4-6	GRN OUTPUT
NC	NA	3	4	TR-5	AC+
T2-6	MU-OK	1	2	T2-2	AC-



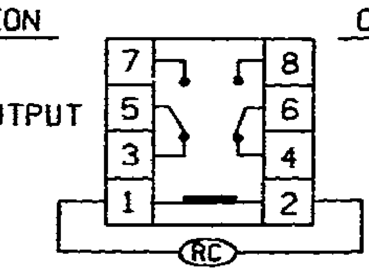
SHOWN DE-ENERGIZED
ENERGIZED BY MONITOR UNIT NORMAL

FOR "AS CONSTRUCTED PLANS" ONLY

TRANSFER RELAY #2

(MODEL 430)

CONNECT TO	FUNCTION	TERMINAL	TERMINAL	CONNECT TO	FUNCTION
SWPK3-7	GRN-3	7	8	SWPK1-7	GRN-1
T4-3	GRN OUTPUT	5	6	T4-9	GRN OUTPUT
CB3	AC+	3	4	TR2-3	AC+
T2-6	MU-OK	1	2	T2-2	AC-



SHOWN DE-ENERGIZED
ENERGIZED BY MONITOR UNIT NORMAL

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

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SHEET 76 OF 138 SHEETS

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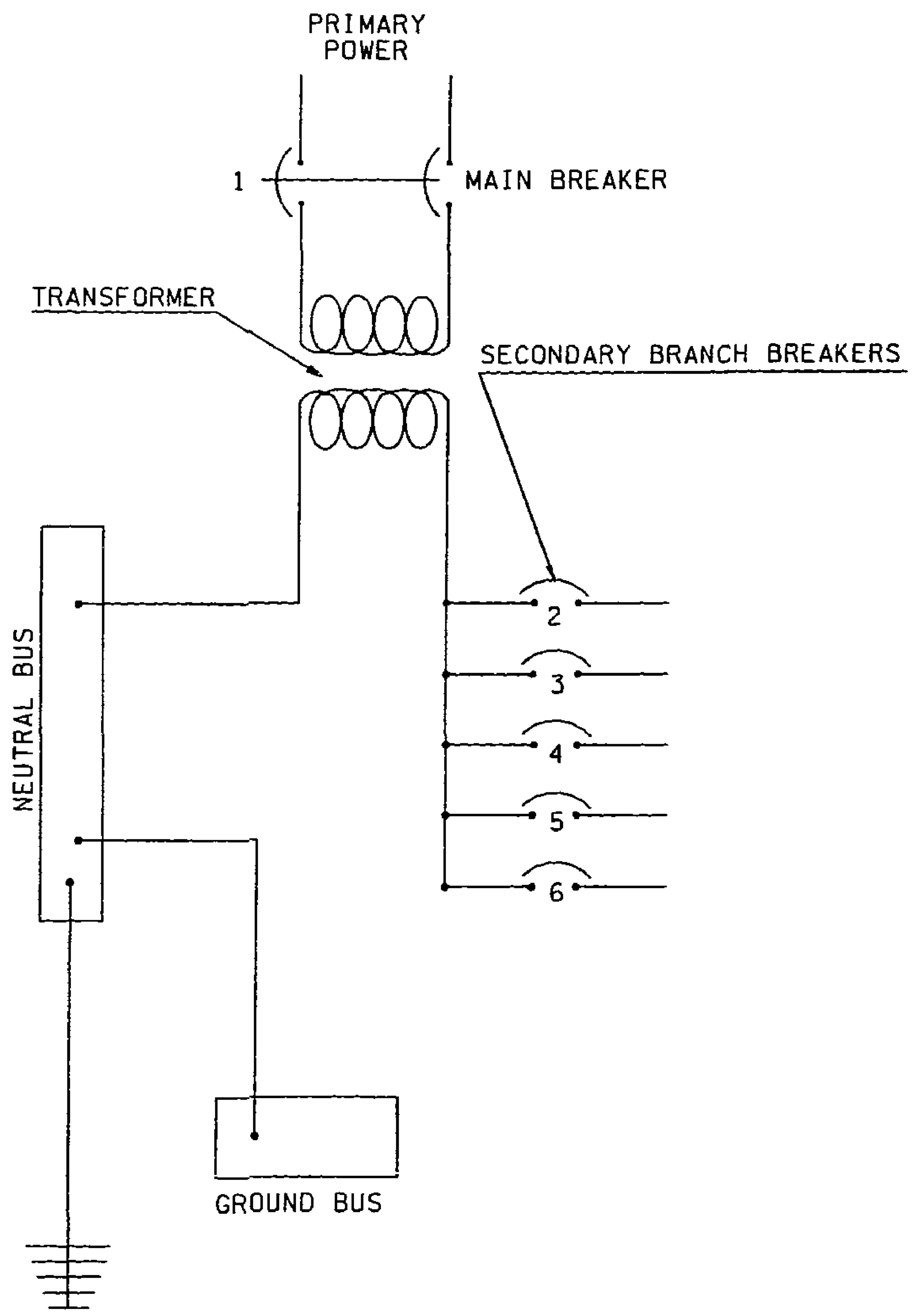
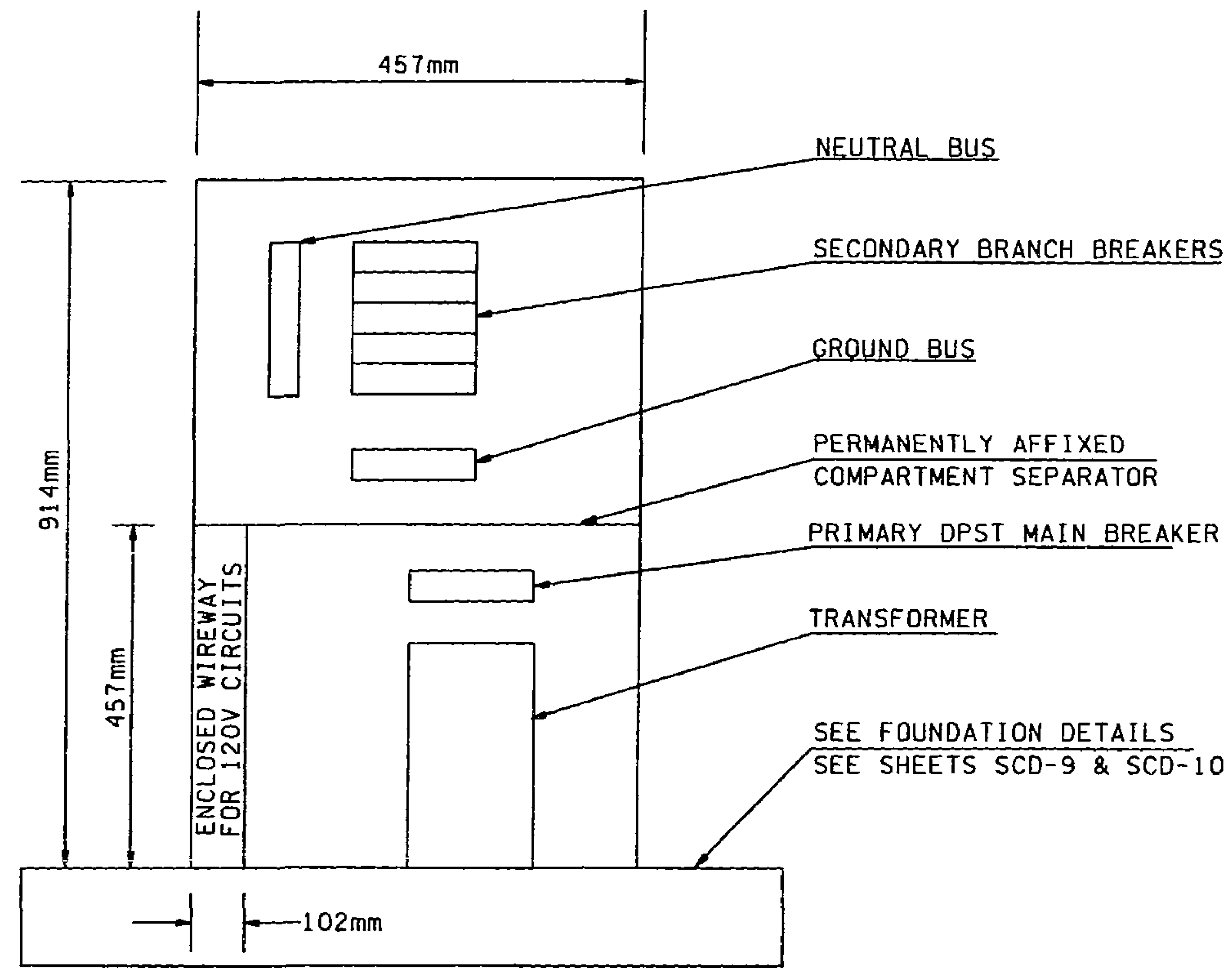


CIRCUIT DIAGRAM



INTERIOR DETAILS
(WITH DEAD FRONTS REMOVED)

GENERAL NOTES

1. 5 KVA TRANSFORMER CABINET SIZE SHALL BE 914mm HIGH X 457mm WIDE X 305mm DEEP.
2. CABINETS SHALL BE FABRICATED FROM ANODIZED SHEET ALUMINUM.
3. THE SECONDARY BRANCH BREAKERS SHALL BE BOLT-IN TYPE, MOUNTED ON COPPER BUS WORK RATED AT 100 AMPS.
4. ALL CIRCUIT BREAKERS INSTALLED SHALL BE PERMANENTLY MARKED WITH APPLICABLE CIRCUIT NAME.
5. THE DEAD FRONT SHALL BE FABRICATED IN TWO PARTS, ONE FOR EACH COMPARTMENT.
6. THE DOOR HINGE SHALL BE MOUNTED ON THE LEFT SIDE.
7. BOLT PATTERN IS PROVIDED BY CABINET MANUFACTURER. BOLTS SHALL BE 16mm DIA. AND EXTEND 38mm ABOVE CONCRETE PAD.
8. SEE SECTION 9-29.24 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
9. TRANSFORMER VOLTAGE AND KVA REQUIREMENTS ARE AS SHOWN IN THE PLANS AND SPECIAL PROVISIONS.
10. SEE SC&DI BREAKER SCHEDULE FOR SIZE AND QUANTITY OF BREAKERS.

TRANSFORMER DETAIL

SR 5 REVERSIBLE ES-154						
POWER FROM SUA 671 CKT#13ABC VIA TRANSFORMER AT GC-154 CKT#4						
TRANSFORMER RATED LOAD 5 KVA 6.2 FLA						
TRANSFORMER ACTUAL LOAD 3 KVA						
BREAKER NO.	CIRCUIT VOLTAGE	BREAKER RATING	BREAKER TYPE	KVA LOAD	AMP LOAD	CIRCUIT NAME
1	240	40 A	D.P.S.T	5	10.4	MAIN BREAKER
2	120	30 A	S.P.S.T.	3	25	ES-154
3	----	-----				
4	----	-----				
5	----	-----				
6	----	-----				

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-4

SHEET 77 OF 138 SHEETS

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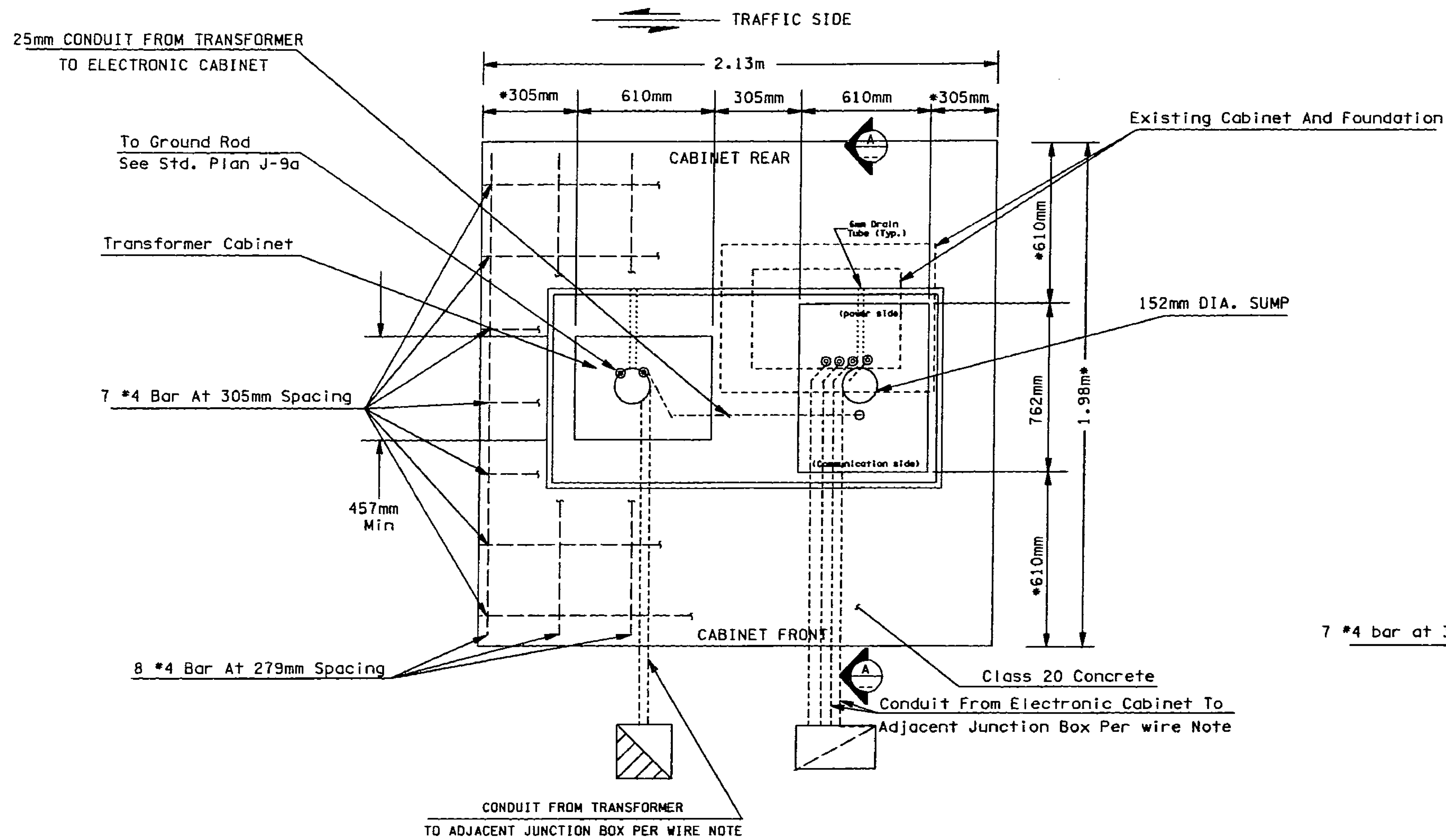
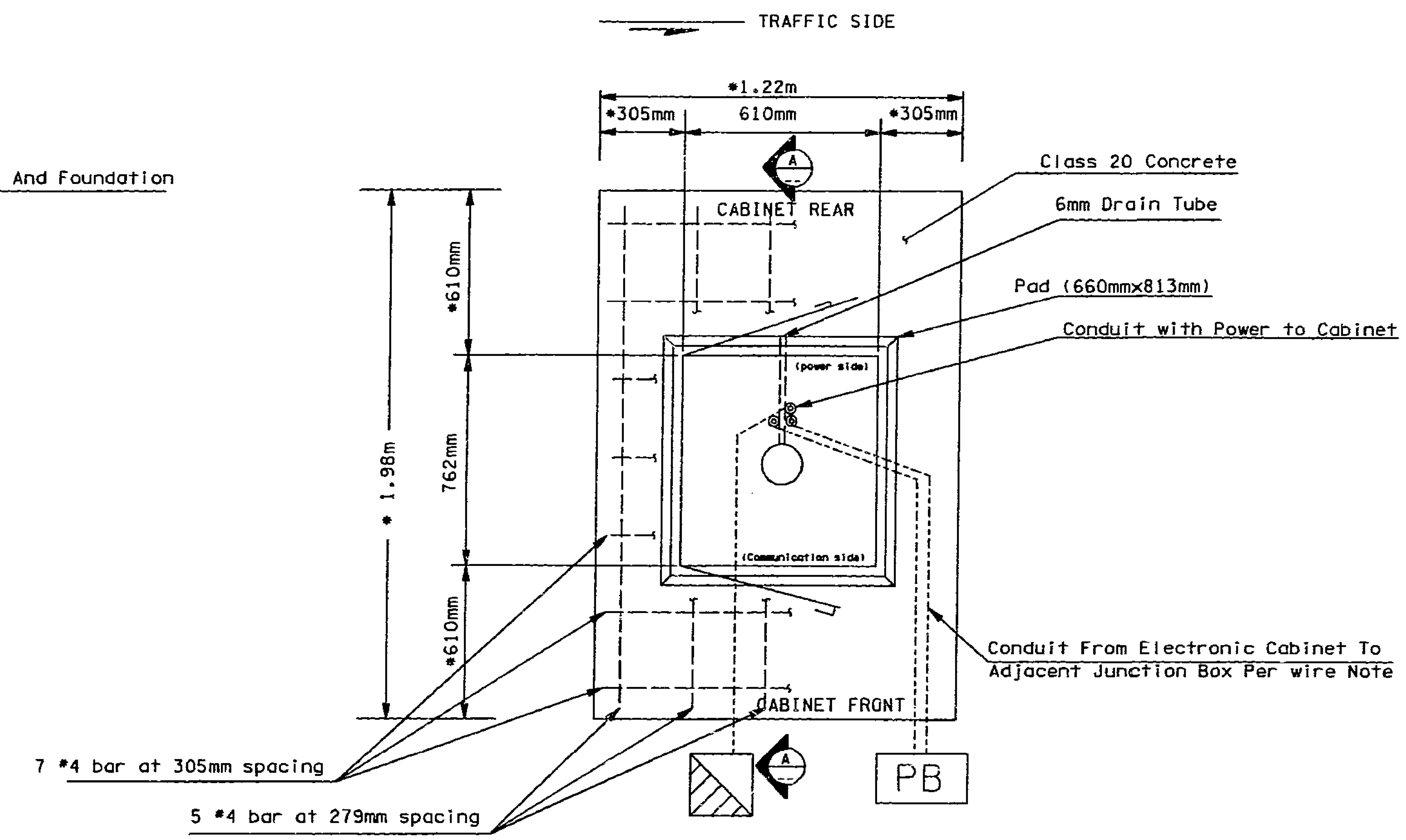


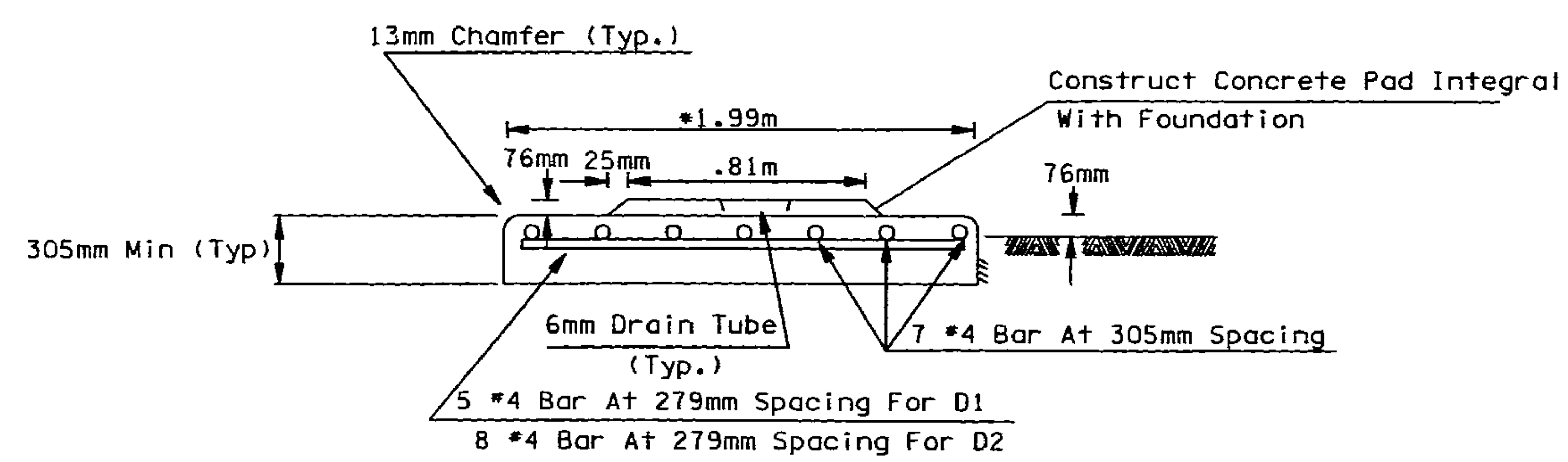
PLAN

ES-154 CABINET FOUNDATION DETAIL WITH TRANSFORMER



PLAN

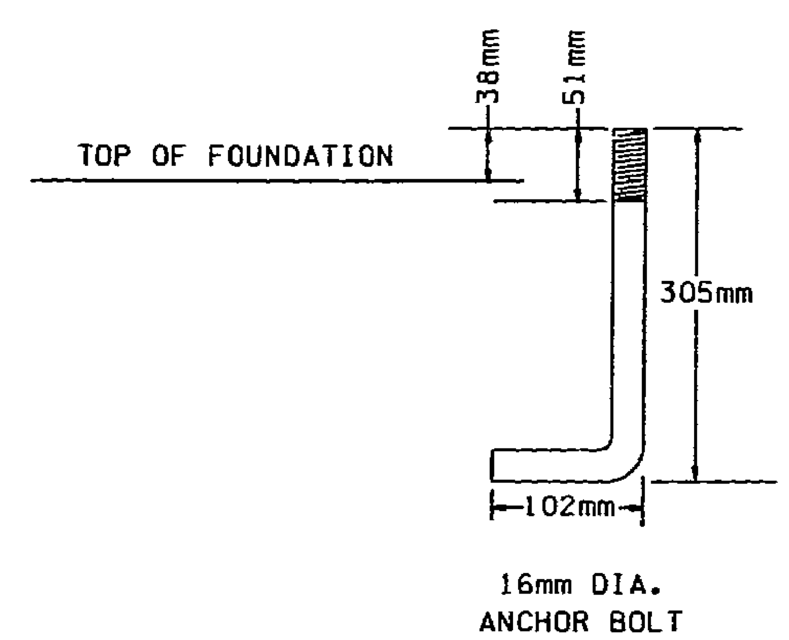
TYPICAL SINGLE CABINET FOUNDATION DETAIL



ELEVATION

SECTION A-A

NOT TO SCALE



FOR "AS CONSTRUCTED PLANS" ONLY

NOTES:

1. All Reinforcing Steel Shall Have A Min. of 51mm Clear Cover.
2. All Conduits To Be Clustered Toward Rear Of The Cabinets.
3. Slope Foundation 21mm/m. To The Edge.
4. Slope Pads 21mm/m To The Sump In Center.
5. All Conduits To extend 51mm Above Cabinet Pad.
6. All Conduits Shall Be Hot Dipped Galvanized.
7. All Controllers Shall Be H=1626mm, W=610mm, D=762mm.
8. Transformer And Terminal Cabinets Are 914mm High By 610mm Wide By 457mm Deep.
9. Use Silicone Beaded Sealant Around Cabinets And Pad.
10. Bolt Pattern Is provided BY Cabinet Manufacturer. Bolts Shall Be 16mm Dia. And Extend A Min. of 38mm Above Concrete Pad
11. For Each Additional Cabinet Add 914mm to D2 Foundation Width.
12. Concrete Shall Be Class 20.
*13. Any Other Dimension Must Be Approved By The Engineer.
14. Use Anchor Bolts With Epoxy Sealent In Modified Foundataion.
15. All Anchor Bolts Shall Be Hot Dipped Galvanized.

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10	WASH	

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

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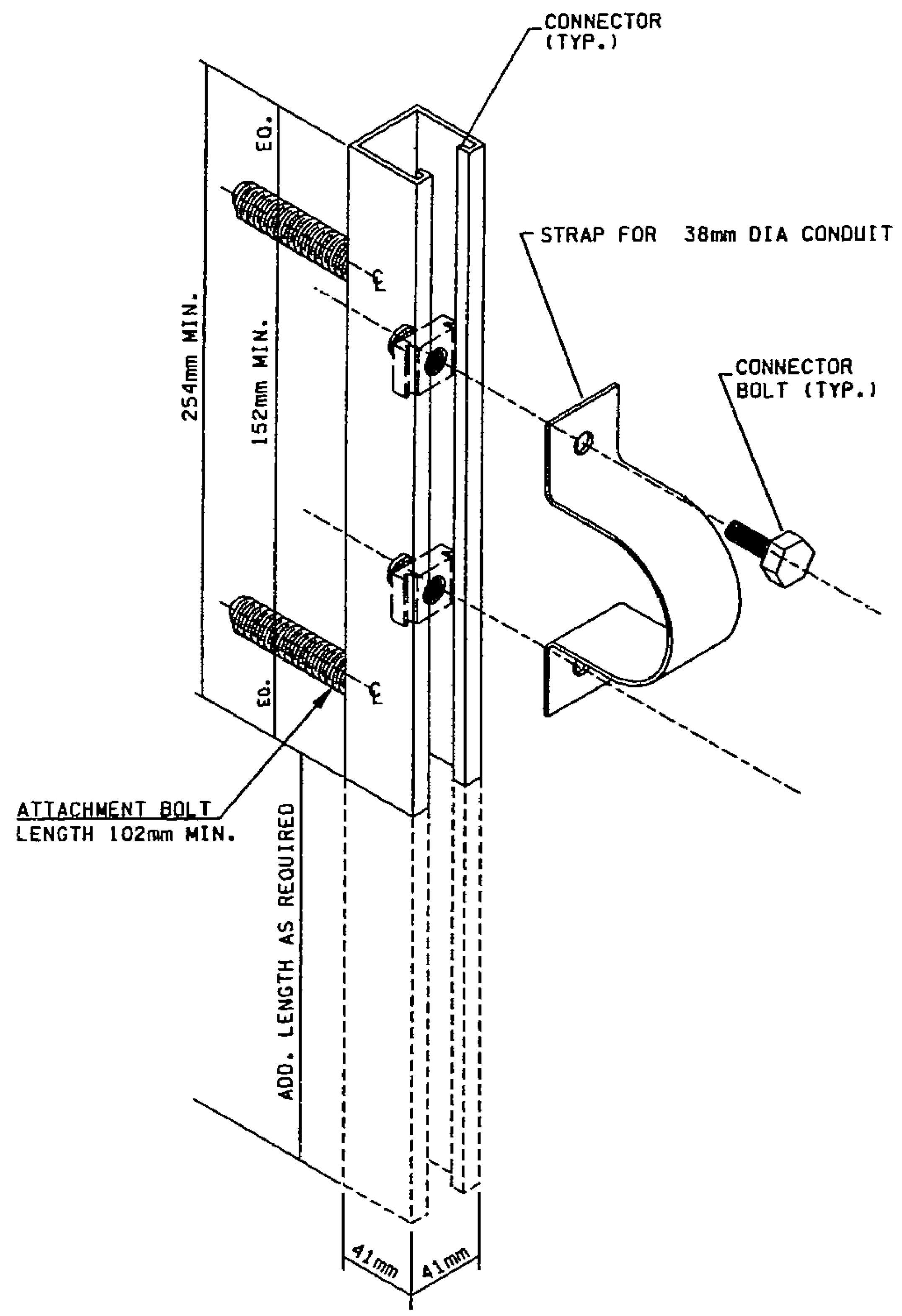
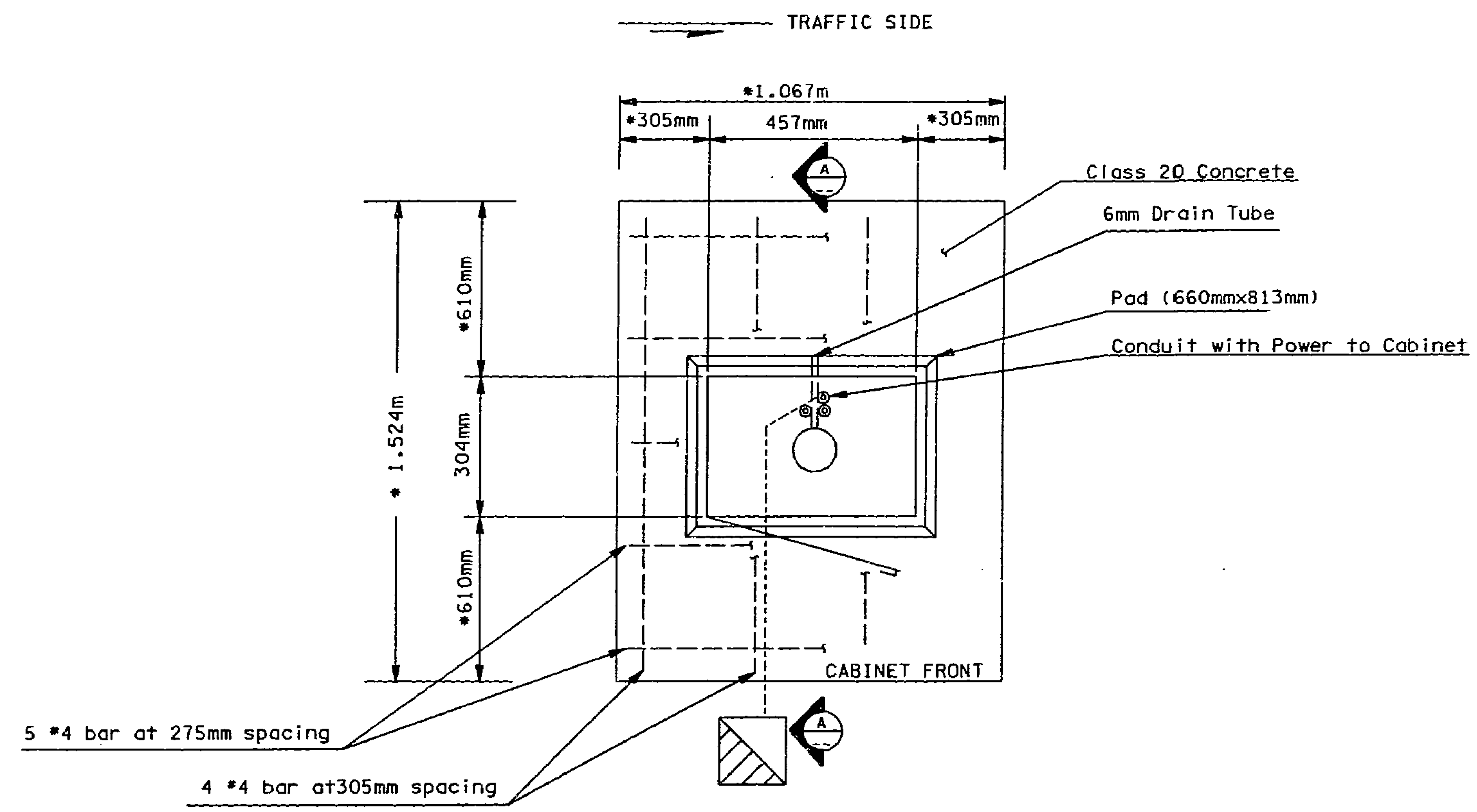
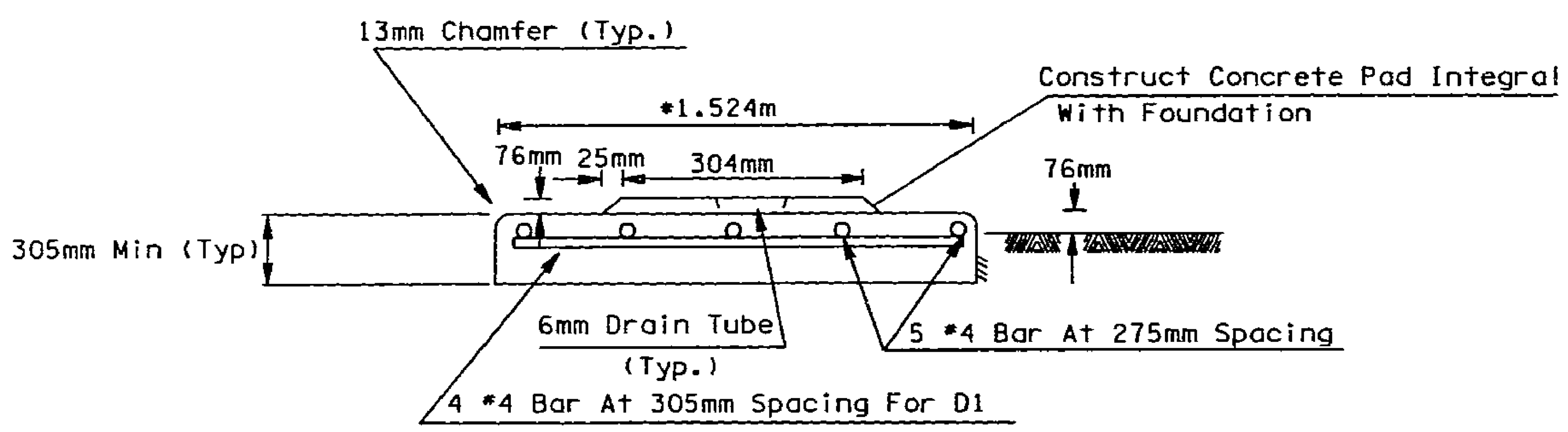


TYPE 1 BRACKET



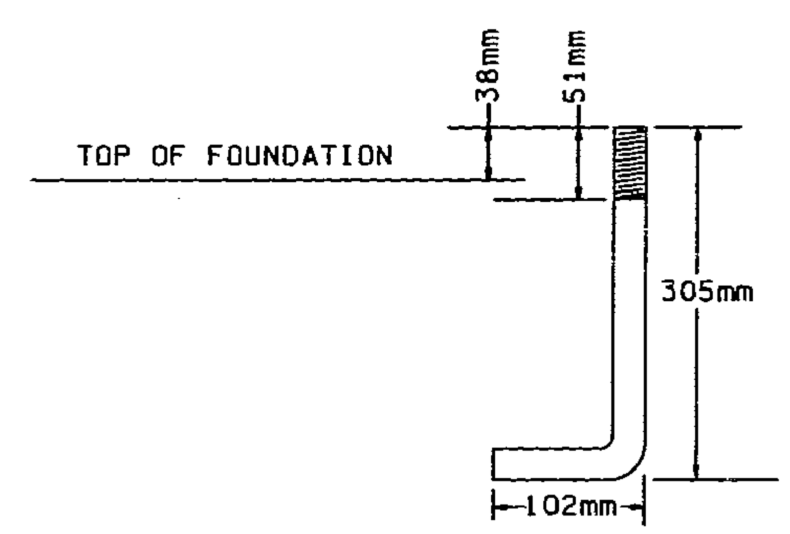
PLAN

TERMINAL CABINET FOUNDATION DETAIL



ELEVATION

SECTION A-A



16mm DIA.
ANCHOR BOLT

NOT TO SCALE

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NOTES:

1. All Reinforcing Steel Shall Have A Min. of 51mm Clear Cover.
2. All Conduits To Be Clustered Toward Rear Of The Cabinets.
3. Slope Foundation 21mm/m. To The Edge.
4. Slope Pads 21mm/m To The Sump In Center.
5. All Conduits To extend 51mm Above Cabinet Pad.
6. All Conduits Shall Be Hot Dipped Galvanized.
7. All Controller Cabinets Shall Be H=1626mm,W=610mm,D=762mm.
8. Transformer And Terminal Cabinets Are 914mm High By 610mm Wide By 457mm Deep.
9. Use Silicone Beaded Sealant Around Cabinets And Pad.
10. Bolt Pattern Is provided BY Cabinet Manufacturer. Bolts Shall Be 16mm Dia. And Extend A Min. of 38mm Above Concrete Pad
11. For Each Additional Cabinet Add 914mm to D2 Foundation Width.
12. Concrete Shall Be Class 20.
* 13. Any Other Dimension Must Be Approved By The Engineer.
14. All Anchor Bolts Shall Be Hot Dipped Galvanized.

DESIGNED BY M. JANKA				
ENTERED BY H. MOSTAGHIMI				
CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-6

SHEET 79 OF 138 SHEETS

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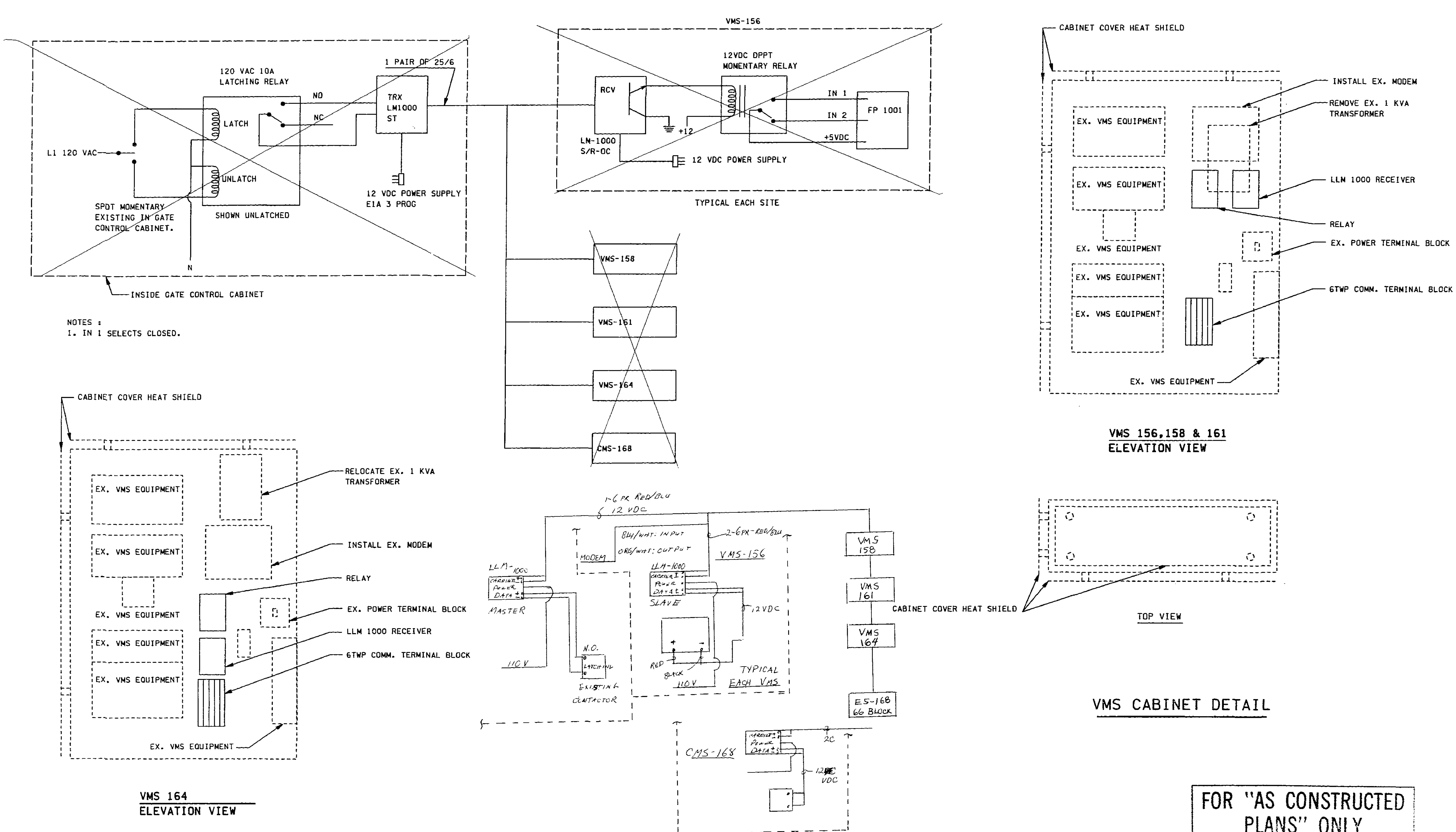

NOTES :
1. IN 1 SELECTS CLOSED.

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ENTERED BY H. MOSTAGHIMI					
CHECKED BY M. BANDY					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO. 5334		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

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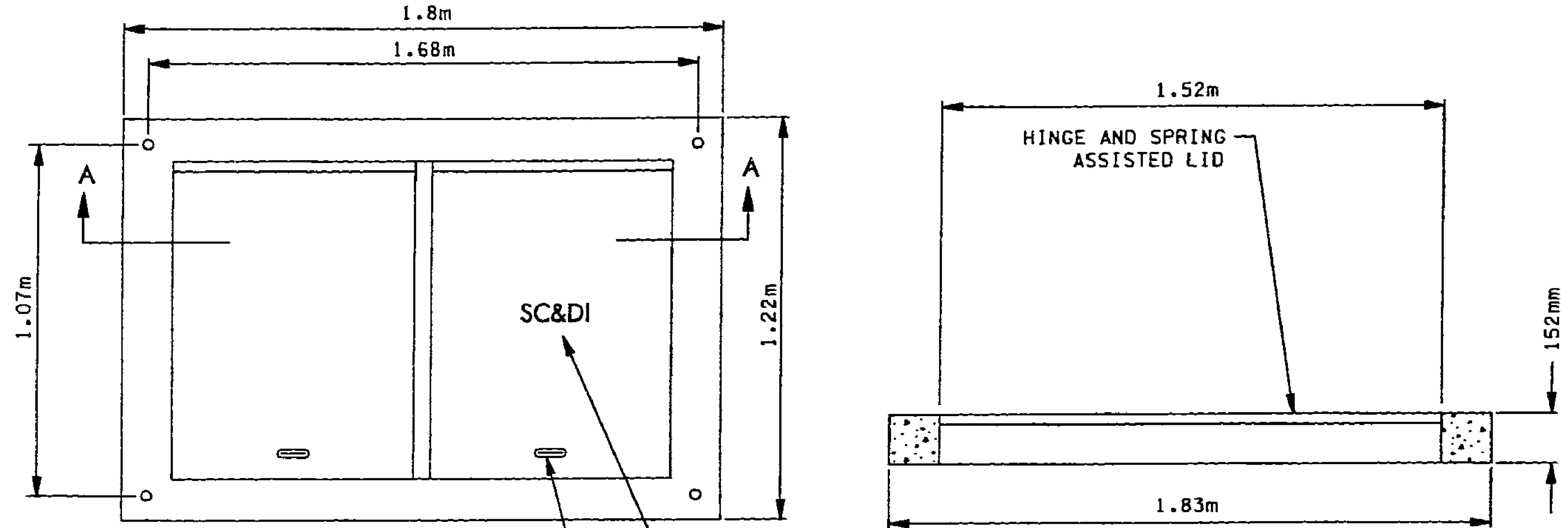
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-7

SHEET 80 OF 138 SHEETS

PLOT1 15 DEC 97 c:\dgn\sr5\sr512538\ngatscdt.dgn mostagh



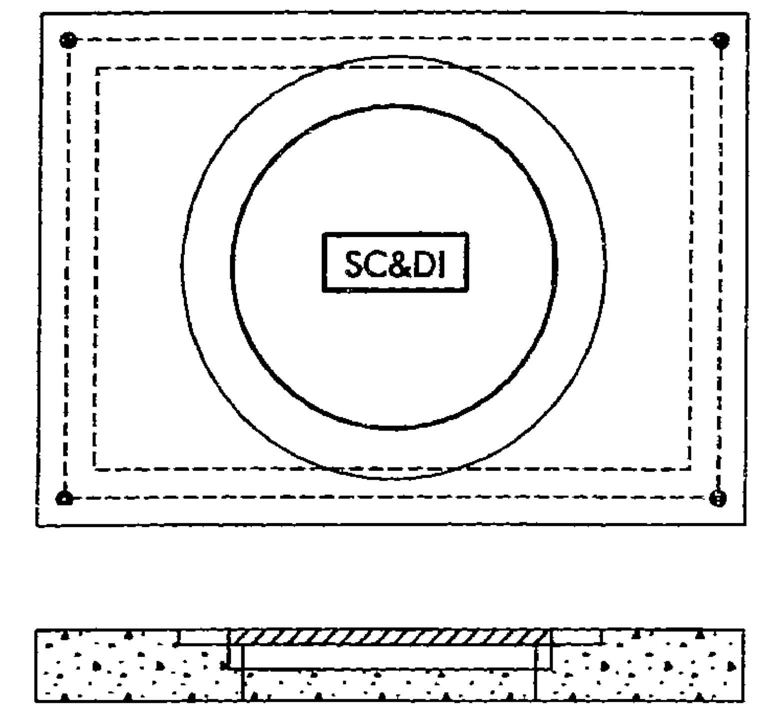
PLAN VIEW

SECTION A-A

LID MARKING
SEE STANDARD PLAN J-110

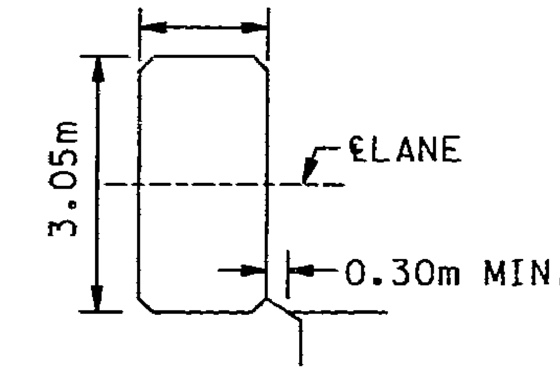
RECESSED LIFTING RING (TYP)

CABLE VAULT LID DETAIL

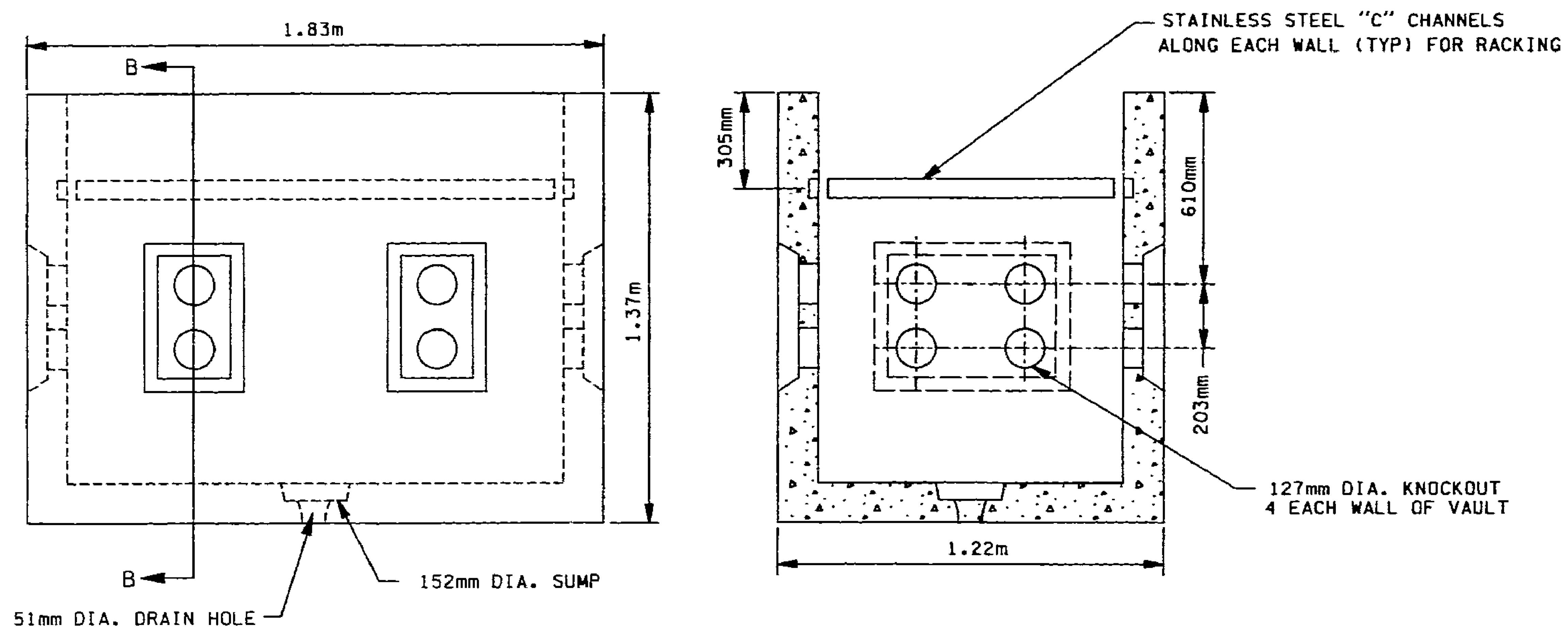


PULL BOX AND CABLE VAULT COVER
PLACED IN THE PAVED SHOULDER

NOTES:
1. TYPE H-35.
2. PULL BOX WITH 534mm (21") AND CABLE VAULT WITH 914mm(36") CAST IRON RING AND COVER.
3. LOCKABLE LID.
4. INSTALL RISER AS REQUIRED.
5. 16mm(5/8") DIA. INSERT AT EACH CORNER.



MODIFIED TYPE 2 (2.0m X 3.0m) LOOP DETAILS



FRONT VIEW

SECTION B-B

CABLE VAULT DETAIL

FOR "AS CONSTRUCTED PLANS" ONLY

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ENTERED BY H. MOSTAGHIMI				JOB NUMBER 97W058		
CHECKED BY M. BANDY				CONTRACT NO.		
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY		

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SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-8

SHEET 81 OF 138 SHEETS

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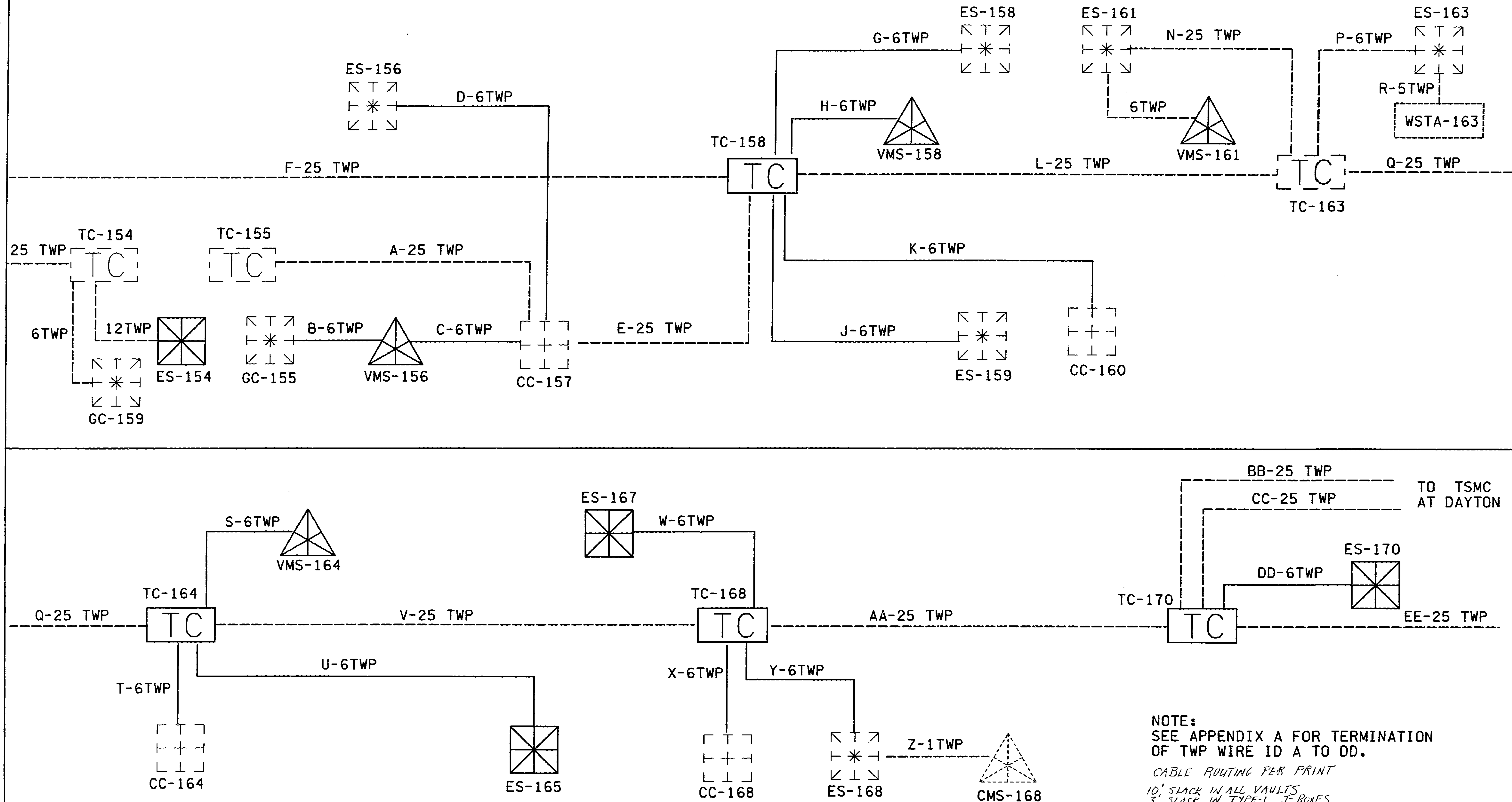

NOTE:
SEE APPENDIX A FOR TERMINATION OF TWP WIRE ID A TO DD.

CABLE ROUTING PER PRINT
10' SLACK IN ALL VAULTS
3' SLACK IN TYPE-I J-BOXES
5' SLACK IN TYPE II J-BOXES

FOR "AS CONSTRUCTED PLANS" ONLY

SCHEMATIC TWISTED PAIR WIRING DIAGRAM

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CHECKED BY M. BANDY				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

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Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SC&DI DETAILS

SCD-9

SHEET 82 OF 138 SHEETS

Sign Specifications
Roadside Sign Structures

SIGN #	SIGN CODE NUMBER	LOCATION (STATION NUMBER)	SIGN SIZE X	SIGN SIZE Y	SHEETING TYPE	LETTER SIZE OR CODE	POST MATERIAL	POST SIZE	POST LENGTH H1	POST LENGTH H2	POST LENGTH H3	POST LENGTH H4	CLEARANCE V	CLEARANCE W	REMARKS
R-25	ENTERING/SEATTLE/														
	FOOD/GAS-LODGING	4+510 LT	2700	3000			WOOD								REMOVE SIGN AND WOOD POSTS
26	SPECIAL	4+510 LT	2700	3000	II	300D/250D/325	WOOD	6X6	6.4	6	6		2.13	EXIST	CN1
R-27	EXPRESS LANES 1 1/4 MI	4+550 LT	7125	2400			BR. U'XING								REMOVE SIGN, NUTS, BOLTS, CLIPS, & WASHERS
28	SPECIAL (EXPR. LANES)	4+550 LT	2700	1500	I	300D;300D/250D	EX. BR. U'XING						EXIST	EXIST	MOUNT TO EXIST. BRACKET WITH NEW BOLTS,
															NUTS, LOCKNUTS, & WASHERS.

NOTES:
POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD PRIOR TO FABRICATION.
FOR STRUCTURE AND MOUNTING DETAILS SEE STANDARD PLAN SHEET SERIES "G".
FOR CODE REFERENCES AND STANDARD DETAILS SEE WASHINGTON STATE SIGN FABRICATION MANUAL.
SIGN SIZES,AND LETTER SIZES ARE IN MILLIMETERS; POSTS SIZES ARE IN INCHES; POSTS HEIGHTS AND VERTICAL CLEARANCES ARE IN METERS.
ALL NEW BOLTS, NUTS, LOCKNUTS, AND WASHERS MUST STAINLESS STEEL.
TOTAL SIGN REMOVALS= 163.53 SQ. M.

CONSTRUCTION NOTES:
1. AS STAKED BY THE ENGINEER.

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY				
ENTERED BY				
CHECKED BY				
PROJ. ENGR. J. JOHNSON				
DIST. ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED. AID. PROJ. NO.

JOB NUMBER 97W058
CONTRACT NO.

PROGRAM DEVELOPMENT DIVISION

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGN SPECIFICATIONS

SS1

Sign Specifications
Roadside Sign Structures

SIGN #	SIGN CODE NUMBER	LOCATION (STATION NUMBER)	SIGN SIZE X	SIGN SIZE Y	SHEETING TYPE	LETTER SIZE OR CODE	POST MATERIAL	POST SIZE	POST LENGTH H1	POST LENGTH H2	POST LENGTH H3	POST LENGTH H4	CLEARANCE V	CLEARANCE W	REMARKS
1A	E1-1	0+905 LT	4500	3000	I	CODE E	CANTILEVER						7.5	14	MOUNT TO NEW CANTILEVER & RE-INSTALL LIGHTS
R-1B	EXISTING CANTILEVER	0+910 LT					CANTILEVER								REMOVE CANTILEVER STR AND FOUNDATION
R-1C	N 80TH ST/NE 80TH ST	0+910 LT	5100	3000			CANTILEVER								REMOVE SIGN, SIGN LIGHT & MOUNTING HARDWARE
R-1	LEFT 2 LANES	1+356 LT	7125	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
2	SPECIAL (EXPR. LANES)	1+356 LT	7200	1800	I	400E/300E	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-3	I-5 SOUTH/SEATTLE	1+495 LT	3000	1800			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
4	E6-2	1+495 LT	2400	1950	I	CODE C	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-5	NORTHGATE WY/1ST AVE	1+495 LT	3600	1800			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
6	D1-701 MOD	1+495 LT	4800	1950	I	CODE C	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-7	LEFT 2 LANES	1+704 LT	7125	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
8	SPECIAL (EXPR. LANES)	1+704 LT	7200	1800	I	400E/300E	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-9	NORTHGATE WY/WB	1+835 LT	3000	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
10	D1-701 MOD	1+835 LT	4800	1950	I	325/250; 250D	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-11	NORTHGATE WY/1ST AVE	1+835 LT	3000	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
12	E6-2	1+835 LT	4800	1950	I	CODE C	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-13	EXIT 173	1+975 LT	1200	1800			WOOD								REMOVE SIGN AND WOOD POST
14	E5-1A MOD (TYPE3)	1+975 LT	1200	1800	II	CODE B	WOOD	4X6	5.5				2.13	EXIST	CN1
R-15	EXIT 173/NORTHGATE WY														
	1ST AVE NE	2+045 LT	4800	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
16	E6-101 MOD	2+045 LT	4800	2400	I	CODE C	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-17	N 85TH ST 2/NE 65TH 3/														
	NE 45TH ST 4	2+045 LT	4800	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
18	E7-1	2+045 LT	4800	2400	I	CODE C	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-19	LEFT 2 LANES	2+531 LT	7125	1800			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
20	SPECIAL (EXPR. LANES)	2+531LT	7200	1800	I	400E/300E	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-21	EXIT 173/NORTHGATE WY														
	1ST AVE NE 1/2 MILE	2+805 LT	5400	3000			CANTILEVER								REMOVE SIGN AND MOUNTING HARDWARE
22	E1-1	2+805 LT	5400	3000	I	CODE E	EXIST. CANT.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE
R-23	LEFT 2 LANES	3+352 LT	7125	2400			SIGN BRIDGE								REMOVE SIGN AND MOUNTING HARDWARE
24	SPECIAL (EXPR. LANES)	3+352 LT	7200	1800	I	400E/300E	EX. SIGN BR.						EXIST	EXIST	MOUNT TO NEW MOUNTING HARDWARE

NOTES:
POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD PRIOR TO FABRICATION.
FOR STRUCTURE AND MOUNTING DETAILS SEE STANDARD PLAN SHEET SERIES "G".
FOR CODE REFERENCES AND STANDARD DETAILS SEE WASHINGTON STATE SIGN FABRICATION MANUAL.
SIGN SIZES,AND LETTER SIZES ARE IN MILLIMETERS; POSTS SIZES ARE IN INCHES; POSTS HEIGHTS AND VERTICAL CLEARANCES ARE IN METERS.
ALL NEW BOLTS, NUTS, LOCKNUTS, AND WASHERS MUST STAINLESS STEEL.
TOTAL SIGN REMOVALS= 163.53 SQ. M.

CONSTRUCTION NOTES:
1. AS STAKED BY THE ENGINEER.

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY
ENTERED BY
CHECKED BY
PROJ. ENGR. J. JOHNSON
DIST. ADM. J. OKAMOTO
DATE | DATE | REVISION | BY

REGION NO. 10 | STATE WASH | FED. AID. PROJ. NO.
JOB NUMBER 97W058
CONTRACT NO.

PROGRAM DEVELOPMENT DIVISION

Washington State Department of Transportation

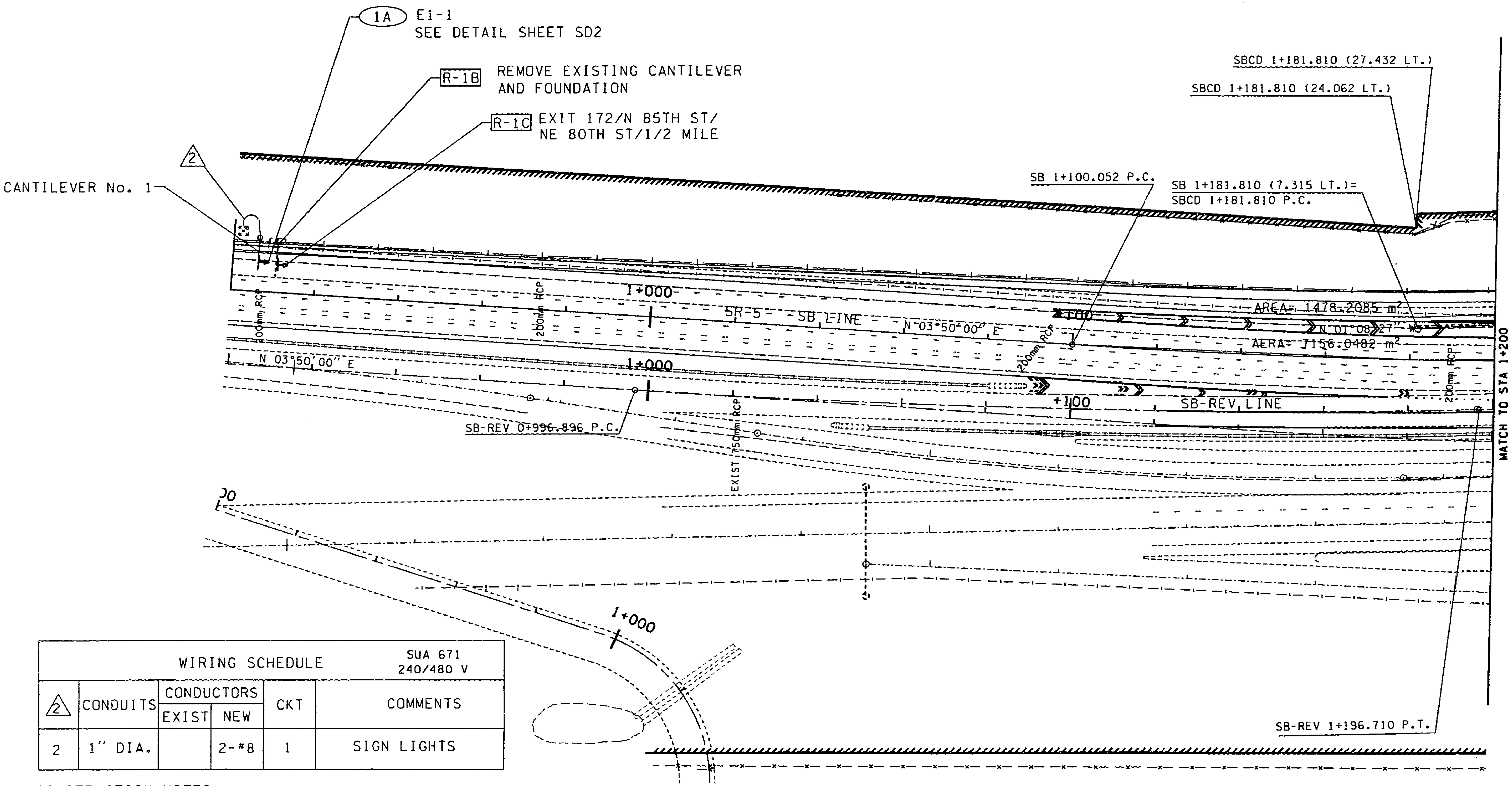
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGN SPECIFICATIONS

SS2

SHEET 84 OF 138 SHEETS

T. 26N. R. 4E. W. M.



WIRING SCHEDULE					SUA 671 240/480 V
2 (triangle)	CONDUITS	CONDUCTORS		CKT	COMMENTS
		EXIST	NEW		
2	1" DIA.		2-#8	1	SIGN LIGHTS

CONSTRUCTION NOTES:
SEE ILLUMINATION AND POWER DISTRIBUTION PLAN
FOR CONTINUATION OF POWER CIRCUIT.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

16 DEC 97 s:\412353\projects\ol2538\l2538shs.dgn quintem
PLOT4

DESIGNED BY	M. BALBAS	NOV. '96			
ENTERED BY	M. BALBAS	NOV. '96			
CHECKED BY	D. J. LINER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

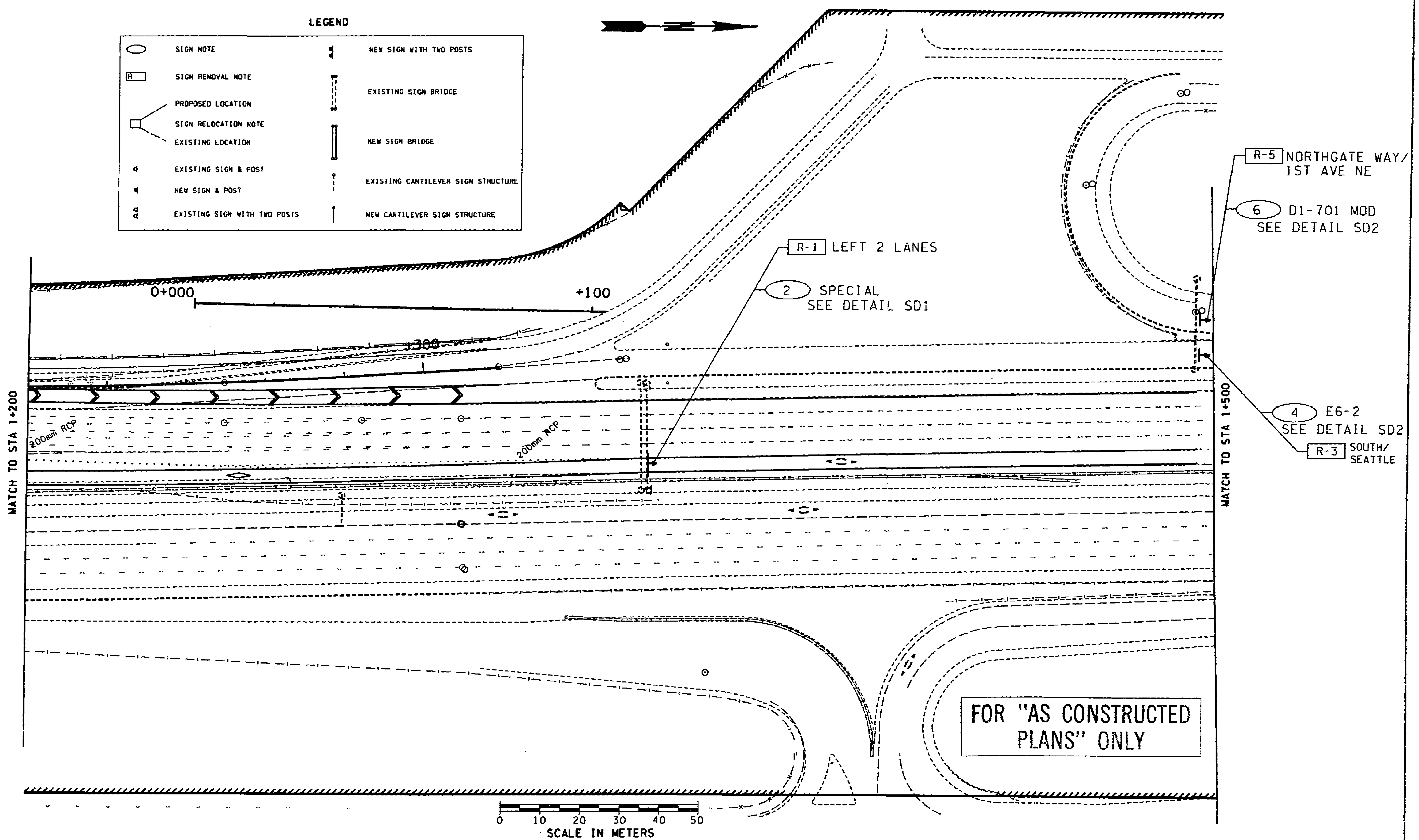
SIGNING PLAN

S1
SHEET 85 OF 138 SHEETS

16 DEC 97 s:\412353\projects\ol2538\l2538shs.dgn quintem

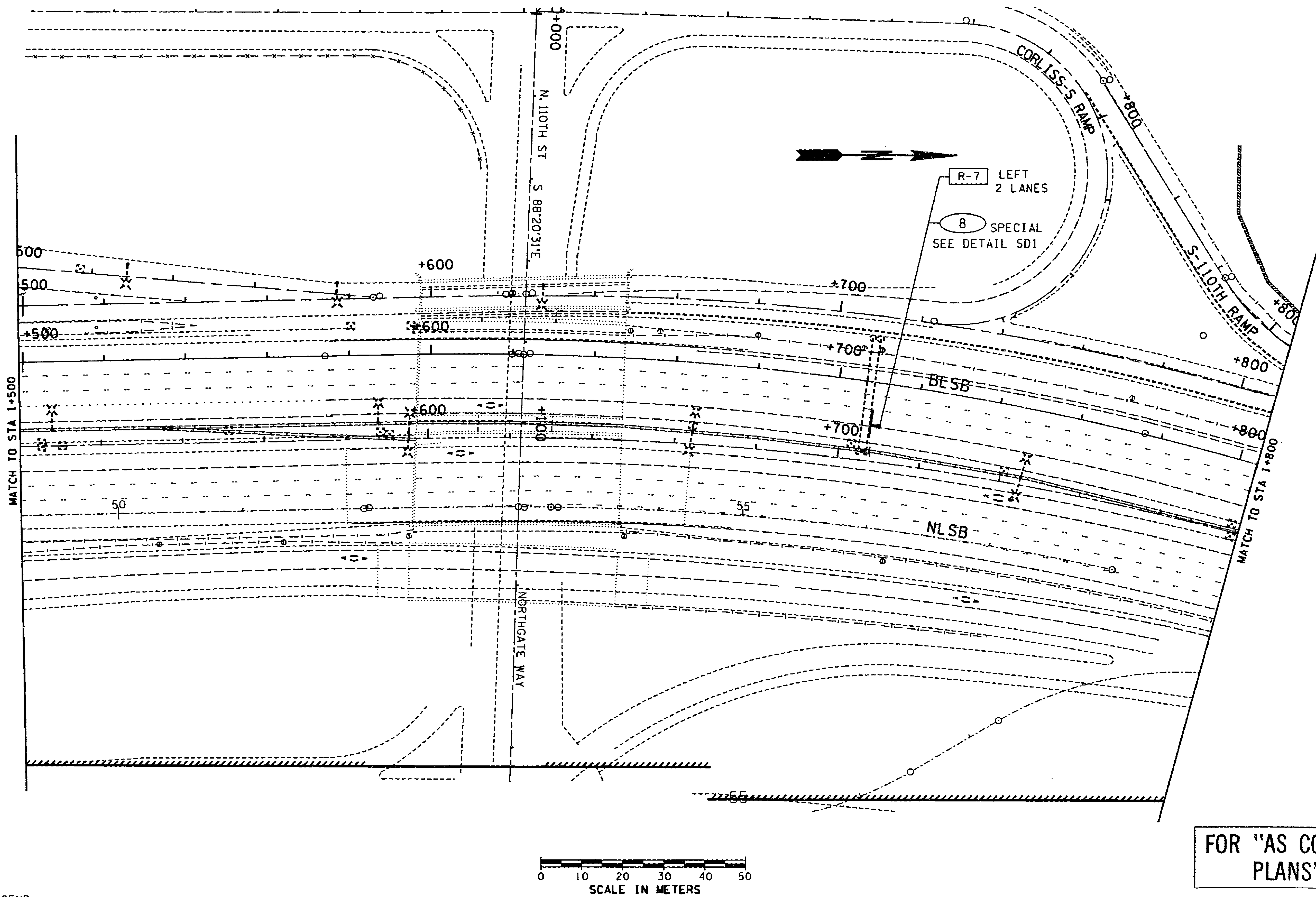
PLOTS

T. 26N. R. 4E. W. M.



DESIGNED BY M. BALBAS	NOV. '96				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.	ENVIRONMENTAL AND ENGINEERING SERVICE CENTER	Washington State Department of Transportation
ENTERED BY M. BALBAS	NOV. '96				JOB NUMBER 97W058				SR 5 VIC NORTHGATE WAY TO VIC NE 145TH ST
CHECKED BY D. J. LINER					CONTRACT NO.				S2
PROJ. ENGR. J. JOHNSON									SIGNING PLAN
REGIONAL ADM. J. OKAMOTO									SHEET 86 OF 138 SHEETS
	DATE	DATE	REVISION	BY					

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

DESIGNED BY M. BALBAS	NOV. '96				REGION NO. 10	STATE WASH
ENTERED BY M. BALBAS	NOV. '96				JOB NUMBER 97W058	FED.AID PROJ.NO.
CHECKED BY D. J. LINER					CONTRACT NO.	
PROJ. ENGR. J. JOHNSON						
REGIONAL ADM. J. OKAMOTO						
	DATE	DATE	REVISION	BY		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

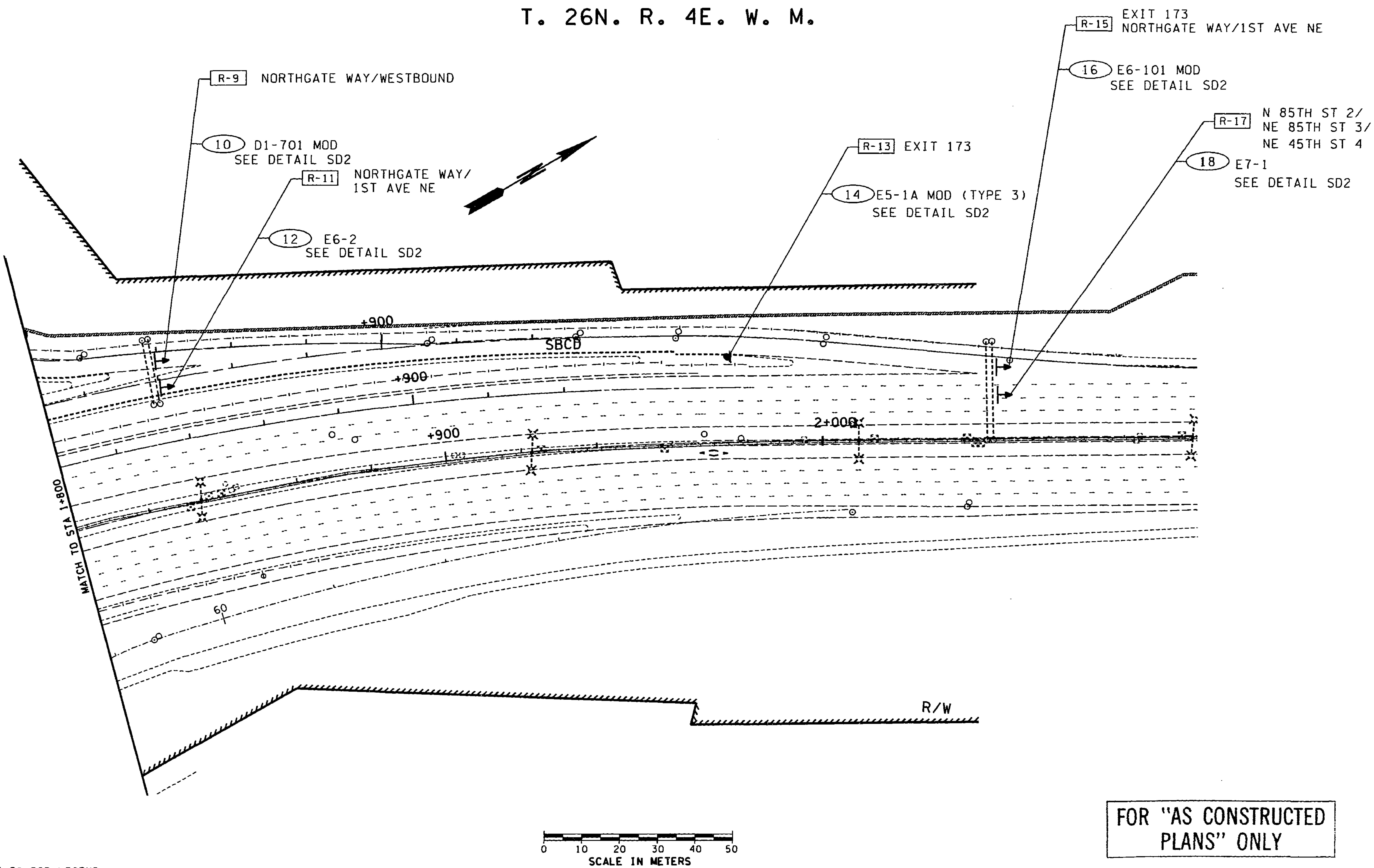
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING PLAN

S3

SHEET 87 OF 138 SHEETS

PLOT7 16 DEC 97 s:\412353\projects\o12538\12538shs.dgn quintem



FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

DESIGNED BY	M. BALBAS	NOV. '96			
ENTERED BY	M. BALBAS	NOV. '96			
CHECKED BY	D. J. LINER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

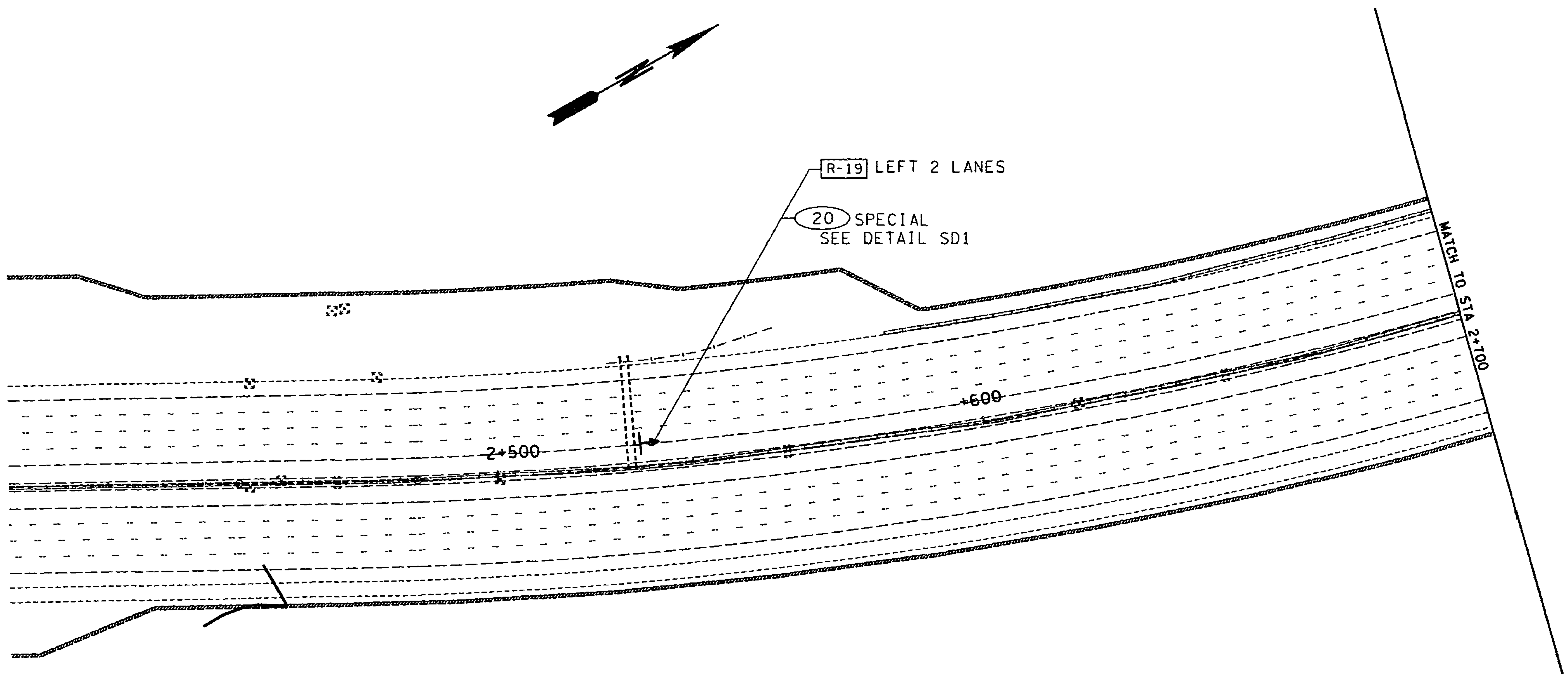
SIGNING PLAN

S4

SHEET 88 OF 138 SHEETS

PLOT9 16 DEC 97 s:\412353\projects\o12538\12538shs.dgn quintem

T. 26N. R. 4E. W. M.



0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

DESIGNED BY	M. BALBAS	NOV. '96			
ENTERED BY	M. BALBAS	NOV. '96			
CHECKED BY	D. J. LINER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

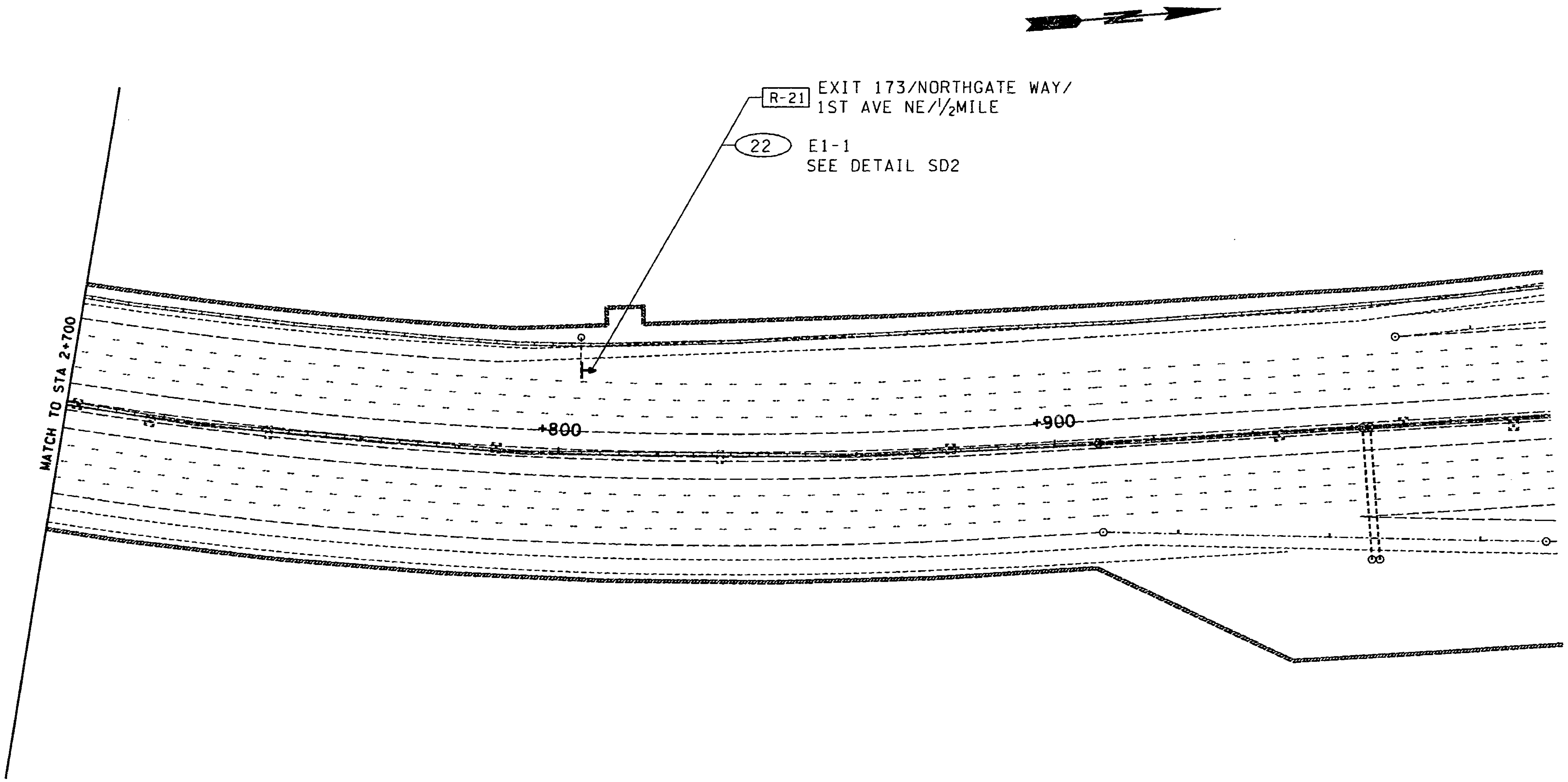
SIGNING PLAN

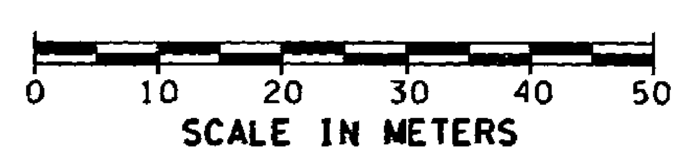
S5

SHEET 89 OF 138 SHEETS

PLOT10 05 JAN 98 s:\412353\projects\o12538\12538shs.dgn wujim

T. 26N. R. 4E. W. M.





FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

DESIGNED BY M. BALBAS	NOV. '96			
ENTERED BY M. BALBAS	NOV. '96			
CHECKED BY D. J. LINER				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

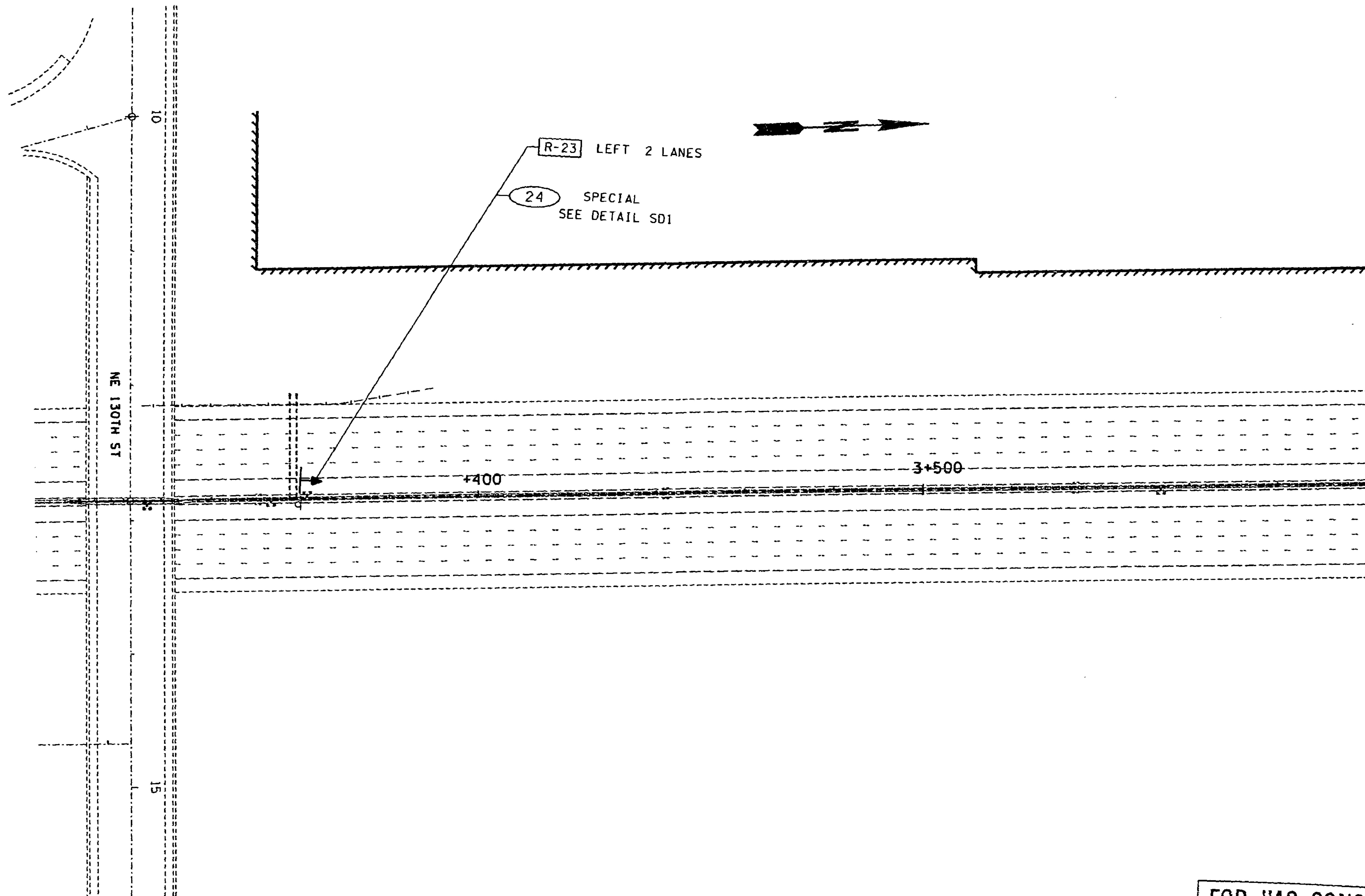
SIGNING PLAN

S6

SHEET 90 OF 138 SHEETS

PLOT12 16 DEC 97 s:\412353\projects\o12538\12538shs.dgn quintem

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

0 10 20 30 40 50
SCALE IN METERS

NOTE: SEE S2 FOR LEGEND

DESIGNED BY	M. BALBAS	NOV. '96		
ENTERED BY	M. BALBAS	NOV. '96		
CHECKED BY	D. J. LINER			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING PLAN

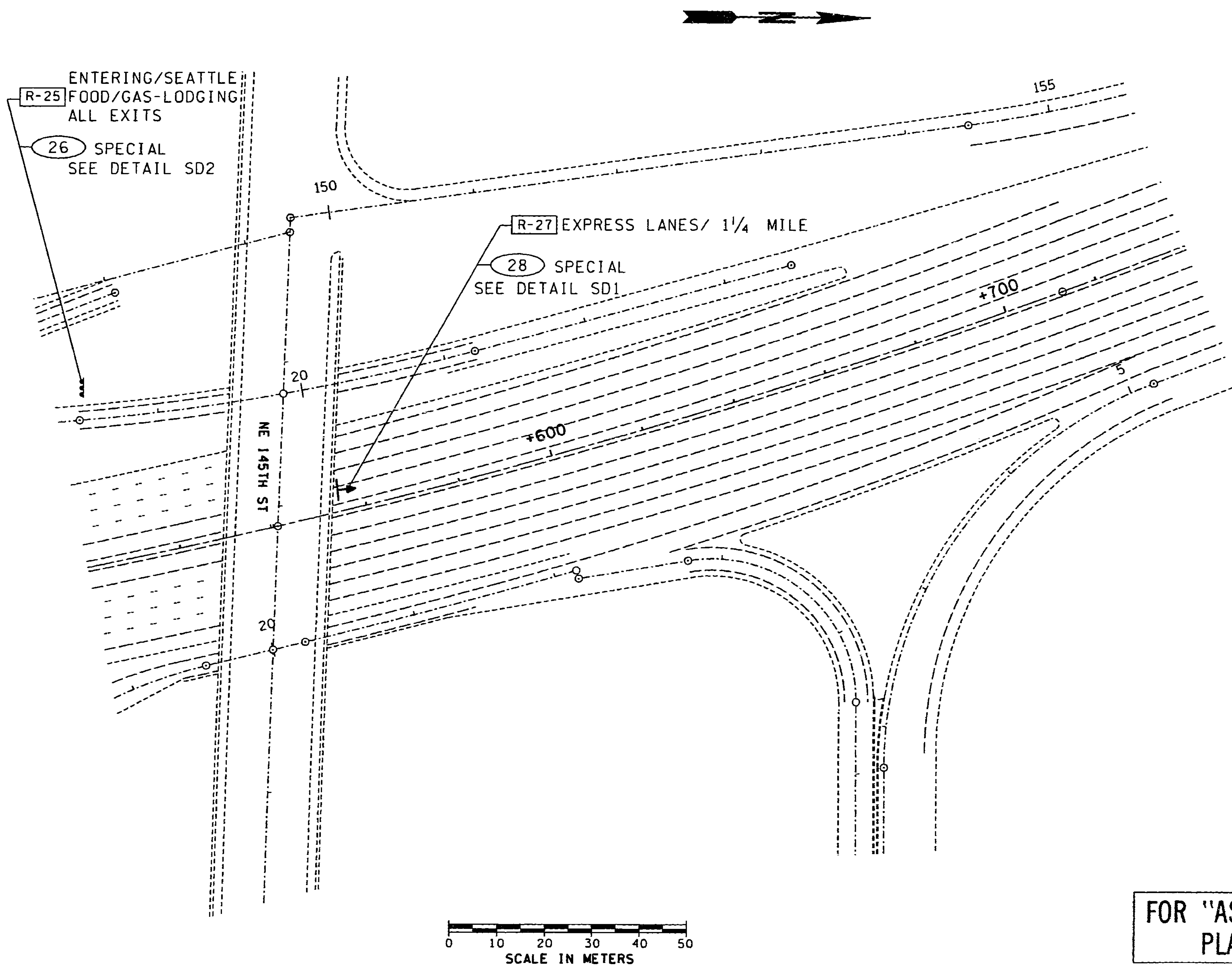
S7

SHEET 91 OF 138 SHEETS

16 DEC 97 s:\412353\projects\a12538\12538shs.dgn quintem

PLOT16

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

NOTE: SEE S2 FOR LEGEND

DESIGNED BY	M. BALBAS	NOV. '96			
ENTERED BY	M. BALBAS	NOV. '96			
CHECKED BY	D. J. LINER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

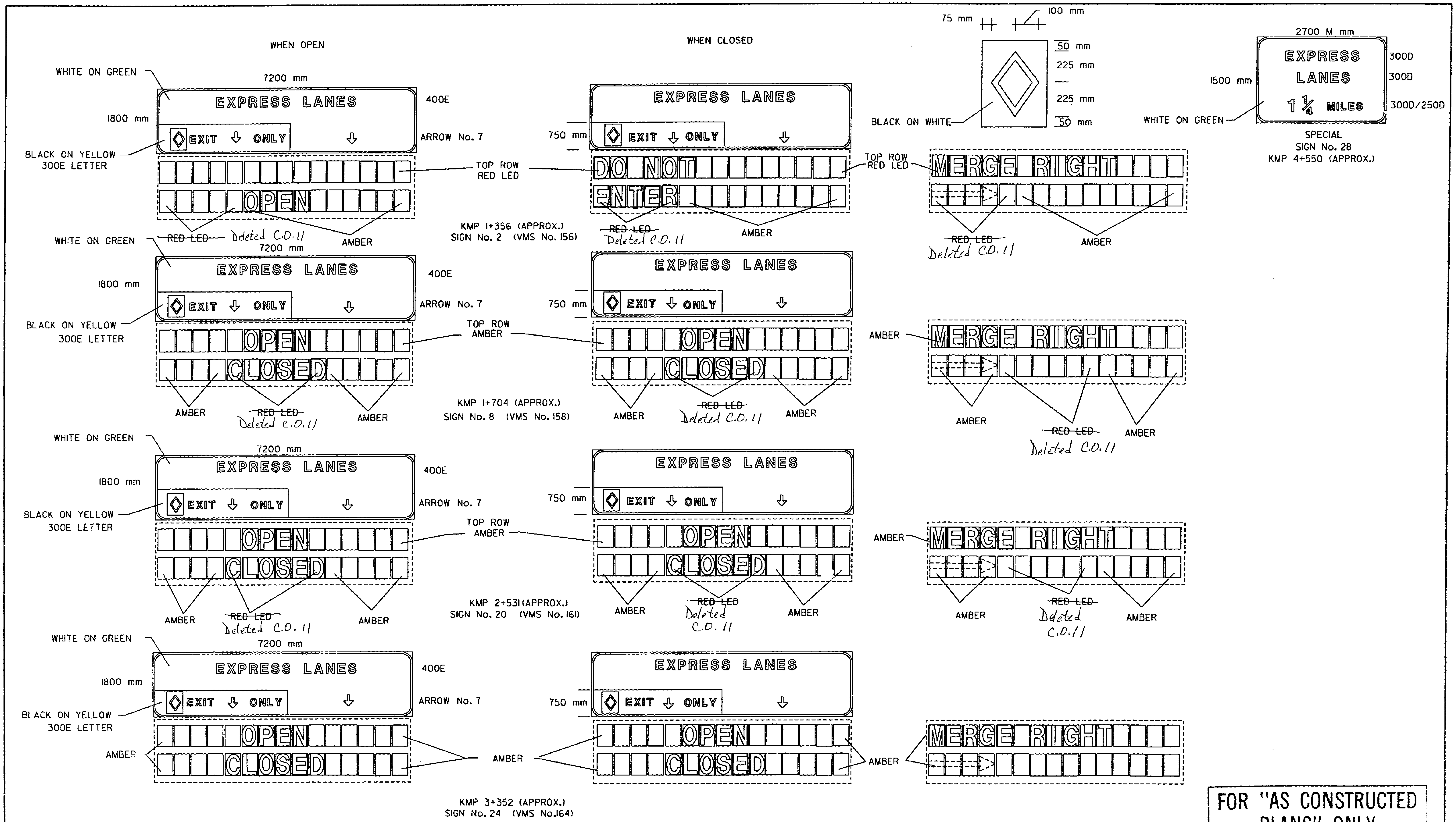
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING PLAN

S8

SHEET 92 OF 138 SHEETS

PLOT17 16 DEC 97 s:\412353\projects\o12538\12538shs.dgn quintem



FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. BALBAS	NOV. '96				
ENTERED BY	M. BALBAS	NOV. '96				
CHECKED BY	D. J. LINER					
PROJ. ENGR.	J. JOHNSON					
REGIONAL ADM.	J. OKAMOTO					
		DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

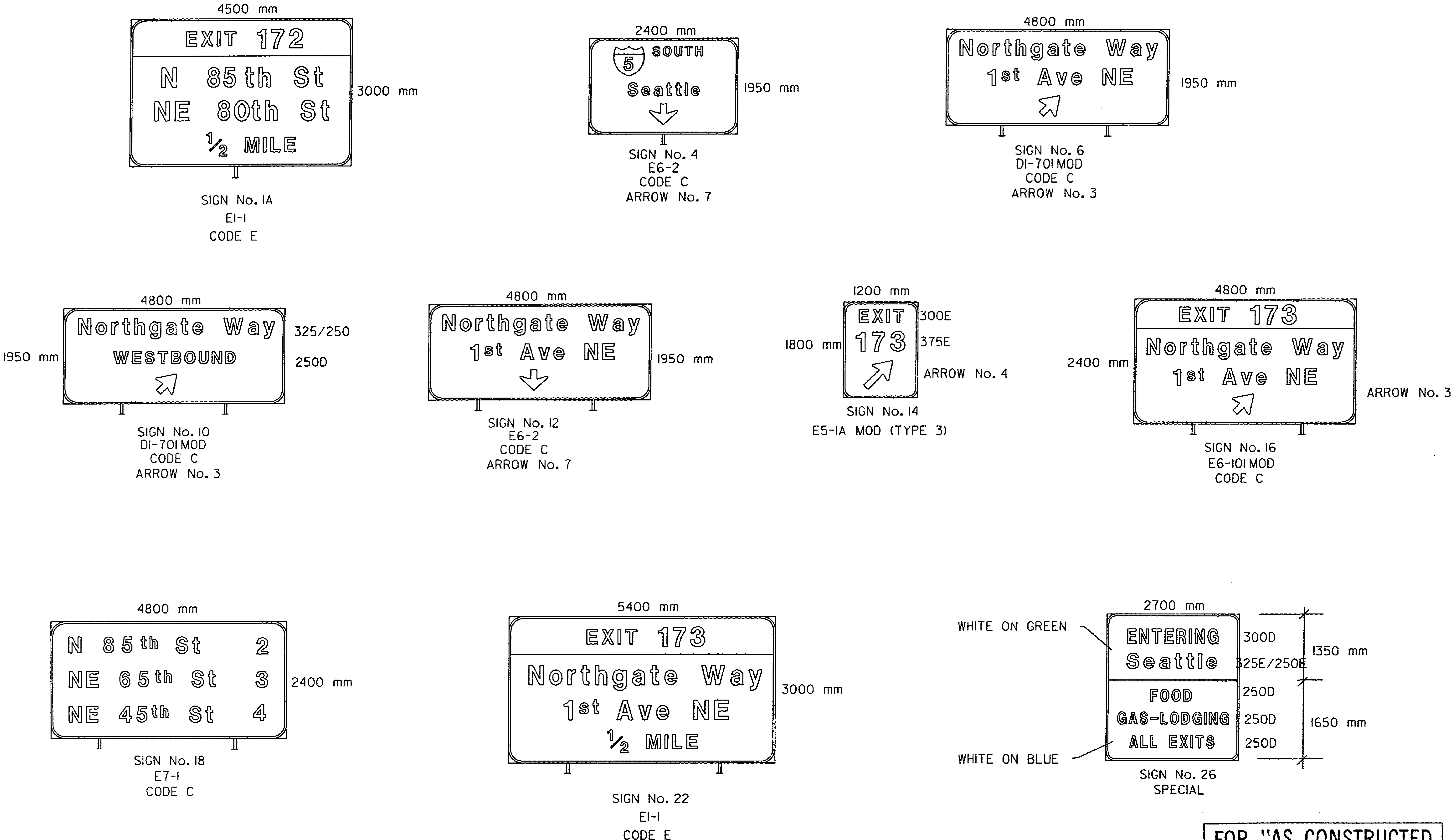
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING DETAIL

S01

SHEET 93 OF 138 SHEETS

PLOT18 16 DEC 97 s:\412353\projects\012538\12538shs.dgn quintem



FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	M. BALBAS	NOV. '96			
ENTERED BY	M. BALBAS	NOV. '96			
CHECKED BY	D. J. LINER				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

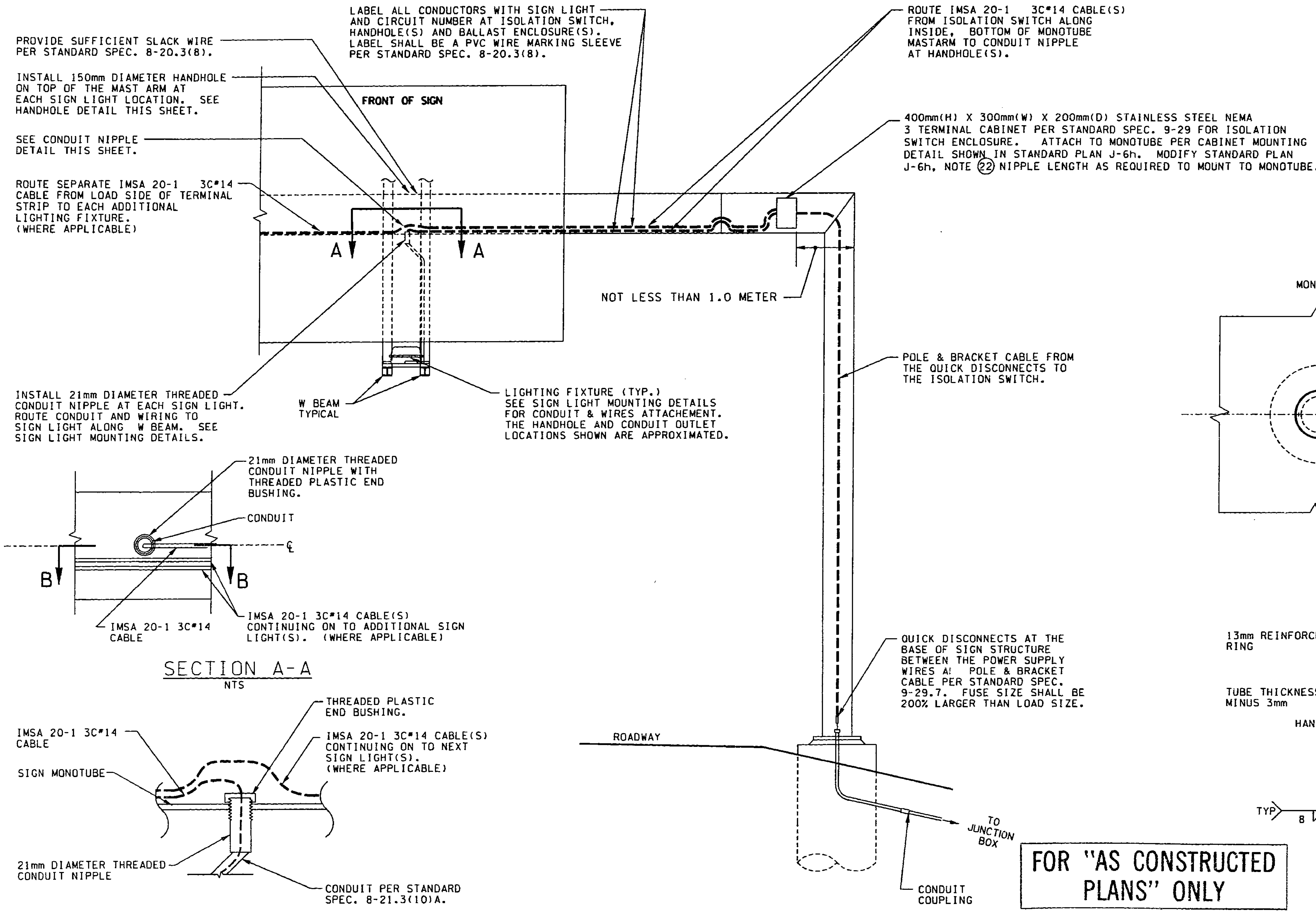
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING DETAIL

SD2

SHEET 94 OF 138 SHEETS

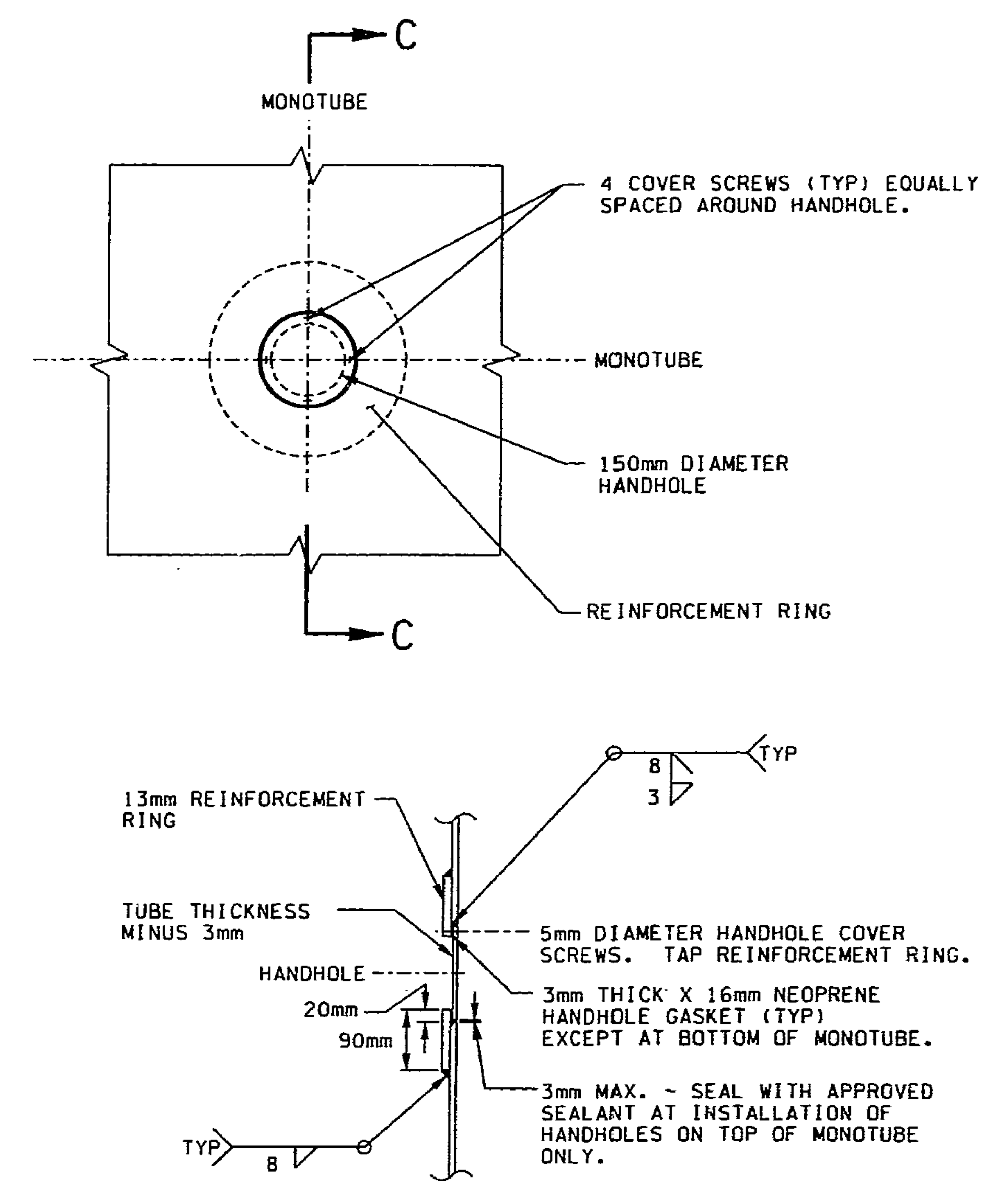


SECTION B-B
NTS

CONDUIT NIPPLE DETAIL

GENERAL NOTES:

1. THE DETAILS SHOW TYPICAL WIRING INSTALLATION ON MONOTUBE SIGN STRUCTURE.
2. SEE PLAN SHEETS FOR ORIENTATION OF SIGN STRUCTURE.
3. REFER TO CANTILEVER SIGN STRUCTURE SHEETS FOR CONSTRUCTION DETAILS.
4. SEE ELECTRICAL SHEETS FOR CONTINUATION OF POWER CIRCUIT.



SECTION C-C
NTS

FOR "AS CONSTRUCTED PLANS" ONLY

HANDHOLE DETAIL
NTS

CANTILEVER SIGN STRUCTURE WIRING DETAILS
NTS

ALL MEASUREMENTS IN MM UNLESS STATED OTHERWISE

					REGION NO.	STATE	FED.AID PROJ.NO.
DESIGNED BY					10	WASH	
ENTERED BY					JOB NUMBER		
CHECKED BY					9TW058		
PROJ. ENGR.					CONTRACT NO.		
REGIONAL ADM.							
	DATE	DATE	REVISION	BY			

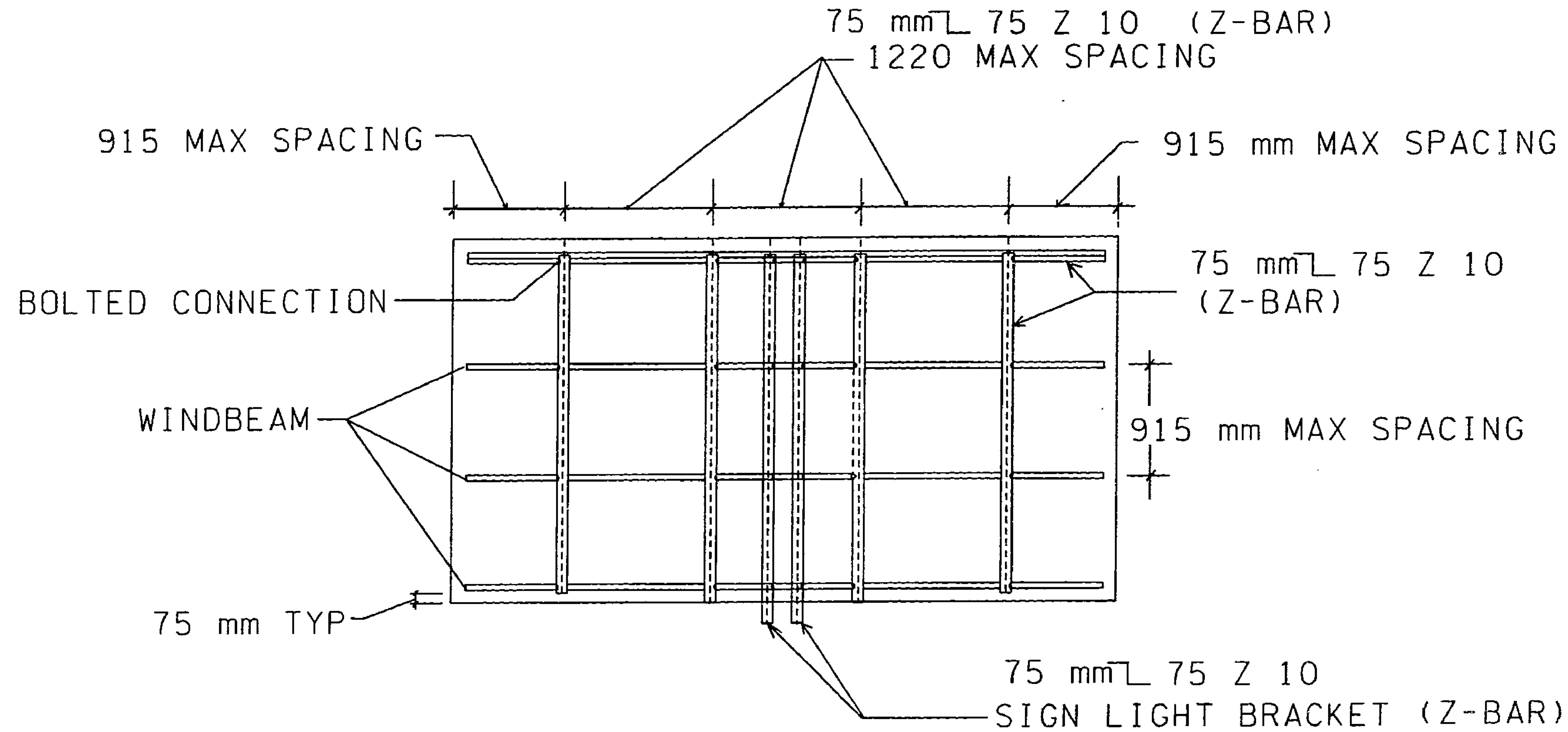
ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

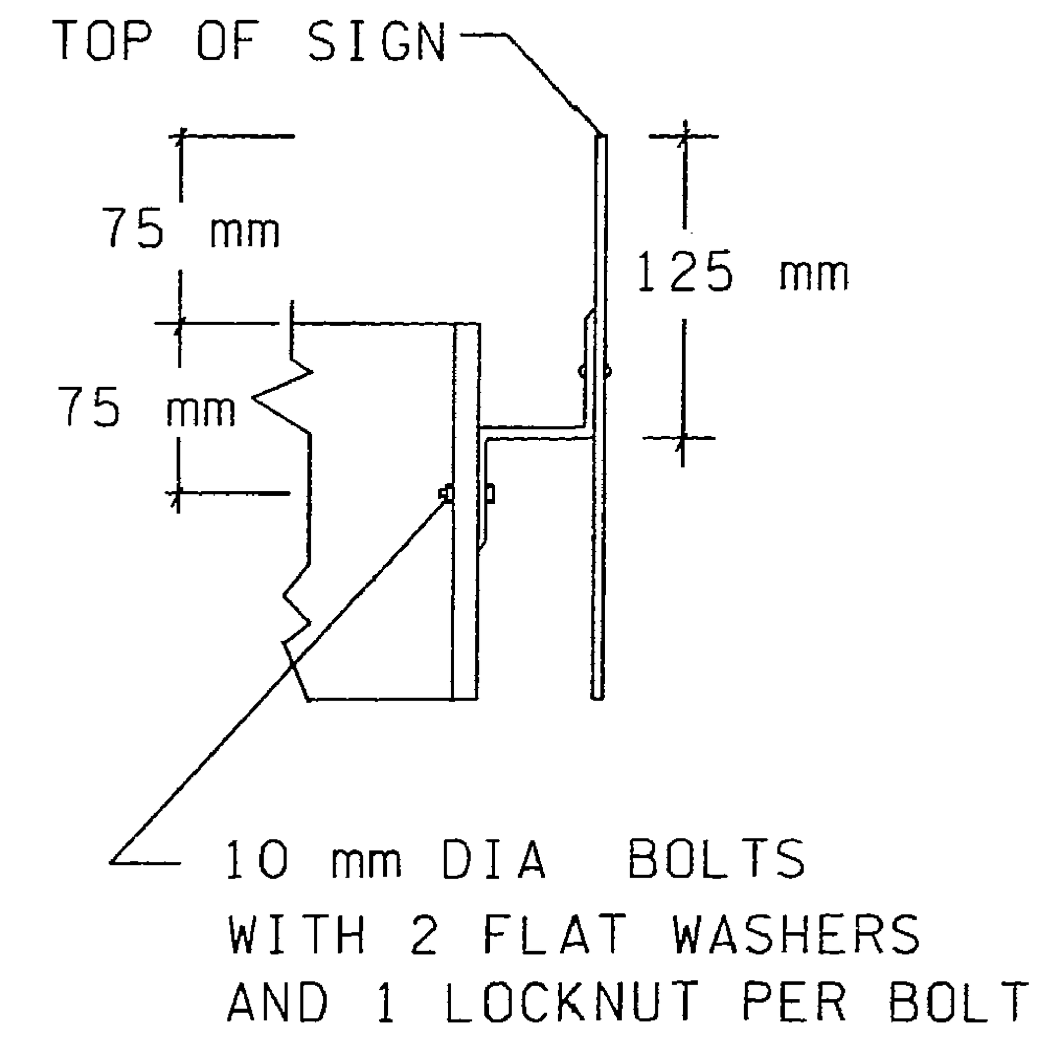
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING DETAILS

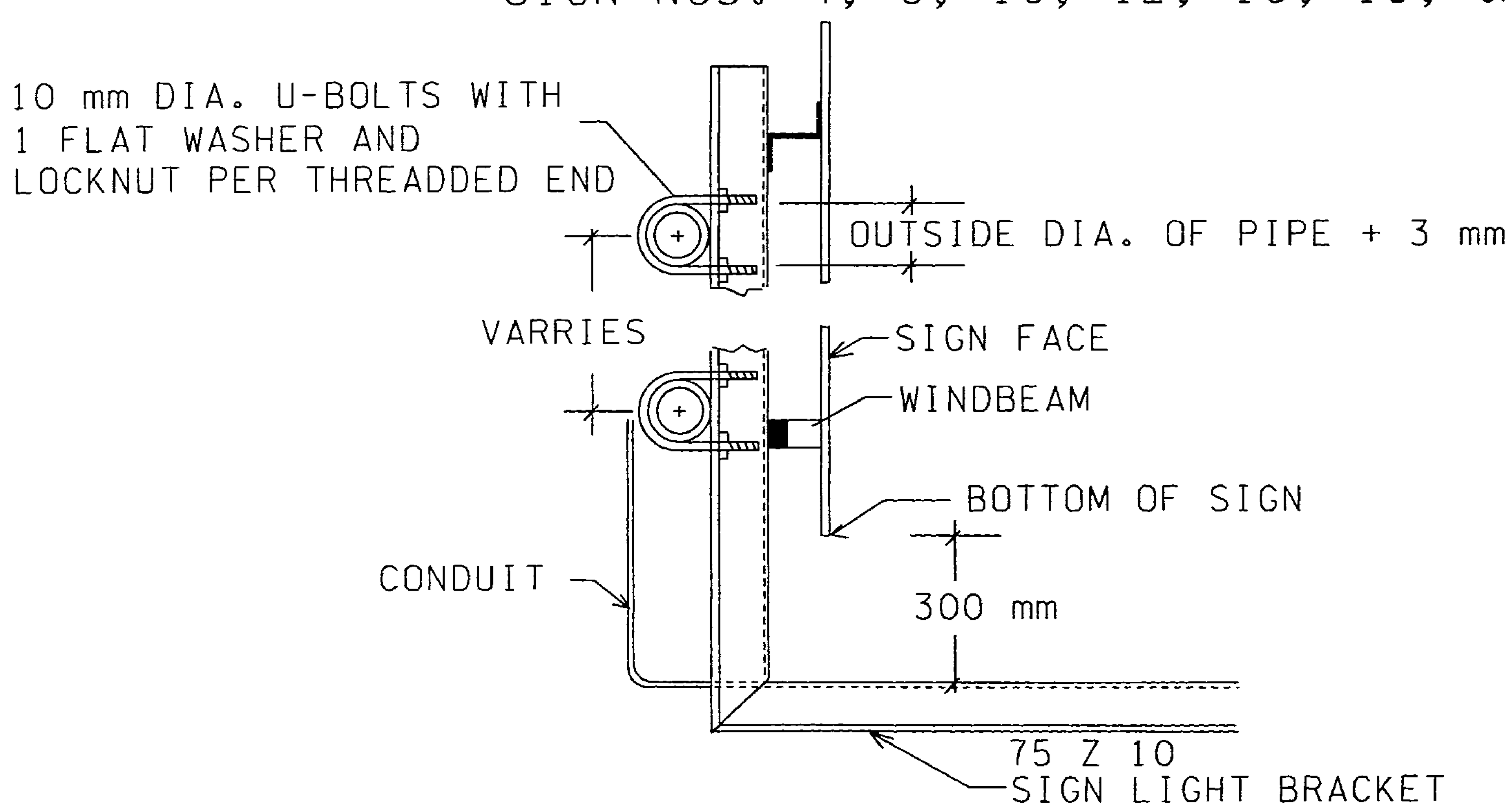
SD3



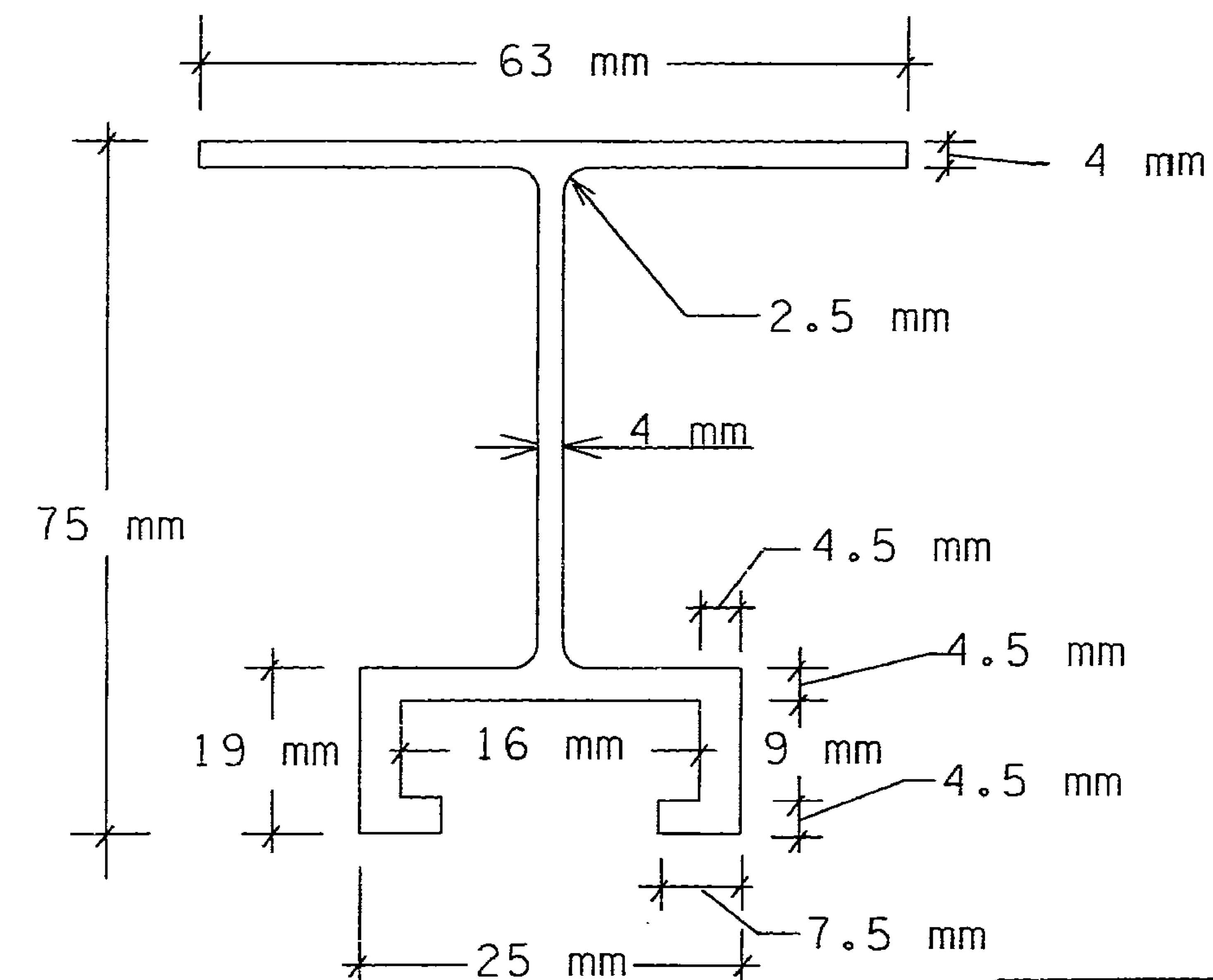
OVERHEAD SIGN MOUNTING DETAIL
WITHOUT WALKWAY
SIGN Nos. 4, 6, 10, 12, 16, 18, & 22



BOLTED CONNECTION DETAIL



VERTICAL Z-BAR DETAIL SHOWING
BOLTED CONNECTION TO SIGN BRIDGE



WINDBEAM DETAIL

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY M. BALBAS	NOV. '96			
ENTERED BY M. BALBAS	NOV. '96			
CHECKED BY D. J. LINER				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

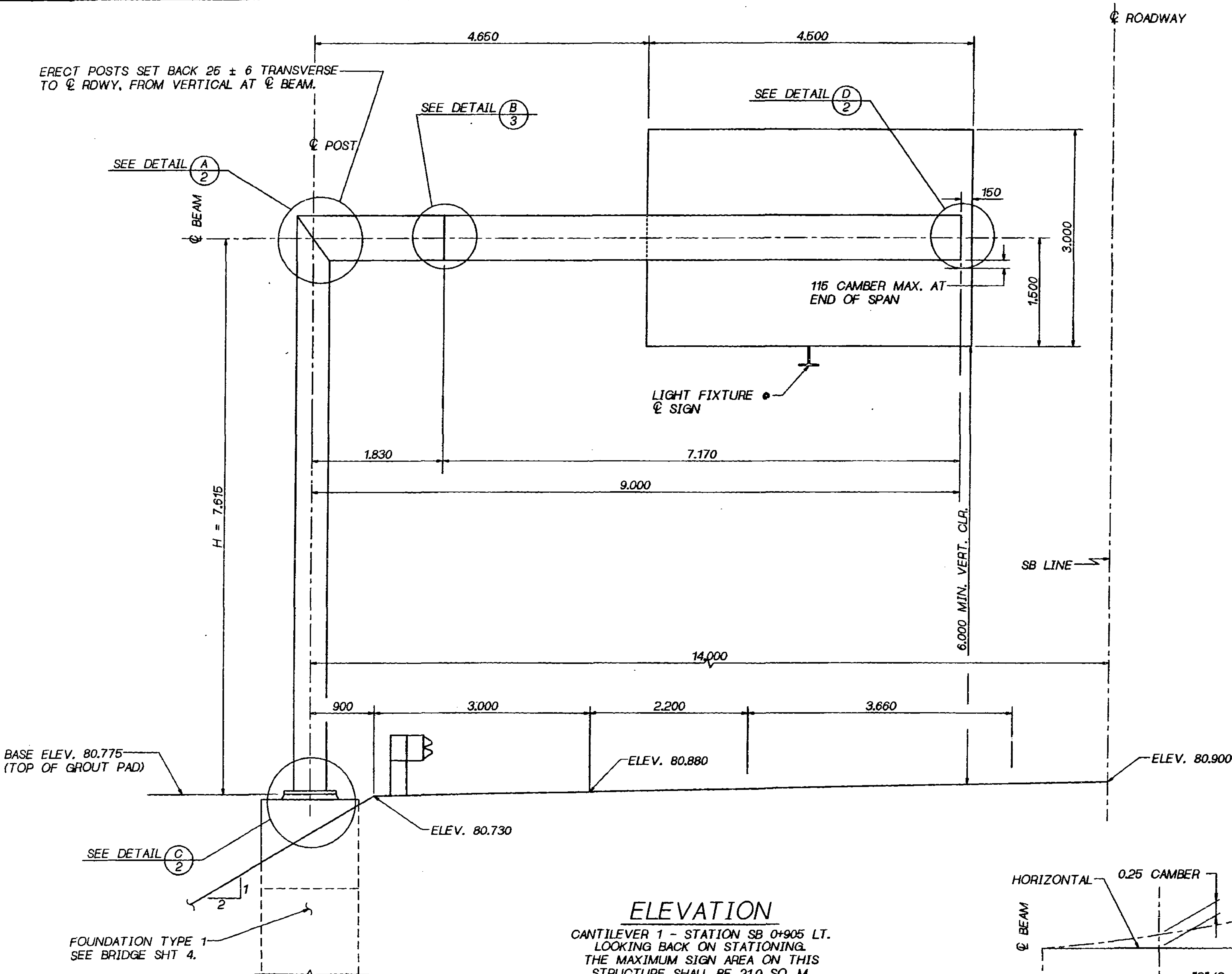
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

SIGNING DETAIL

S04

SHEET 96 OF 138 SHEETS



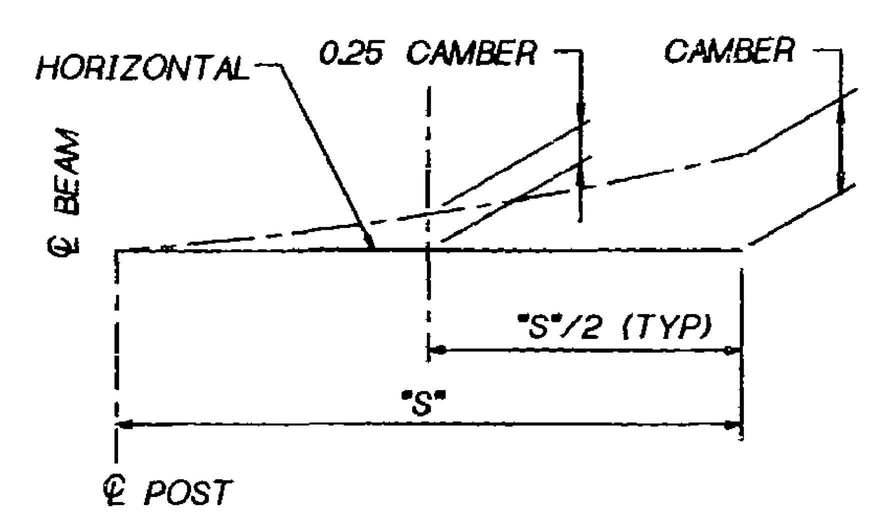
ELEVATION

CANTILEVER 1 - STATION SB 0+905 LT.
LOOKING BACK ON STATIONING.
THE MAXIMUM SIGN AREA ON THIS STRUCTURE SHALL BE 21.0 SQ. M.

METRIC LEGEND

126.175 DENOTES METERS
175 DENOTES MILLIMETERS

FOR "AS CONSTRUCTED PLANS" ONLY



BEAM CAMBER DIAGRAM

GENERAL NOTES

1. ALL MATERIAL AND WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICPAL CONSTRUCTION METRIC DATED 1998 AND AMENDMENTS.
2. ALL BUTT JOINT WELDS SHALL BE FULL PENETRATION GROOVE WELDS WITH BACK-UP PLATES OF 6 mm MIN. THICKNESS.
3. THE BACK-UP PLATES FOR ALL FULL PENETRATION WELDS SHALL BE WELDED CONTINUOUSLY TO THE JOINED PIECES. THIS CAN BE DONE BY EITHER A CONTINUOUS FILLET WELD ON THE BACK SIDE OF THE PIECE, OR BY A CONTINUOUS WELD IN THE ROOT OF THE FULL PENETRATION WELD.
4. ALL BOLTS, RODS AND RELATED HARDWARE SHALL BE GALVANIZED AFTER FABRICATION PER AASHTO M 232.
5. STEEL SURFACES SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111. ALL EXTERIOR STEEL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
6. SIGN PANELS AS SHOWN IN THE CONTRACT PLANS SHALL BE INSTALLED WITH THE SIGN STRUCTURE OR IMMEDIATELY AFTER THE SIGN STRUCTURE IS ERECTED.
7. FABRICATE BEAM TO PROVIDE SMOOTH PARABOLIC CAMBER CURVE. SEE CAMBER DIAGRAM. DO NOT SHIM AT BOLTED SPLICES.
8. FABRICATE POSTS STRAIGHT.
9. MATERIALS SPECIFICATIONS:

ALL STRUCTURAL STEEL	AASHTO M 223M GR. 345 OR AASHTO M 222M
ANCHOR RODS	ASTM A 449
HANDHOLE COVER SCREWS	ASTM F 593 GR. 1
SPLICE BOLTS	AASHTO M 164 M
SIGN BRACKET BOLTS	ASTM A 307
MOUNTING BEAM BOLTS	AASHTO M 164 M

10. BASE ELEVATIONS AND POST HEIGHTS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD MEASURE ANCHOR BOLT LOCATIONS, ELEVATIONS AND ALL STEEL STRUCTURE DIMENSIONS PRIOR TO THE FABRICATION OF THE STRUCTURAL STEEL AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. FINAL VALUES WILL BE FURNISHED BY THE ENGINEER PRIOR TO FABRICATION.
11. SEE OTHER PLANS FOR CONDUIT LOCATIONS, CONDUCTOR PENETRATIONS AND ADDITIONAL HAND HOLES.
12. POSTS AND BEAMS ARE MAIN LOAD CARRYING TENSILE MEMBERS OR TENSION COMPONENTS OF FLEXURAL MEMBERS.

DESIGN CRITERIA

1. THE DESIGN AND ANALYSIS OF THE STRUCTURES HAS BEEN DONE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS DATED 1994, USING 145 KPH WIND VELOCITY.
2. THE MAXIMUM SIGN AREA ON A STRUCTURE SHALL BE AS NOTED.

LEGEND

B/15 — IDENTIFIES SECTION, VIEW OR DETAIL — TAKEN OR SHOWN ON BRIDGE SHEET 15

B/— — TAKEN OR SHOWN ON THE SAME SHEET

PROJECT NO. OL2538 - NORTHWEST REGION - SR 5 - VIC. NORTHGATE WAY TO VIC. NE 145TH ST. - CANTILEVER 1

SR 5 JOB NO. ____ SHEET 1

Bridge Design Engr.	SIGN_BRIDGEROOT:[FGB]NG_CANT_LAYOUT.FGB;1				
Supervisor J. A. VAN LUND					
Designed By G.E.C. MINNS 8/97					
Checked By JAVL/JP 4/97					
Detailed By J. PLESHA 8/97					
Bridge Projects Engr.					
Prelim. Plan By					
Architect/Specialist	DATE	REVISION	BY	APP'D	

REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10	WASH.			

JOB NUMBER 97W058

BRIDGE AND STRUCTURES OFFICE

GARY E. C. MINNS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 1/22/99 — 12-23-97 — SIGN SUPPORT ENGINEER

JOHN A. VAN LUND — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 12/23/97 — 12-23-97 — SUPERVISING BRIDGE ENGINEER

Washington State Department of Transportation

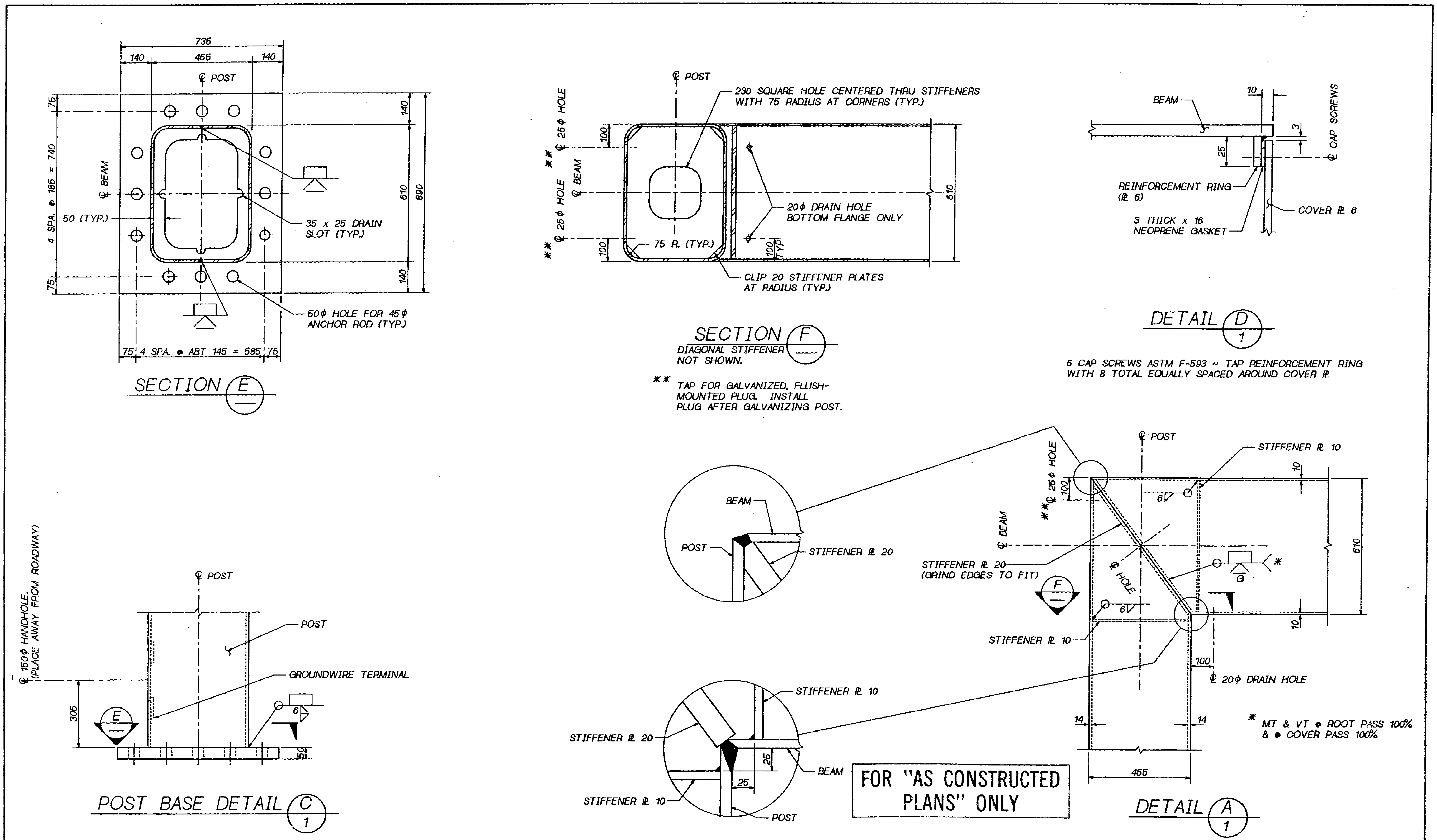
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST.

CANTILEVER 1 - LAYOUT

BRIDGE SHEET NO. 1

SHEET 97 OF 138 SHEETS

23-DEC-97



MONOTUBE SIGN CANTILEVER (6.1 < S < 10.0)

Bridge Design Engr.	SIGN_BRIDGEROOT:[FGB]NG_DET1.FGB;1		
Supervisor J. A. VAN LUND			
Designed By G.E.G. MINNS 4/97			
Checked By JAVL/JP 4/97			
Detailed By J. PLESHA 4/97			
Bridge Projects Engr.			
Prelim. Plan By			
Architect/Specialist	DATE	REVISION	BY APP'D

23-DEC-97

REGION NO. 10 | STATE WASH. | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS

JOB NUMBER 97W058

BRIDGE AND STRUCTURES OFFICE

12-23-97 SIGN SUPPORT ENGINEER

12-23-97 SUPERVISING BRIDGE ENGINEER

Washington State Department of Transportation

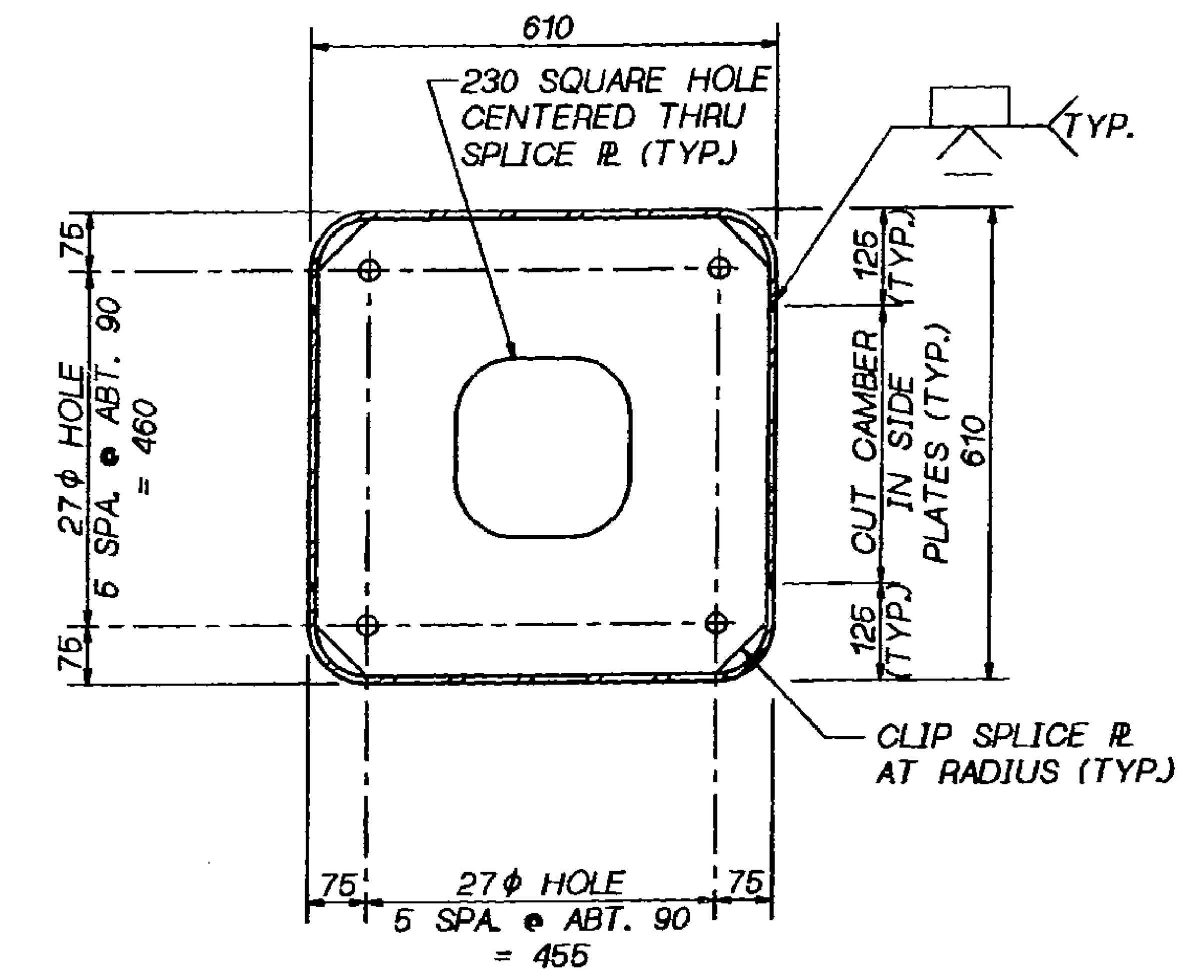
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST.

CANTILEVER 1
STRUCTURAL DETAILS I

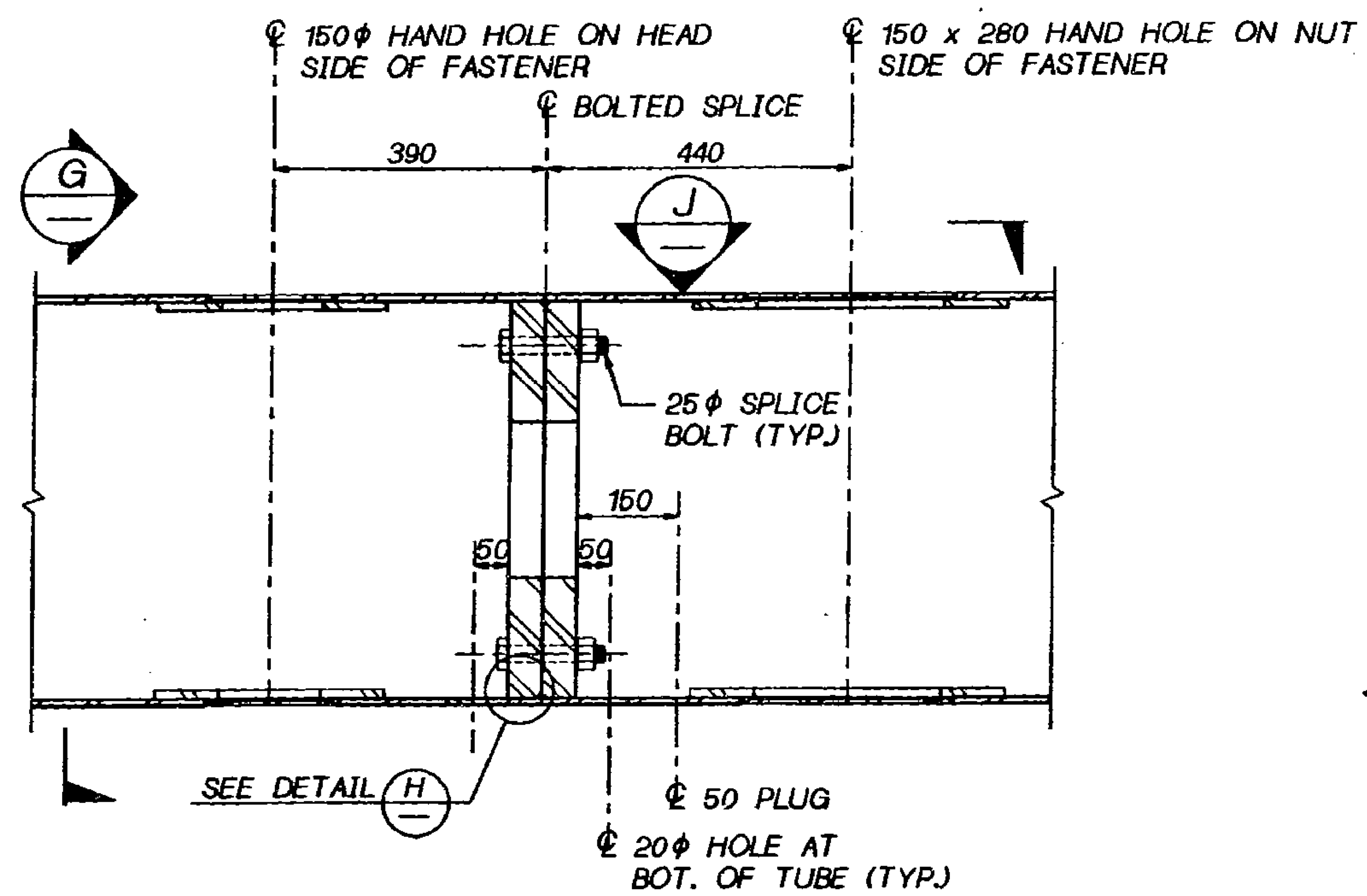
BRIDGE SHEET NO. 2

SHEET 98 OF 138 SHEETS

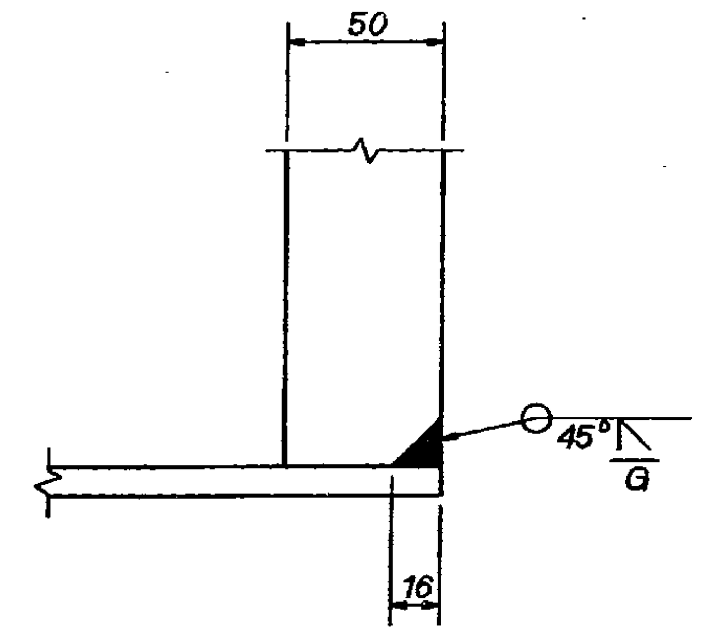
SR 5 JOB NO. SHEET 2



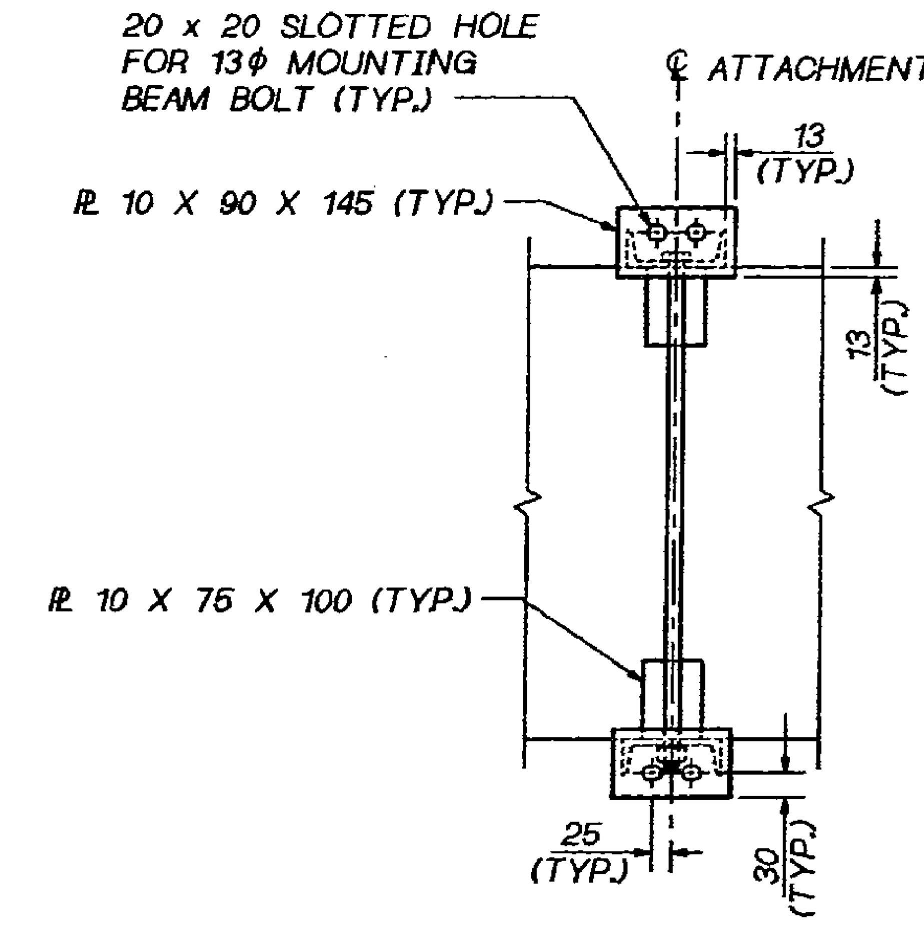
SECTION (G)



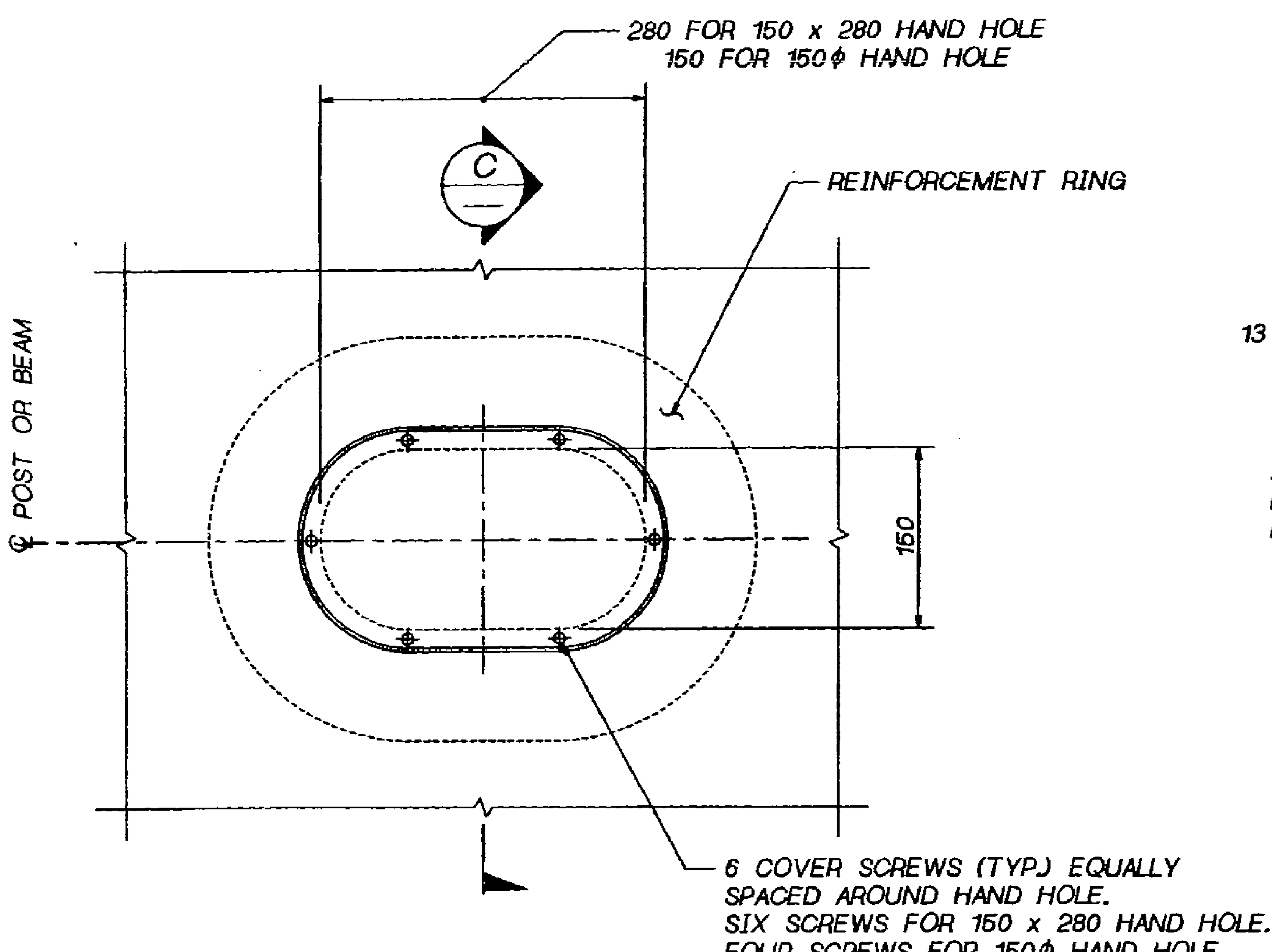
DETAIL (B/1)
SECTION THRU BEAM



DETAIL (H)

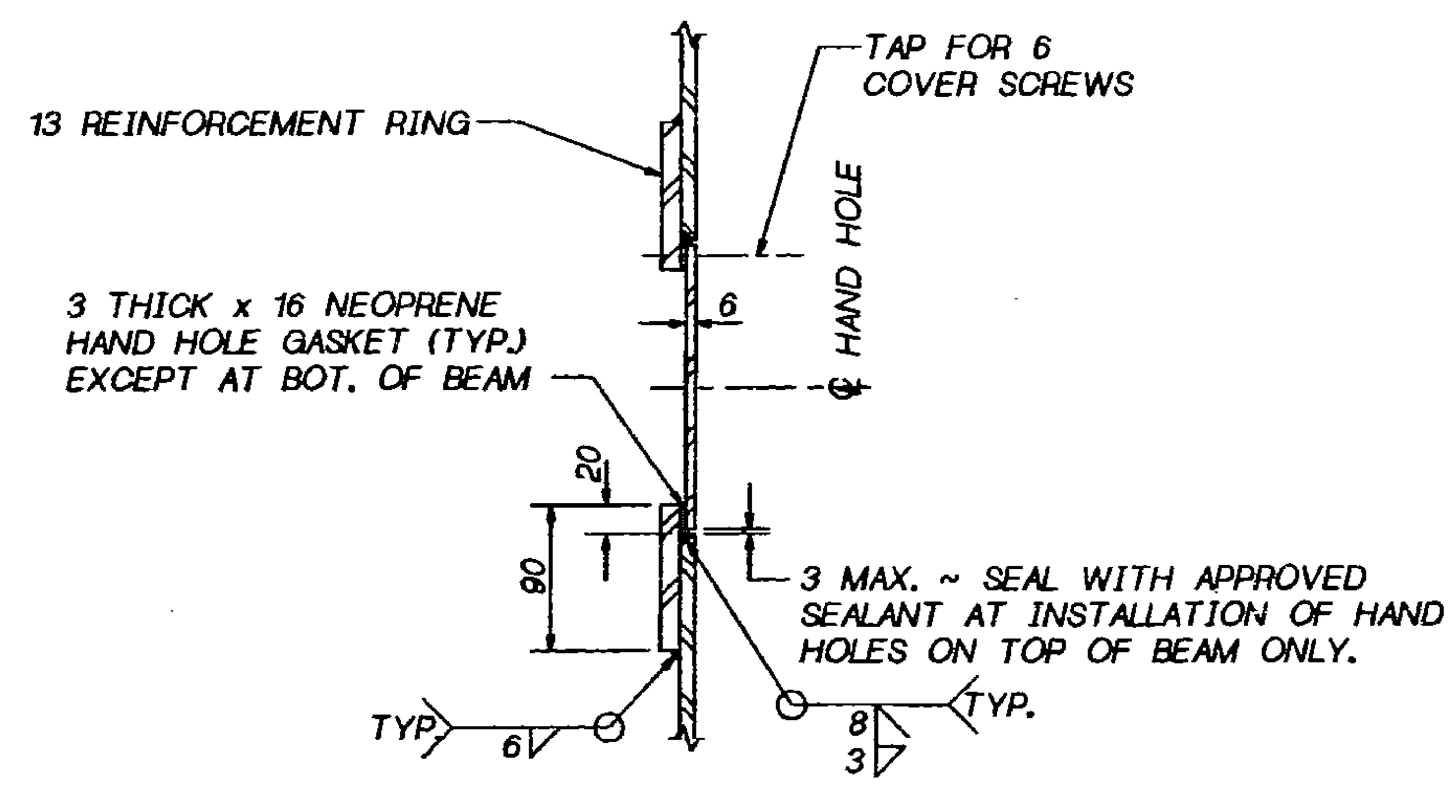


SECTION (A)



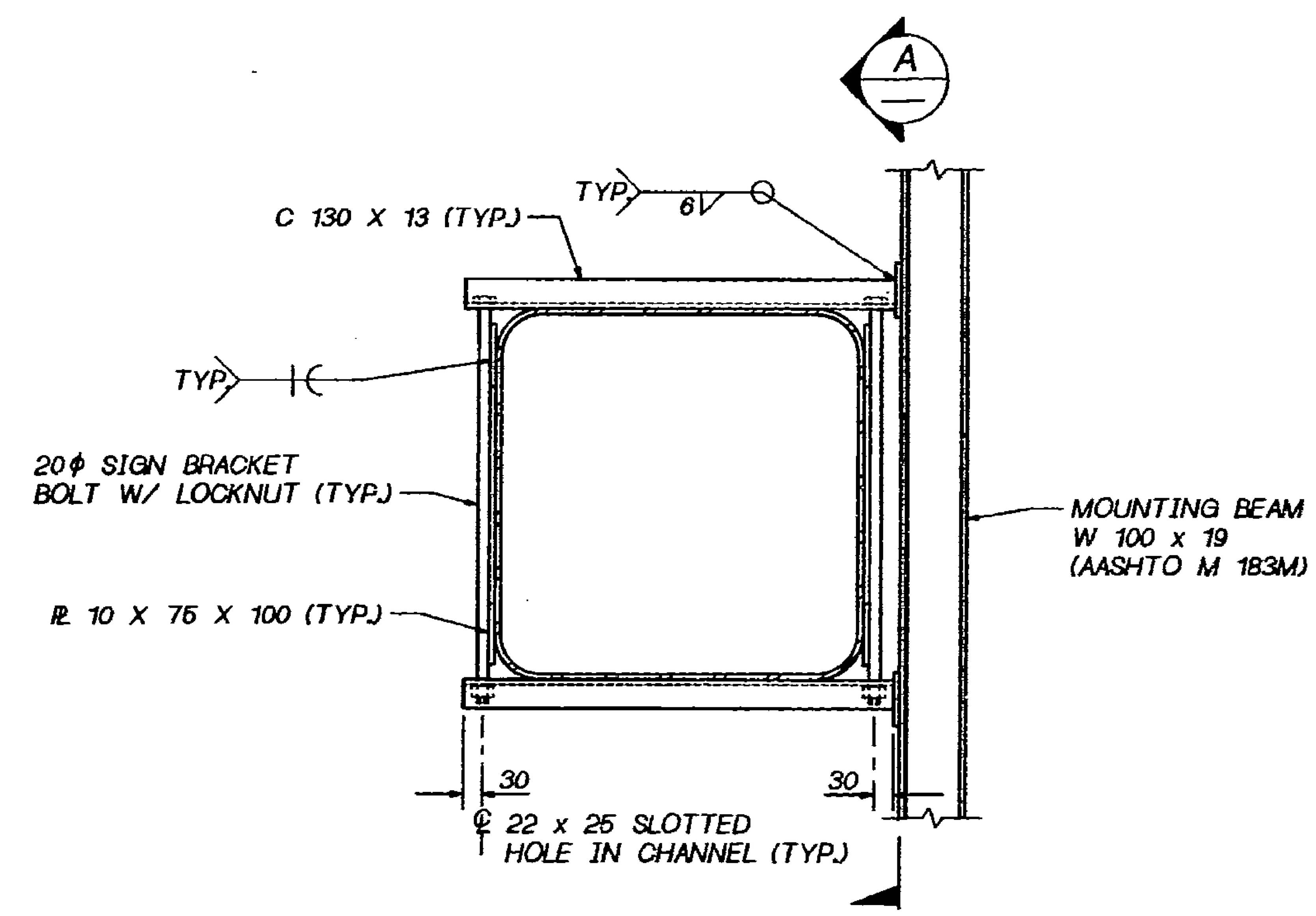
VIEW (J)

150 x 280 HAND HOLE SHOWN.
150φ HAND HOLE SIMILAR EXCEPT AS NOTED.



SECTION (C)

FOR "AS CONSTRUCTED PLANS" ONLY



ATTACHMENT BRACKET DETAIL

PAINT ENTIRE ATTACHMENT BRACKET TO MATCH EXISTING STRUCTURE EXCEPT FOR MOUNTING BEAM. SIGN, LIGHT, BEAM LENGTHS, SIZE AND SPACING SHALL BE DETERMINED FROM THE CONTRACT PLANS OR THE STANDARD PLANS. VARIABLE MESSAGE SIGNS SHALL HAVE MOUNTING BEAMS @ 915 MAXIMUM.

MONOTUBE SIGN CANTILEVER (6.1 < S < 10.0)

SR 5 JOB NO. ____ SHEET 3

Bridge Design Engr.	SIGN_BRIDGEROOT:[FGB]NG_DET2.FGB; 1			
Supervisor J. A. VAN LUND				
Designed By G.E.C. MINNS 4/97				
Checked By JAVL/JP 4/97				
Detailed By J. PLESHA 4/97				
Bridge Projects Engr.				
Prelim. Plan By				
Architect/Specialist	DATE	REVISION	BY	APP'D

REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10	WASH.			

JOB NUMBER 97W058

BRIDGE AND STRUCTURES OFFICE

GARY E. C. MINNS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 1/22/98
12-23-97 SIGN SUPPORT ENGINEER

JOHN A. VAN LUND — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 12/23/99
12-23-97 SUPERVISING BRIDGE ENGINEER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST.

CANTILEVER 1
STRUCTURAL DETAILS II

BRIDGE SHEET NO. 3
SHEET 99 OF 138 SHEETS

23-DEC-97

ANCHOR ROD ~ 45φ x 1.275 LONG THREADED ROD OR STUD BOLT WITH 4 WASHERS AND 4 HEAVY HEX NUTS (TYP.). THREAD EACH END 195. GALVANIZE EXPOSED ANCHOR ROD END FOR 295 MIN.

NOTE: USE A TEMPLATE TO LOCATE AND SECURE BOLTS IN PLACE DURING FOUNDATION INSTALLATION. FOR DETAILS, SEE DETAIL B, THIS SHT.

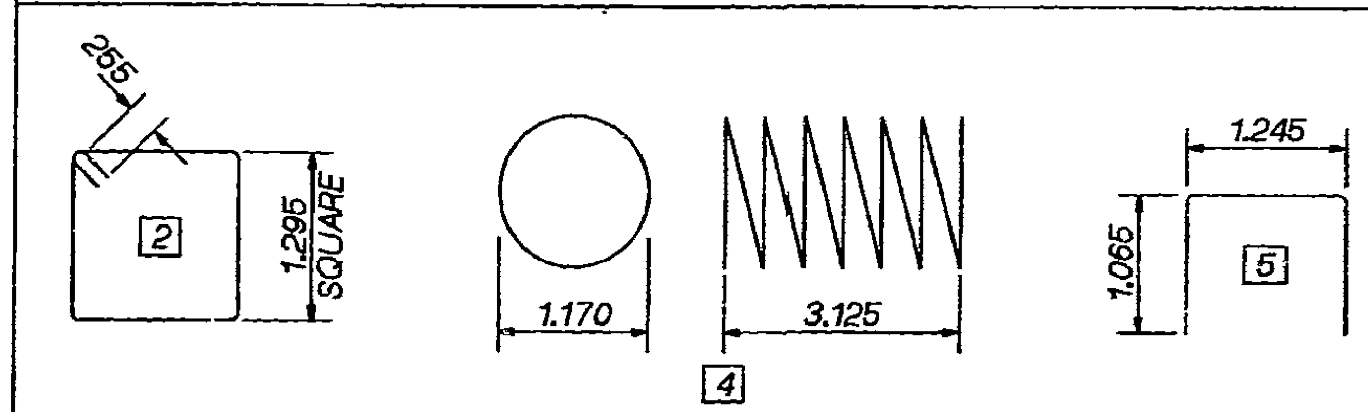
SPIRAL OPTIONS

DEFORMED BAR	PLAIN STEEL BAR	COLD DRAWN WIRE	DEFORMED WIRE
#4	13φ	W20	D20

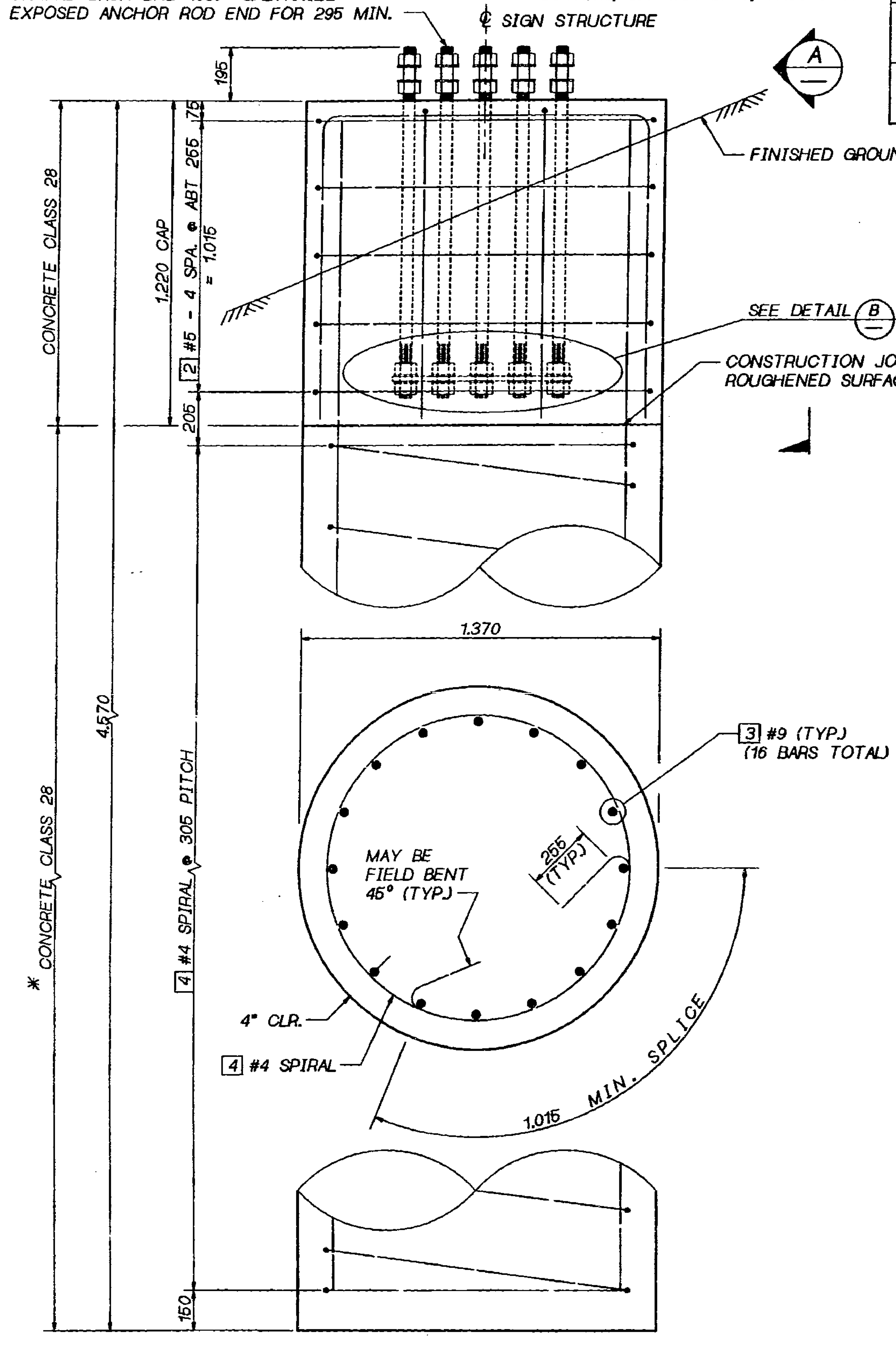
BAR LIST
DESIGN AASHTO M 31 GR. 60

MARK	LOCATION	SIZE	NO. REQ'D.	LENGTH	
1	CAP VERTICAL	4	4	1.145	STR.
2	CAP HOOPS	5	5	5.665	
3	SHAFT VERTICAL	9	16	4.345	STR.
4	SHAFT SPIRAL	4	1	"A"	
5	CAP TOP	5	4	3.300	

BENDING DIAGRAM

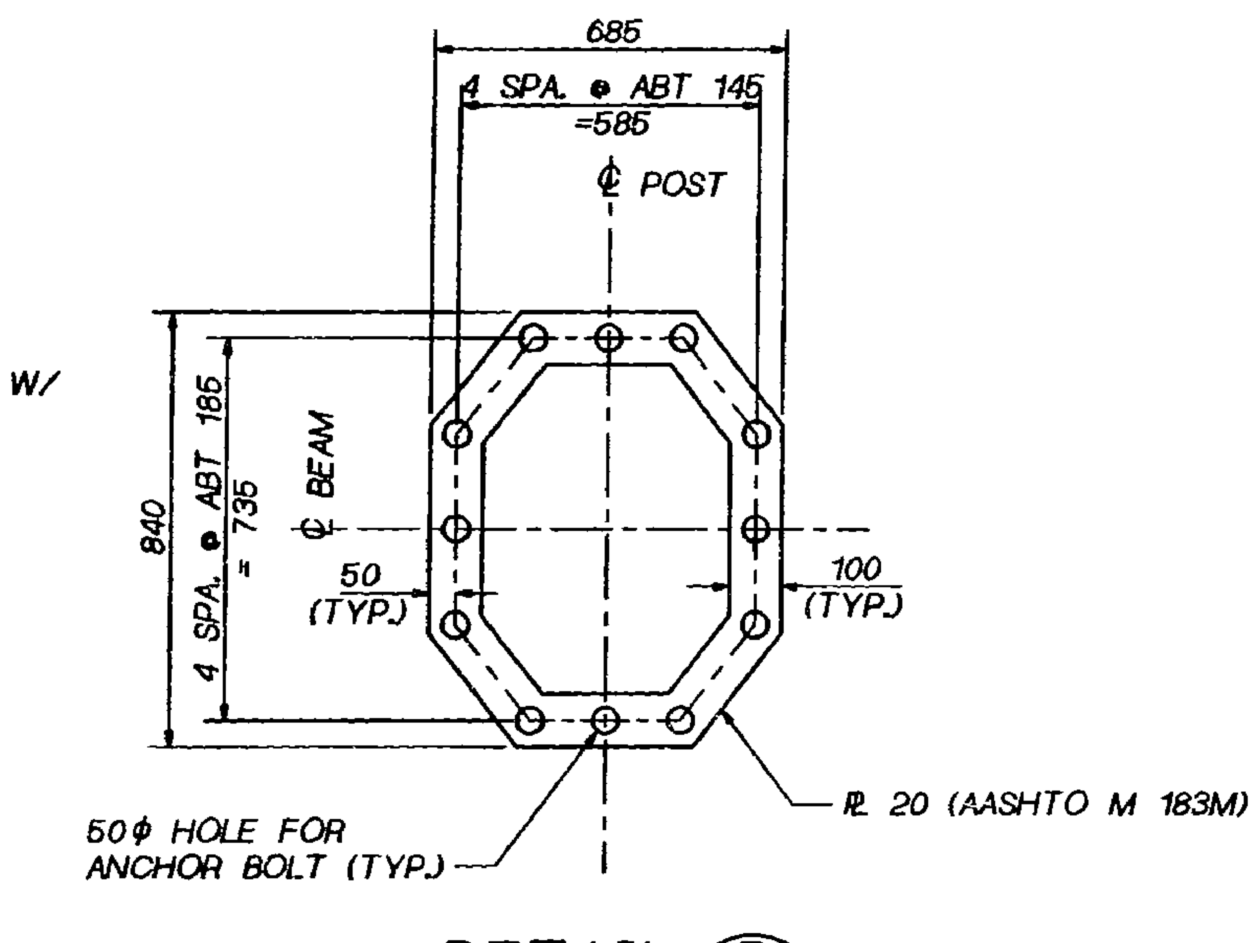


"A" ~ DETERMINE FROM PLANS

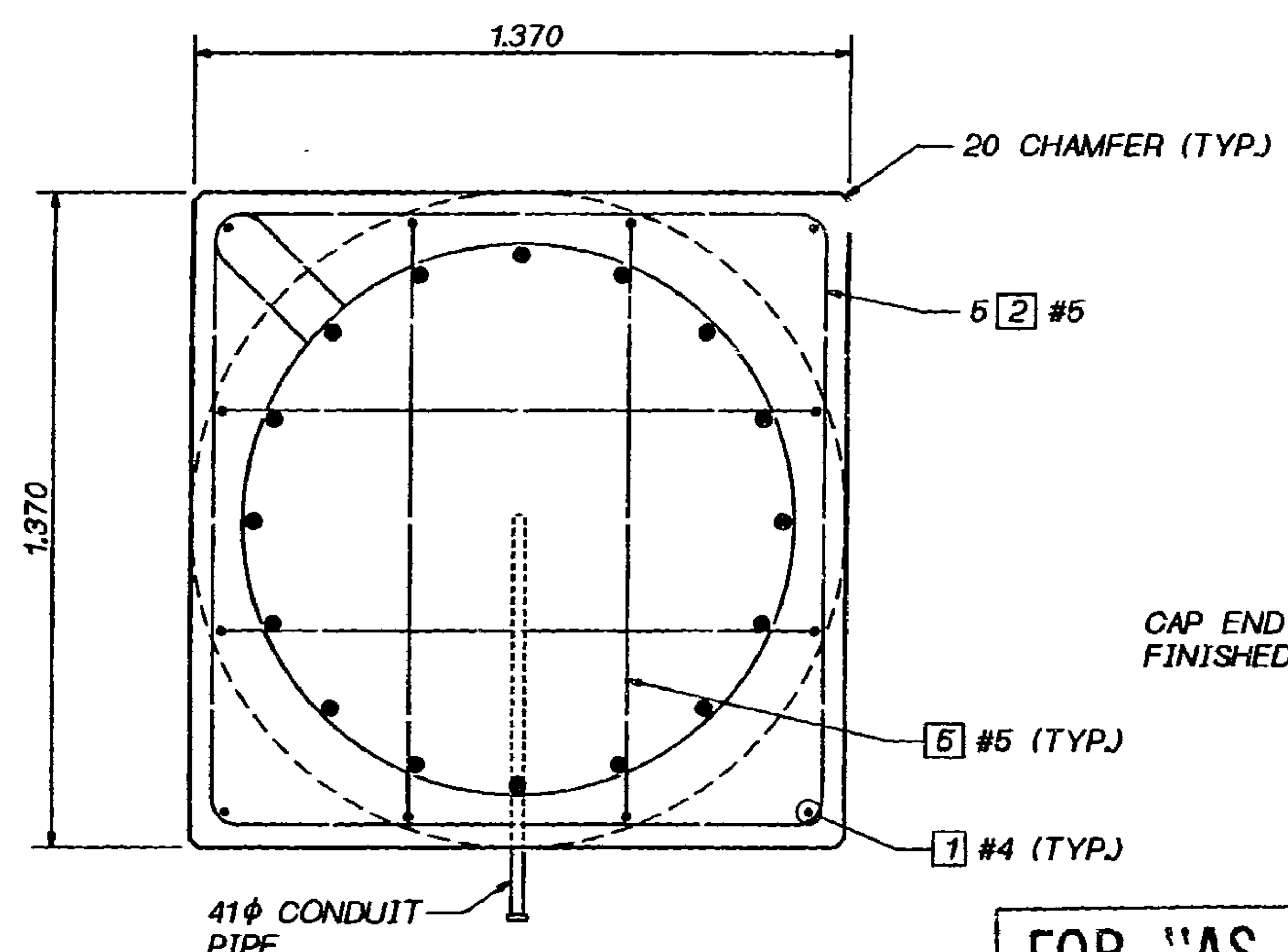


ELEVATION

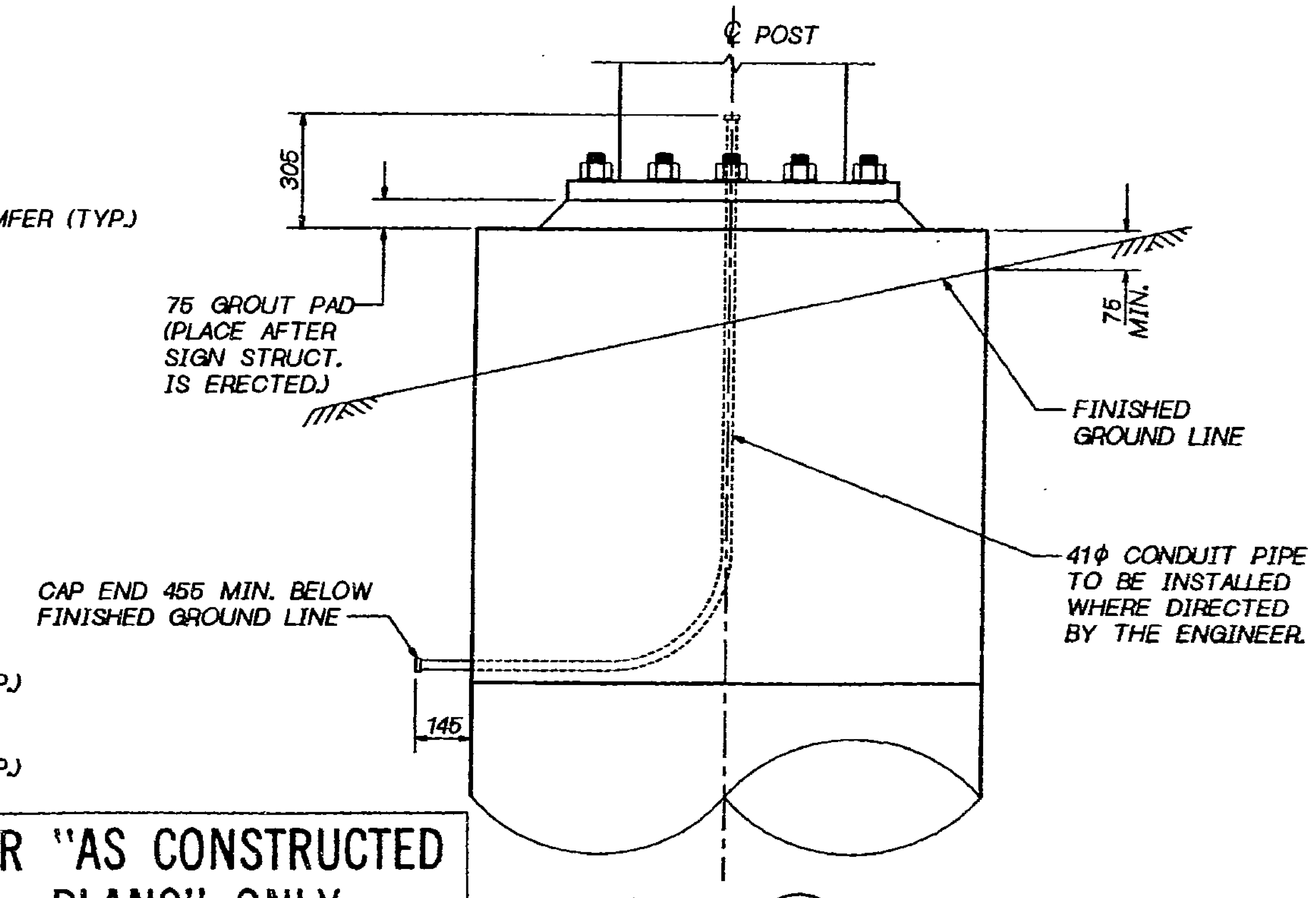
* USE CONCRETE CLASS 28W WHEN WATER IS PRESENT IN THE EXCAVATION.



DETAIL B



PLAN



VIEW A

FOR "AS CONSTRUCTED PLANS" ONLY

MONOTUBE SIGN CANTILEVER (6.1 < S < 10.0)

Bridge Design Engr.	
Supervisor	J. A. VAN LUND
Designed By	G.E.C. MINNS 4/97
Checked By	JAVL/JP 4/97
Detailed By	J. PLESHA 4/97
Bridge Projects Engr.	
Prelim. Plan By	
Architect/Specialist	

SIGN_BRIDGEROOT:[FGB]NG_FND1.FGB;1

DATE	REVISION	BY	APP'D

REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10	WASH.			

JOB NUMBER 97W058

BRIDGE AND STRUCTURES OFFICE

GARY E. C. MINNS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 1/22/98 — 12-23-97 — SIGN SUPPORT ENGINEER

JOHN A. VAN LUND, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 12/23/97 — 12-23-97 — SUPERVISING BRIDGE ENGINEER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST.

CANTILEVER 1
FOUNDATION TYPE 1

BRIDGE SHEET NO. 4

SHEET 100 OF 138 SHEETS

SR 5 JOB NO. ____ SHEET 4

23-DEC-97

QUANTITY TABULATION

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.
THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION	TEMPORARY CONC. BARRIER	RESETTING CONC. BARRIER	TEMPORARY IMPACT ATTENUATOR	RESETTING IMPACT ATTENUATOR	TRUCK MOUNTED IMPACT ATTENUATOR	OPERATION OF TRUCK MOUNTED IMPACT ATTENUATOR	TEMPORARY PAVEMENT MARKING	SEQUENTIAL ARROW SIGN	TYPE III BARRICADE	SEE GENERAL NOTES
		METER	METER	EACH	EACH	HOUR	HOUR	METER	HOUR	EACH	
	STAGE 1										
	STA. SB 0+642 TO SB 1+480							2514			1
	STA. SB 0+642 TO SB 1+220							578			1
	STA. SB 0+742 TO SB 1+185	443									2
	STA. SB 1+090			1							
	STA. SB 1+185				1						
	STA. SB 1+220 TO SB 1+340							120			
	STA. SB 1+340 TO SB 1+421					45	20	80			3
	STAGE 2										
	STA. SB 0+642 TO SBCD 1+380							1476			3
	STA. SB 0+642 TO SB 1+100							458			1
	STA. SB 0+740 TO SB 1+090							448			3
	STA. SB 0+742 TO SB 1+185		443					443			3
	STA. SB 1+090 TO SB 1+230							140			3
	STA. SB 1+100 TO SB 1+618							518			3
	STA. SB 1+130 TO SB 1+380							250			1
	STA. SB 1+185 TO SBCD 1+356	135	20					171			3
	STA. SB 1+230 TO SB 1+380				1			150			1
	STA. SB 1+590								200		
	STAGE 3										
	STA. SB 0+642 TO SB 1+185							543			3
	STA. SB 0+680 TO SB 1+188							546			1
	STA. SB 0+742 TO SBCD 1+250		508								
	STA. SBCD 1+185 TO SBCD 1+400							215			3
	STA. SBCD 1+188 TO SBCD 1+217							29			2
	STA. SB 1+188 TO SB 1+344							156			2
	STA. SB 1+250 TO SB 1+400							150			
	STA. SB 1+344 TO SB 1+400							56			3
	STAGE 4										
	STA. SB 1+080 TO SB 1+335		255		1						
	STA. SB 1+440					65	40				
	STA. SB 1+738								200		
	OTHER										
	STA. SBCD 1+520 TO 1+880									3	4
	STA. SB 2+075					45	20				
	STA. SB 2+660								200		
	STA. SB 2+815					45	20				
	STA. SB 3+280								150		
	SHEET TOTAL	578	1226	1	3	200	100	9041	750	3	
	PROJECT TOTAL	578	1226	1	3	200	100	9041	750	3	

GENERAL NOTES:

1. TEMPORARY RAISED PAVEMENT MARKERS.
2. TEMPORARY 200mm PAINTED GORE STRIPE.
3. TEMPORARY 100mm PAINT STRIPE.
4. REFERENCE TRAFFIC CONTROL PLAN PLAN SHEETS FOR EXACT LOCATION OF TYPE III BARRIERS.
5. ACCEPTABLE ALTERNATIVES FOR TEMPORARY IMPACT ATTENUATORS:
   a. ADIEM II
   b. GREAT cz (6 Bay)
   c. BREAKMASTER
   d. C.A.T.

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP			
ENTERED BY	M. WELAYE			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGION ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED. AID. PROJ. NO.

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL & ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

QUANTITY TABULATION - TRAFFIC CONTROL

QTTC1

SHEET 101 OF 138 SHEETS

T. 26N. R. 4E. W. M.

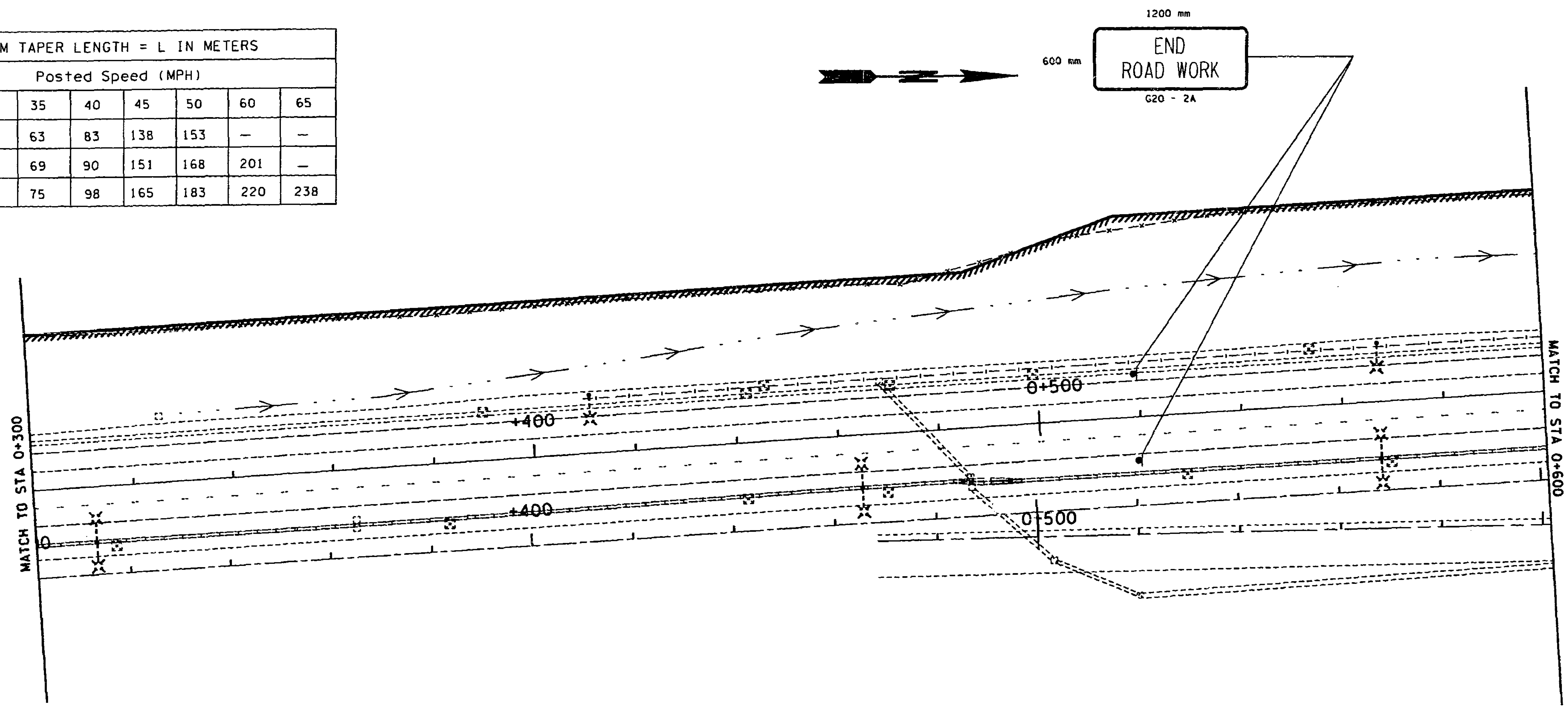
BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES A 4500 LB IMPACTING VEHICLE AT 65 MPH SPEED AND DRY PAVEMENT.

LEGEND	
▫▫▫	TRAFFIC SAFETY DRUMS
◁◁◁	SEQUENTIAL ARROW SIGN
	TYPE III BARRICADE
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238



SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP
ENTERED BY M. GOUDARZI
CHECKED BY R. SUAFOA
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. ODAMOTO

DATE | DATE | REVISION | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

97W058

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC1

SHEET 102 OF 138 SHEETS

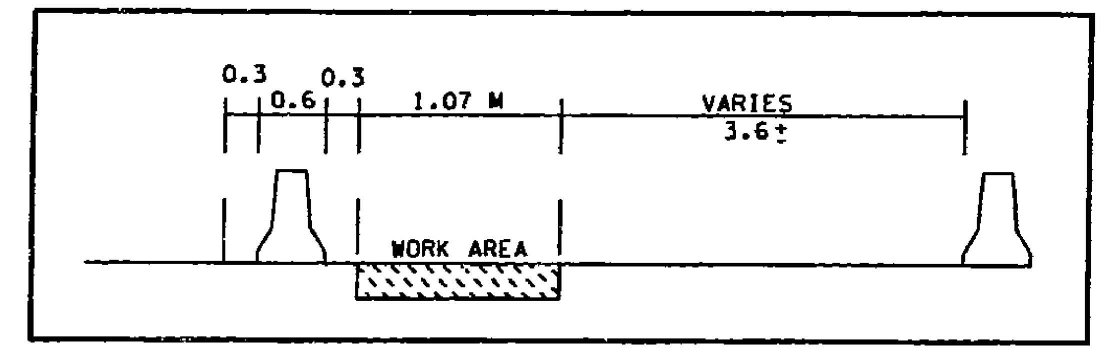
15 DEC 97 s:\412353\projects\ol2538\ol2538tcl.dgn 412353

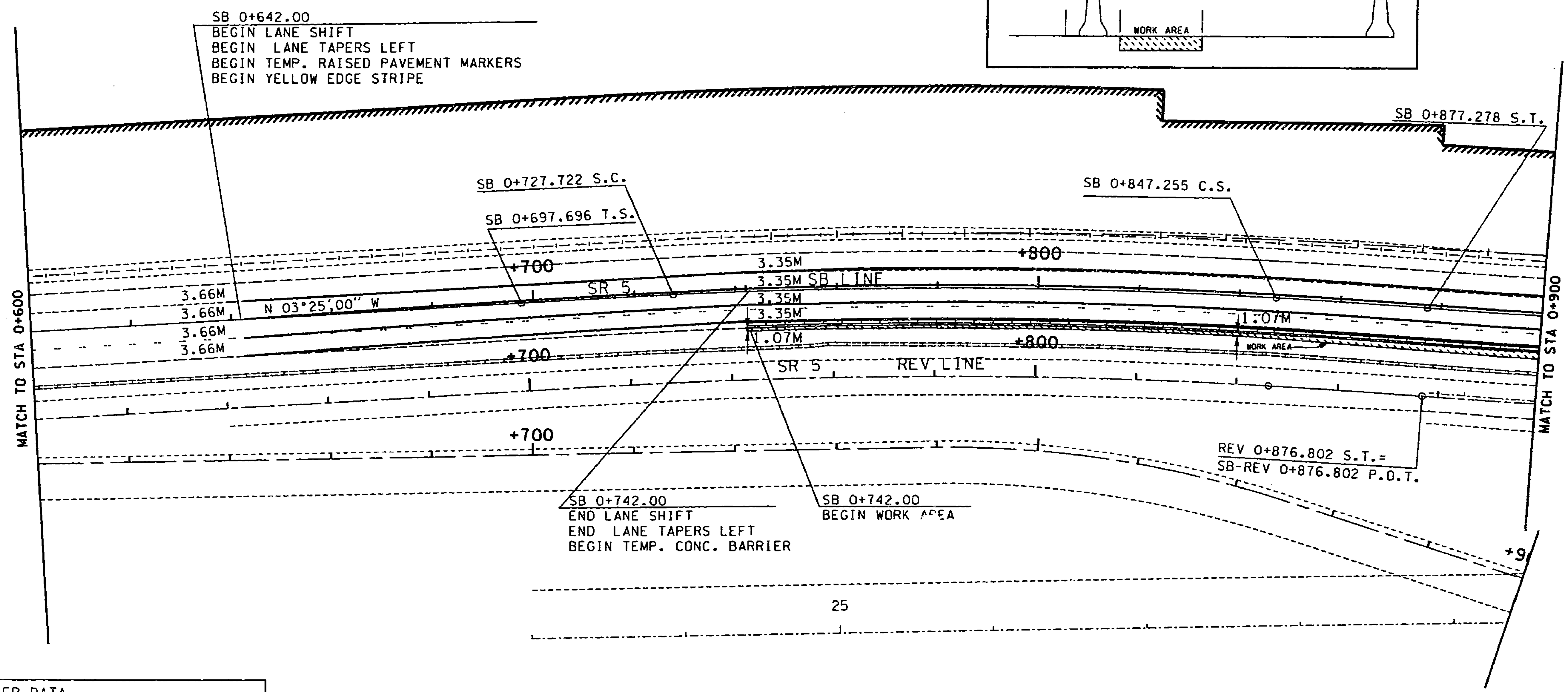
PLOT3

T. 26N. R. 4E. W. M.

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA





FOR "AS CONSTRUCTED PLANS" ONLY

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R

BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

0 10 20 30 40 50
SCALE IN METERS

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

DESIGNED BY	D. BISHOP				
ENTERED BY	M. GOUDARZI				
CHECKED BY	R. SUAFOA				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	j. ODAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC2

SHEET 103 OF 138 SHEETS

T. 26N. R. 4E. W. M.

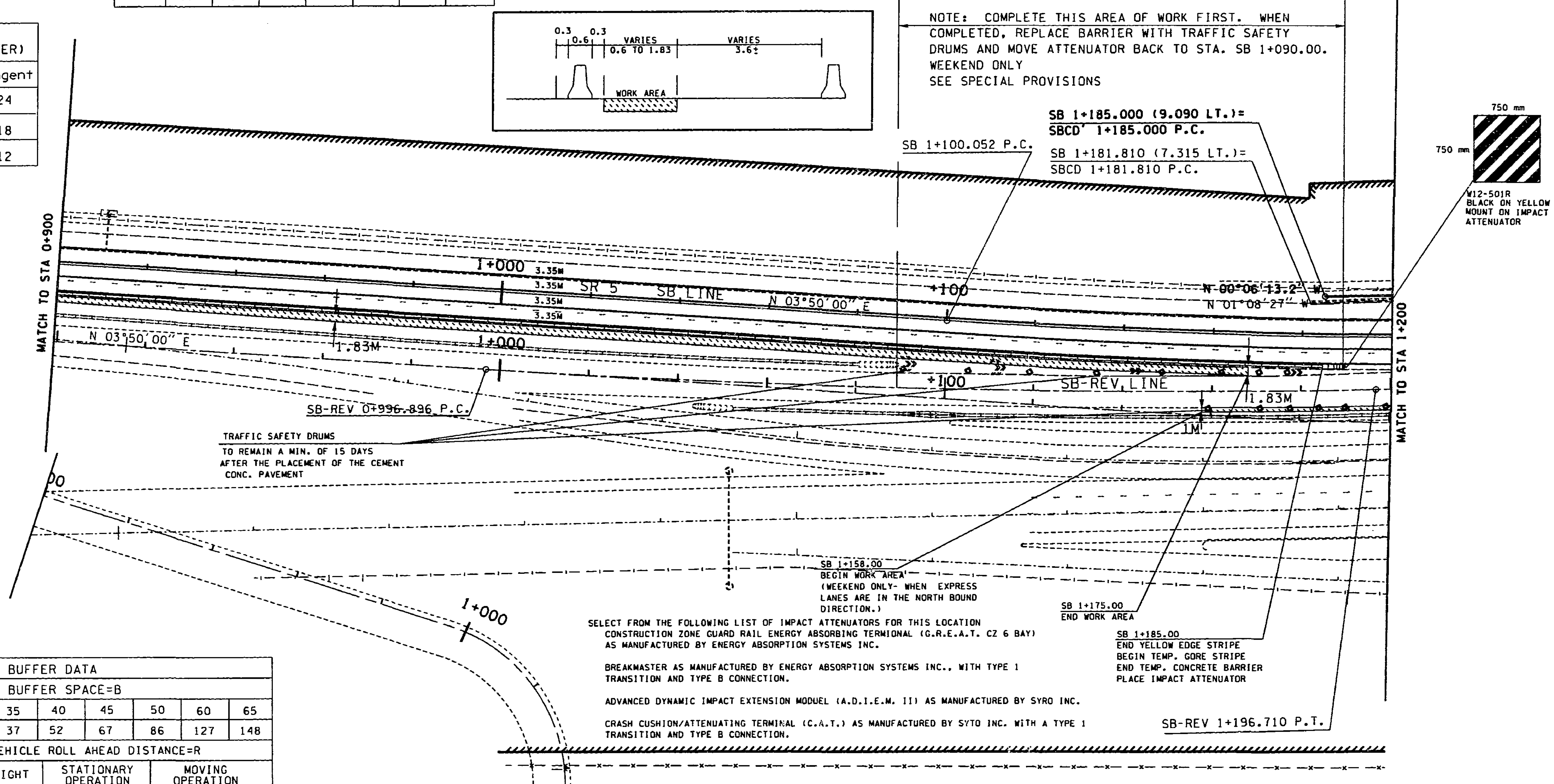
SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- IMPACT ATTENUATOR

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



SELECT FROM THE FOLLOWING LIST OF IMPACT ATTENUATORS FOR THIS LOCATION

CONSTRUCTION ZONE GUARD RAIL ENERGY ABSORBING TERMINAL (G.R.E.A.T. CZ 6 BAY) AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC.

BREAKMASTER AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC., WITH TYPE 1 TRANSITION AND TYPE B CONNECTION.

ADVANCED DYNAMIC IMPACT EXTENSION MODUEL (A.D.I.E.M. II) AS MANUFACTURED BY SYRO INC.

CRASH CUSHION/ATTENUATING TERMINAL (C.A.T.) AS MANUFACTURED BY SYTO INC. WITH A TYPE 1 TRANSITION AND TYPE B CONNECTION.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	j. ODAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC3

SHEET 104 OF 138 SHEETS

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

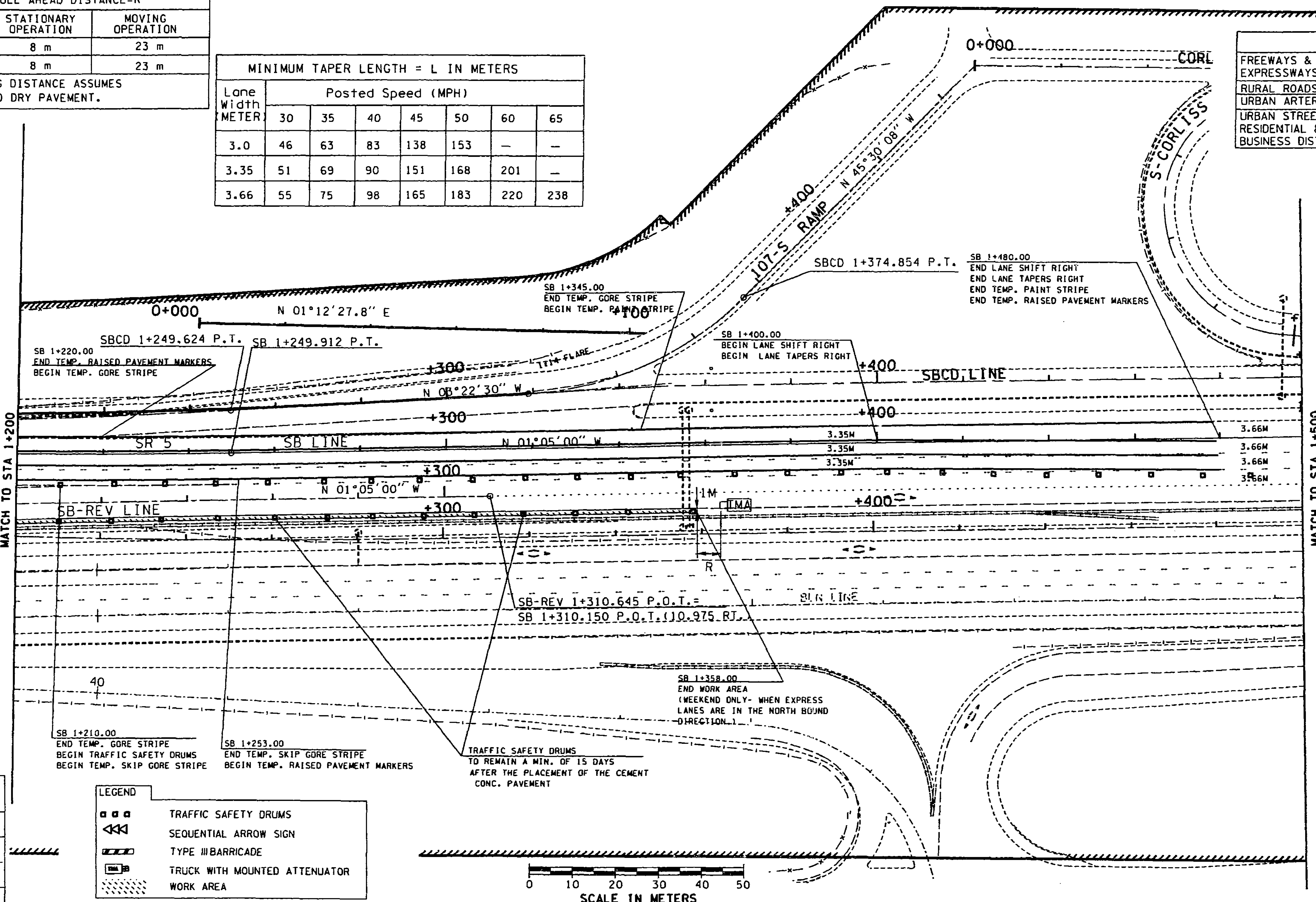
BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

T. 26N. R. 4E. W. M.

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP		
ENTERED BY	M. GOUDARZI		
CHECKED BY	R. SUAFOA		
PROJ. ENGR.	J. JOHNSON		
REGIONAL ADM.	j. ODAMOTO		
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC4

SHEET 105 OF 138 SHEETS

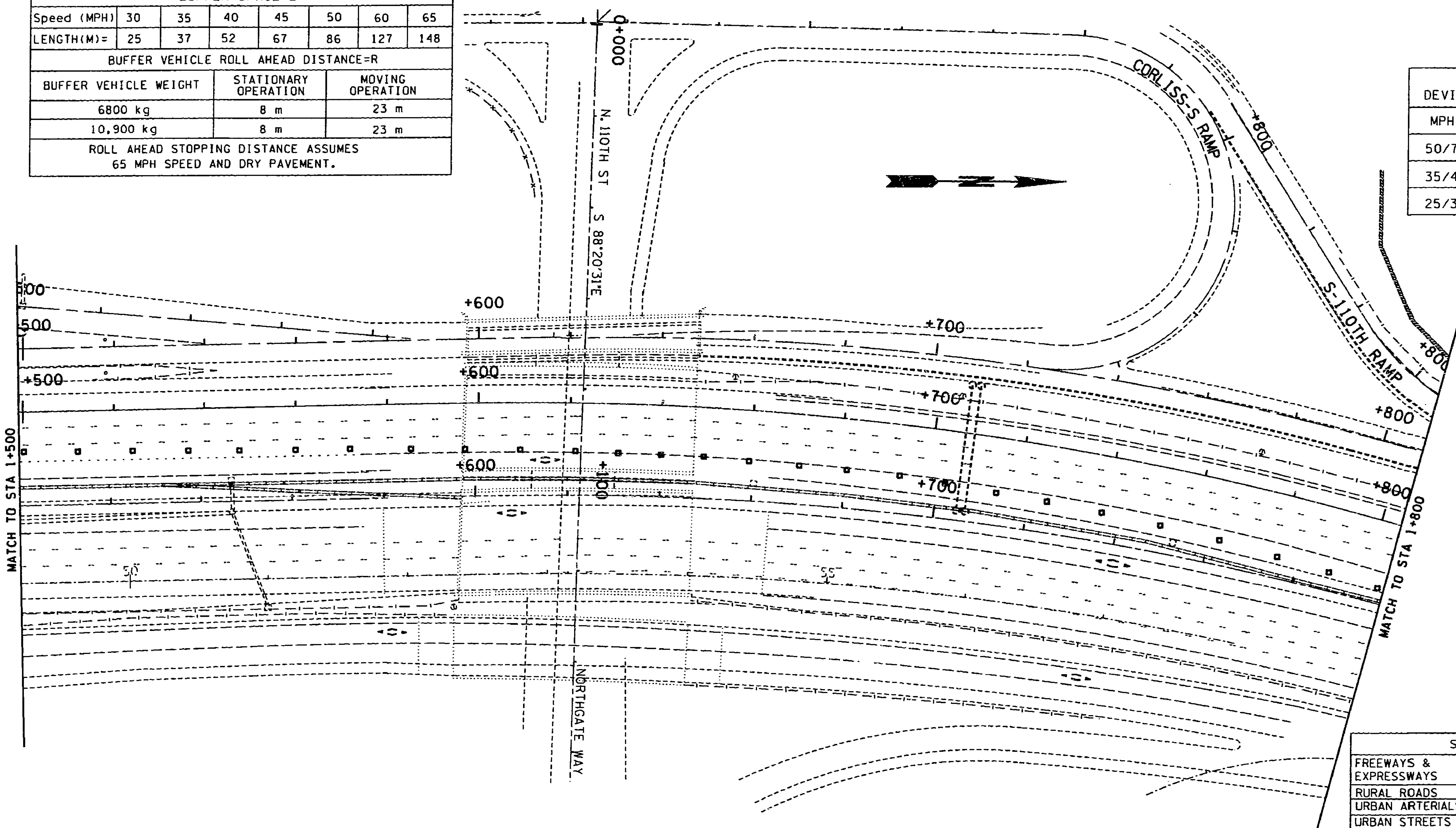
PLOT6 15 DEC 97 s:\412353\projects\o12538\o12538tc1.dgn 412353

T. 26N. R. 4E. W. M.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. ODAMOTO			
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC5

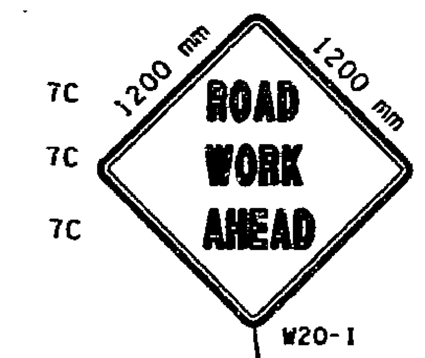
SHEET 106 OF 138 SHEETS

T. 26N. R. 4E. W. M.

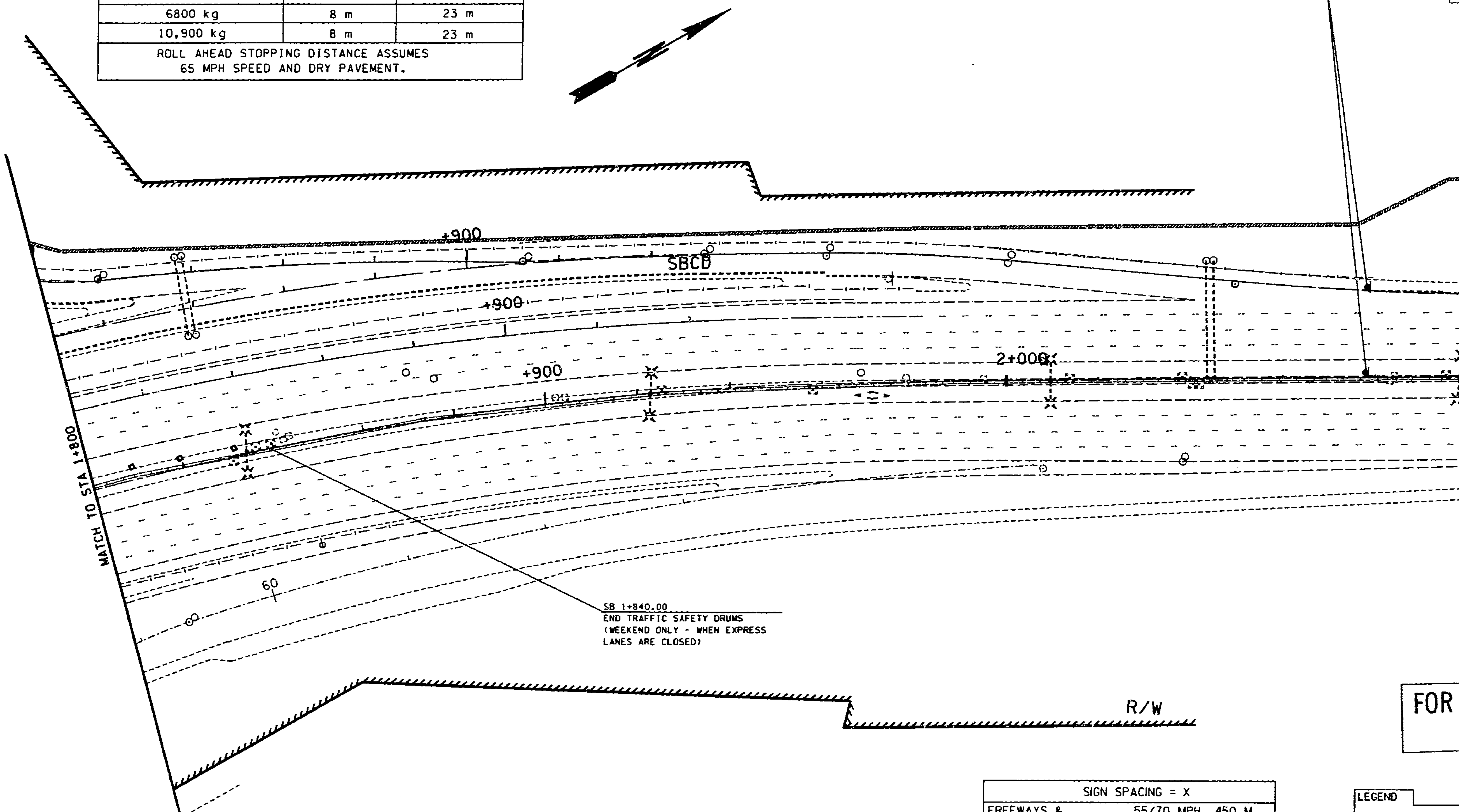
BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



FOR "AS CONSTRUCTED PLANS" ONLY

0 10 20 30 40 50
SCALE IN METERS

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. j. ODAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 1

TC6

SHEET 107 OF 138 SHEETS

15 DEC 97 s:\412353\projects\o12538\o12538tc2.dgn quintem

PLOT2

T. 26N. R. 4E. W. M.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

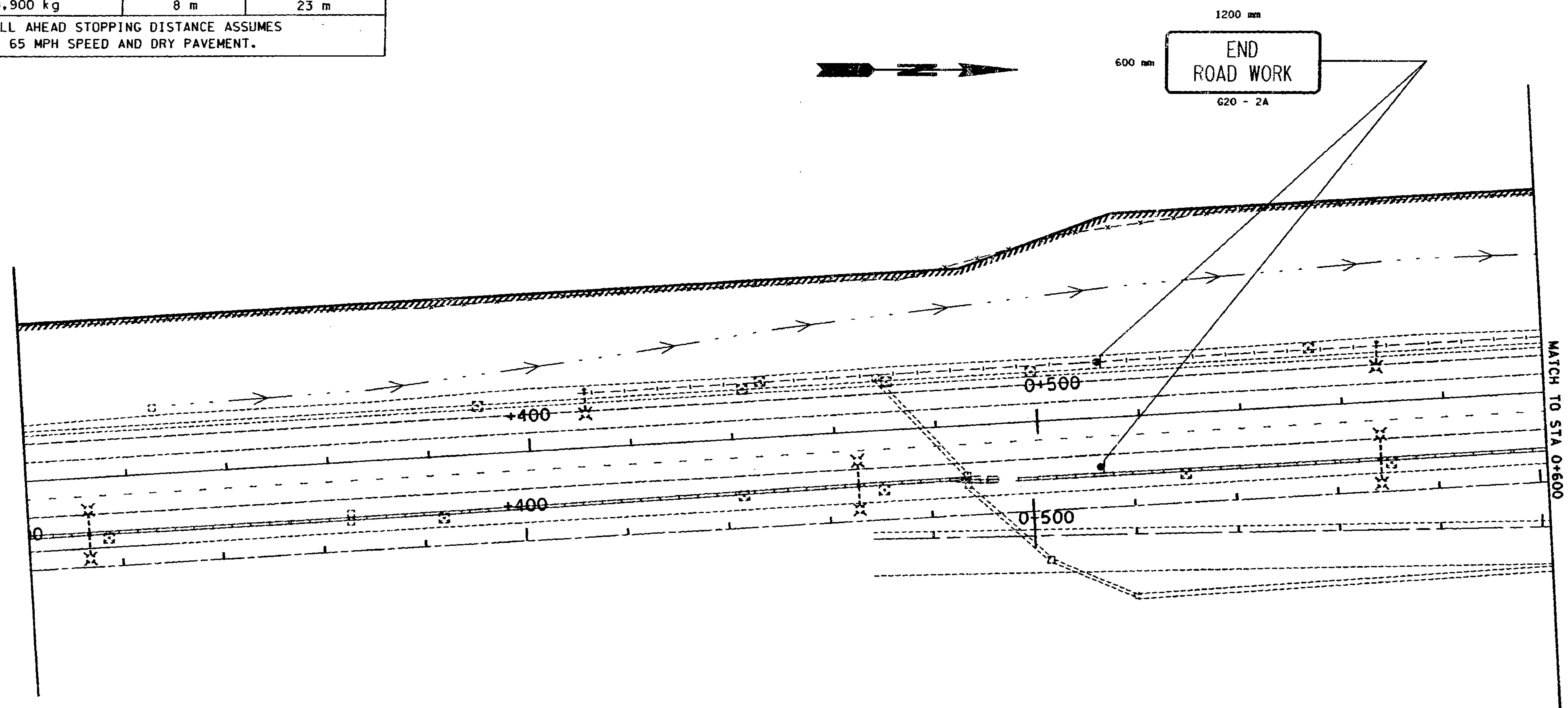
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

MINIMUM TAPER LENGTH = L IN METERS

Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

CHANNELIZING DEVICE SPACING (METER)

MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



SIGN SPACING = X

FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP					
ENTERED BY M. GOUDARZI					
CHECKED BY R. SUAFOA					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

TC7

SHEET 108 OF 138 SHEETS

15 DEC 97 s:\412353\projects\ol2538\ol2538tc2.dgn quintem

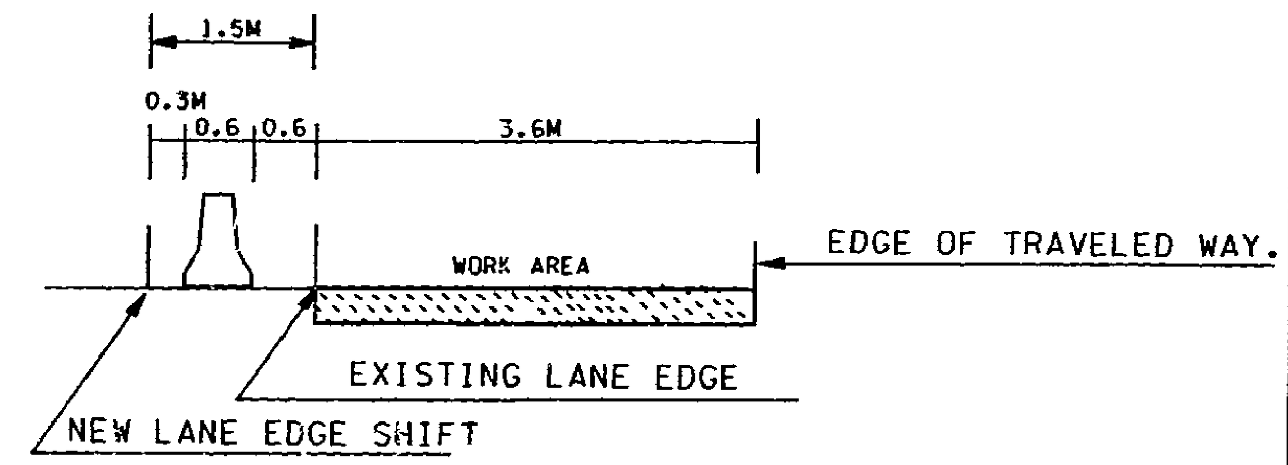
PLOT3

T. 26N. R. 4E. W. M.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



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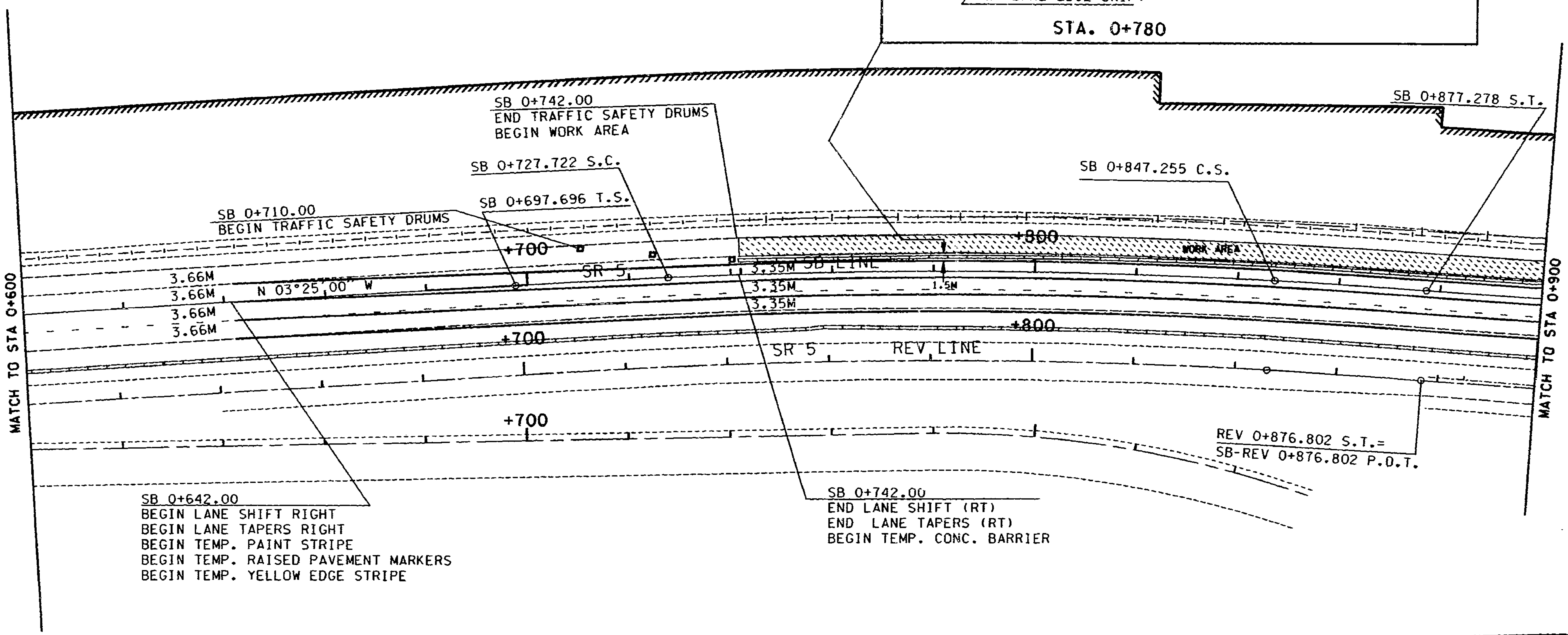


FOR "AS CONSTRUCTED PLANS" ONLY

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

0 10 20 30 40 50
SCALE IN METERS

NOTE:
STAGE 2 WORK SHALL BE ACCOMPLISHED ON WEEKENDS ONLY (SEE SPECIAL PROVISIONS FOR TIMES)

LEGEND	
	TRAFFIC SAFETY DRUMS
	SEQUENTIAL ARROW SIGN
	TYPE III BARRICADE
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA

DESIGNED BY	D. BISHOP		
ENTERED BY	M. GOUDARZI		
CHECKED BY	R. SUAFOA		
PROJ. ENGR.	J. JOHNSON		
REGIONAL ADM.	J. OKAMOTO		
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

TC8

SHEET 109 OF 138 SHEETS

PLOT4 15 DEC 97 s:\412353\projects\ol2538\ol2538tc2.dgn quintem

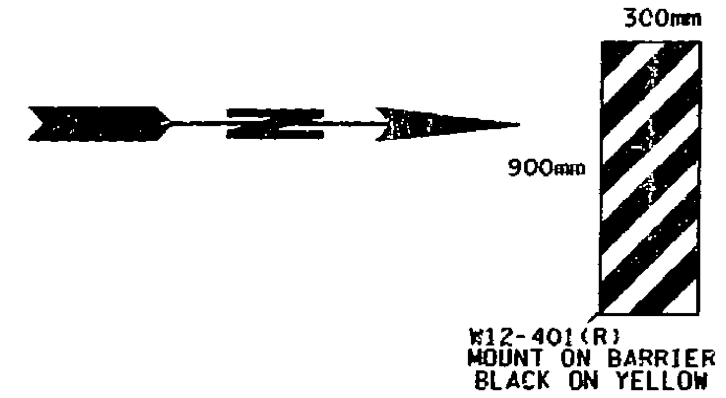
T. 26N. R. 4E. W. M.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

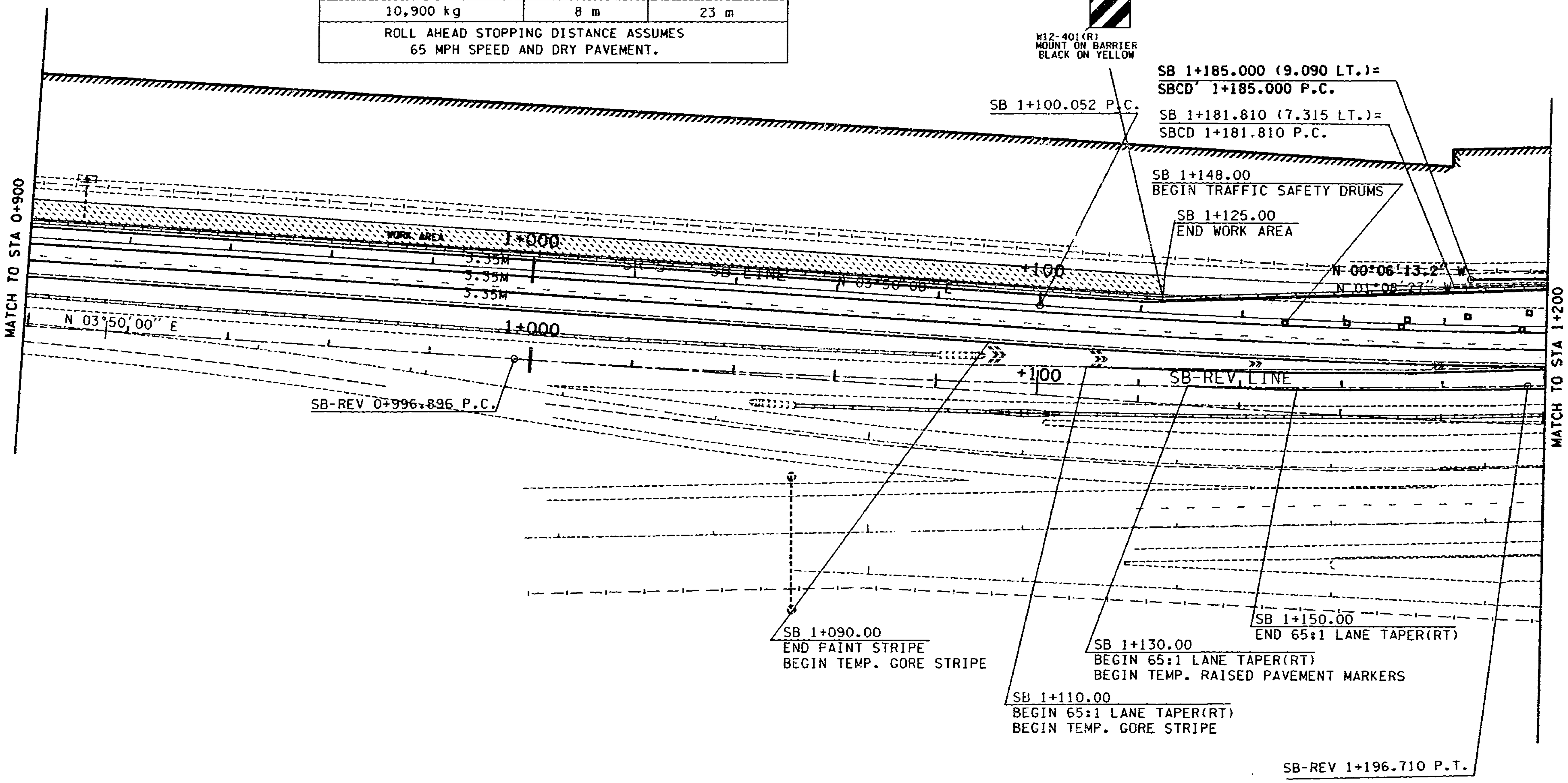
BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.



SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

0 10 20 30 40 50
SCALE IN METERS

NOTE:
STAGE 2 WORK SHALL BE ACCOMPLISHED ON WEEKENDS ONLY. (SEE SPECIAL PROVISIONS FOR TIMES)

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP				
ENTERED BY	M. GOUDARZI				
CHECKED BY	R. SUAFOA				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

TC9

SHEET 110 OF 138 SHEETS

wujim 05 JAN 98 s:\412353\projects\ol2538\ol2538tc2.dgn PLOT5

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R

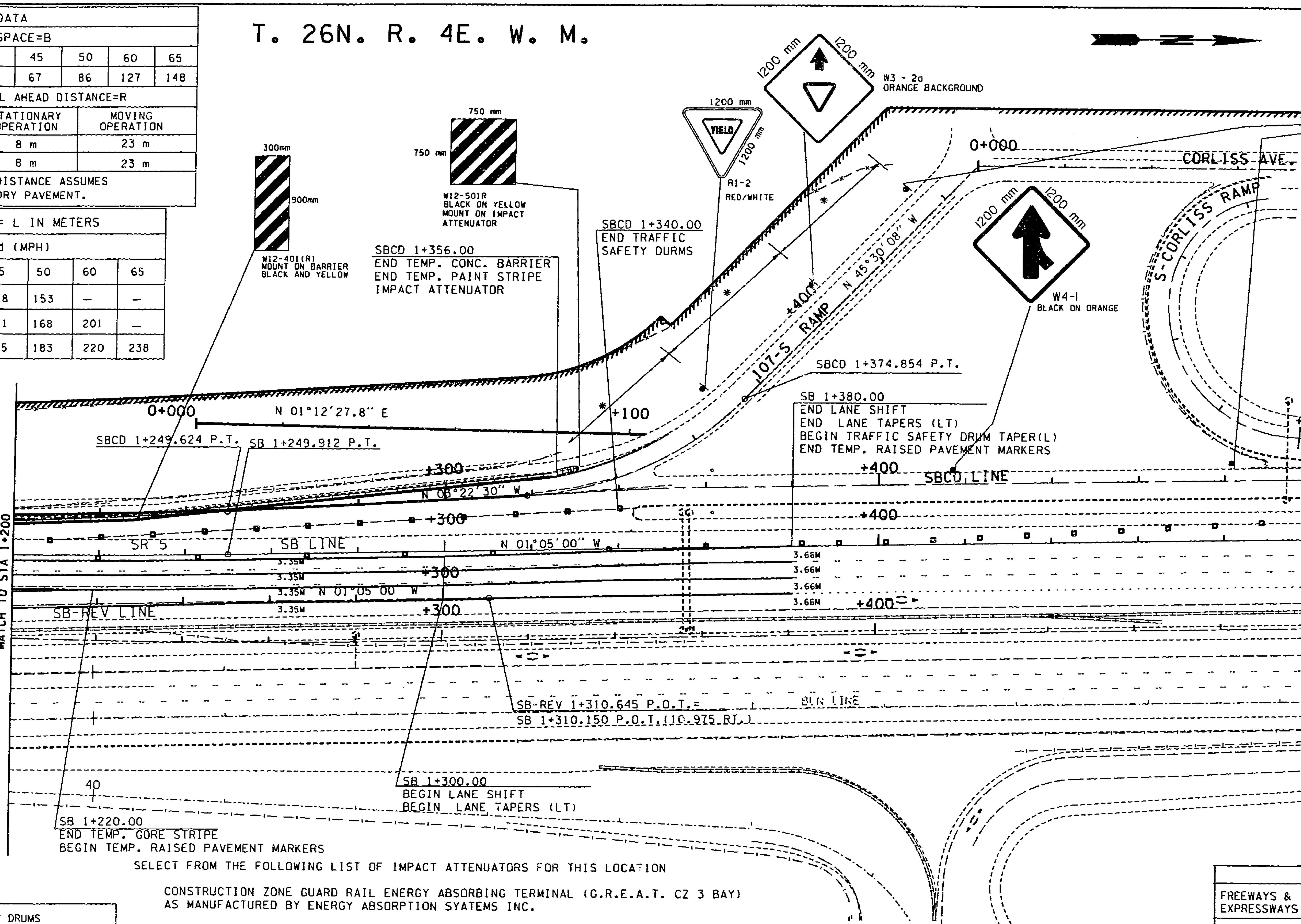
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

MINIMUM TAPER LENGTH = L IN METERS

Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

T. 26N. R. 4E. W. M.



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

FOR "AS CONSTRUCTED PLANS" ONLY

SELECT FROM THE FOLLOWING LIST OF IMPACT ATTENUATORS FOR THIS LOCATION

CONSTRUCTION ZONE GUARD RAIL ENERGY ABSORBING TERMINAL (G.R.E.A.T. CZ 3 BAY) AS MANUFACTURED BY ENERGY ABSORPTION SYATEMS INC.

BREAKMASTER AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC., WITH TYPE 1 TRANSITION AND TYPE B CONNECTION.

ADVANCED DYNAMIC IMPACT ESTENSION MODUEL (A.D.I.E.M. II) AS MANFACTURED BY SYRO INC.

CRASH CUSHION/ATTENUATING TERMINAL (C.A.T.) AS MANUFACTURED BY SYRO INC. WITH A TYPE 1 TRANSITION AND TYPE B CONNECTION.

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- IMPACT ATTENUATOR

0 10 20 30 40 50
SCALE IN METERS

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M ± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M ±
URBAN ARTERIALS	35/40 MPH	105 M ±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

* FOR SIGNING ON RAMPS THE SPACING SHALL BE "AS AVAILABLE".

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

TC10

SHEET 111 OF 138 SHEETS

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

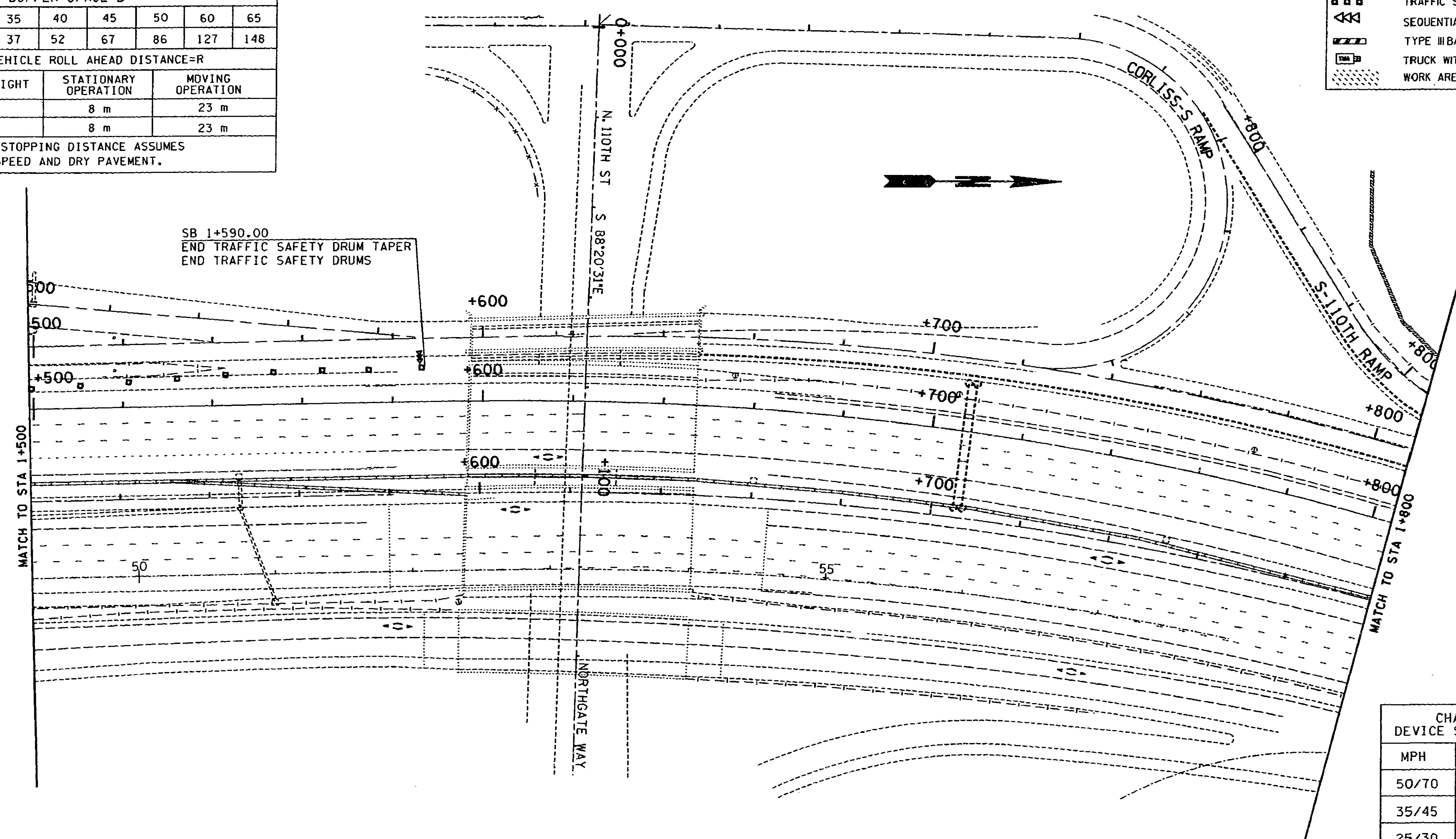
BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

T. 26N. R. 4E. W. M.

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

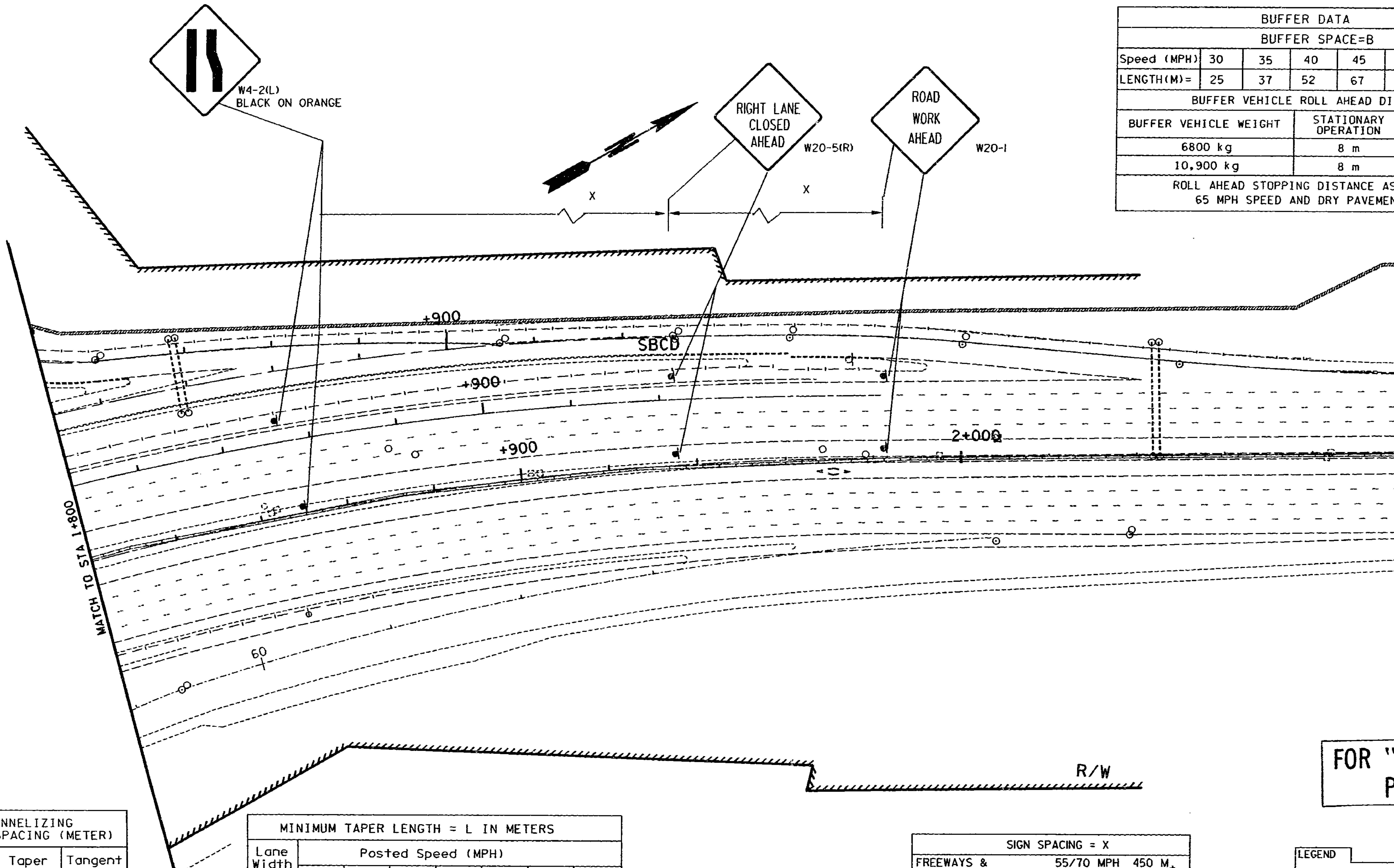
TC11

SHEET 112 OF 138 SHEETS

15 DEC 97 s:\412353\projects\o12538\o12538tc2.dgn quintem

PLOT6

T. 26N. R. 4E. W. M.



BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

FOR "AS CONSTRUCTED PLANS" ONLY

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

0 10 20 30 40 50
SCALE IN METERS

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

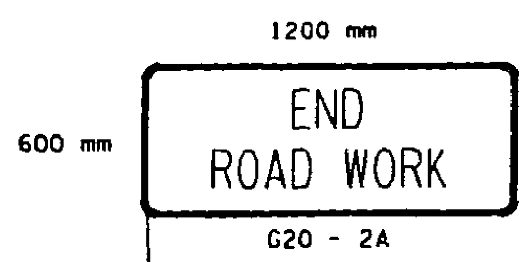
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-STAGE 2

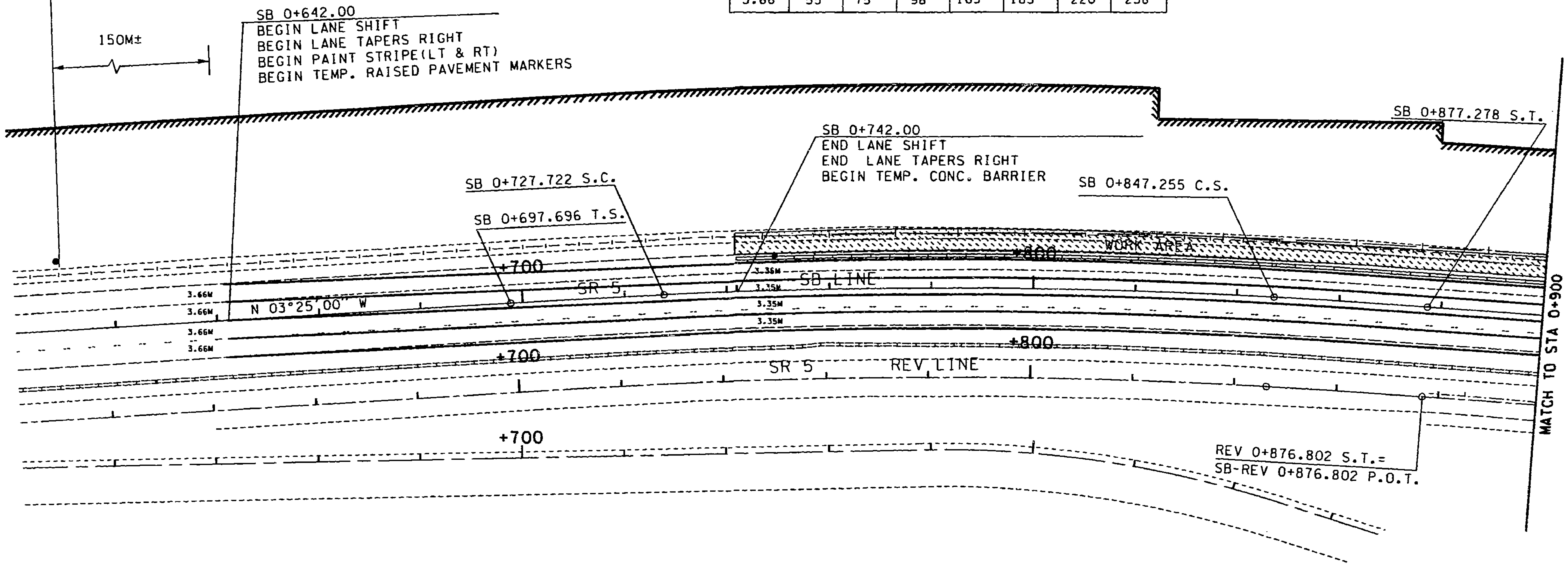
TC12

SHEET 113 OF 138 SHEETS

T. 26N. R. 4E. W. M.



MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238



BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

0 10 20 30 40 50
SCALE IN METERS

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

FOR "AS CONSTRUCTED PLANS" ONLY

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 3

TC13

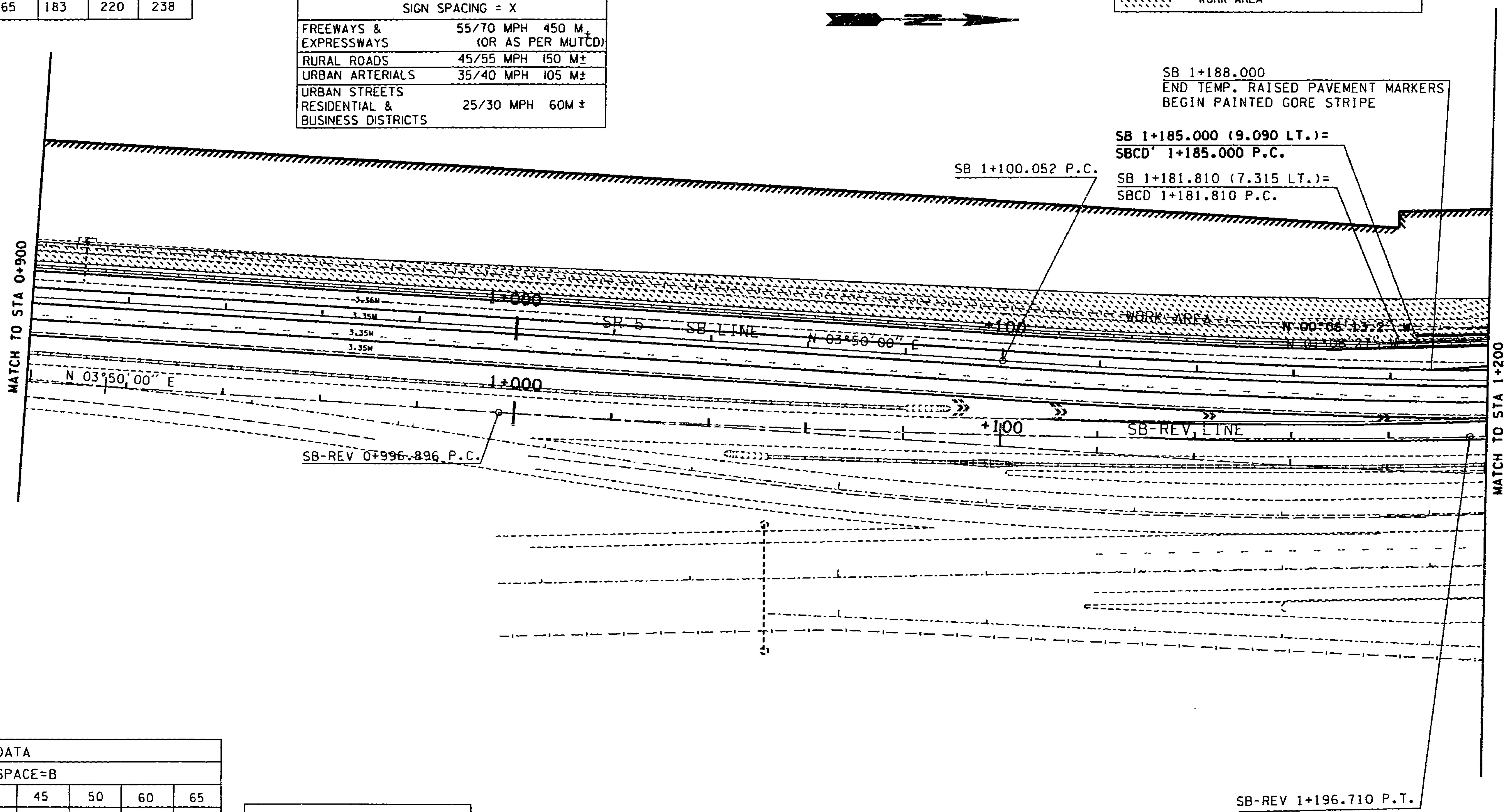
SHEET 114 OF 138 SHEETS

T. 26N. R. 4E. W. M.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

LEGEND	
▫▫▫	TRAFFIC SAFETY DRUMS
⟪⟪⟪	SEQUENTIAL ARROW SIGN
	TYPE III BARRICADE
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA



BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP
ENTERED BY	M. GOUDARZI
CHECKED BY	R. SUAFOA
PROJ. ENGR.	J. JOHNSON
REGIONAL ADM.	J. OKAMOTO

DATE | DATE | REVISION | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 3

TC14

SHEET 115 OF 138 SHEETS

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PLOT4

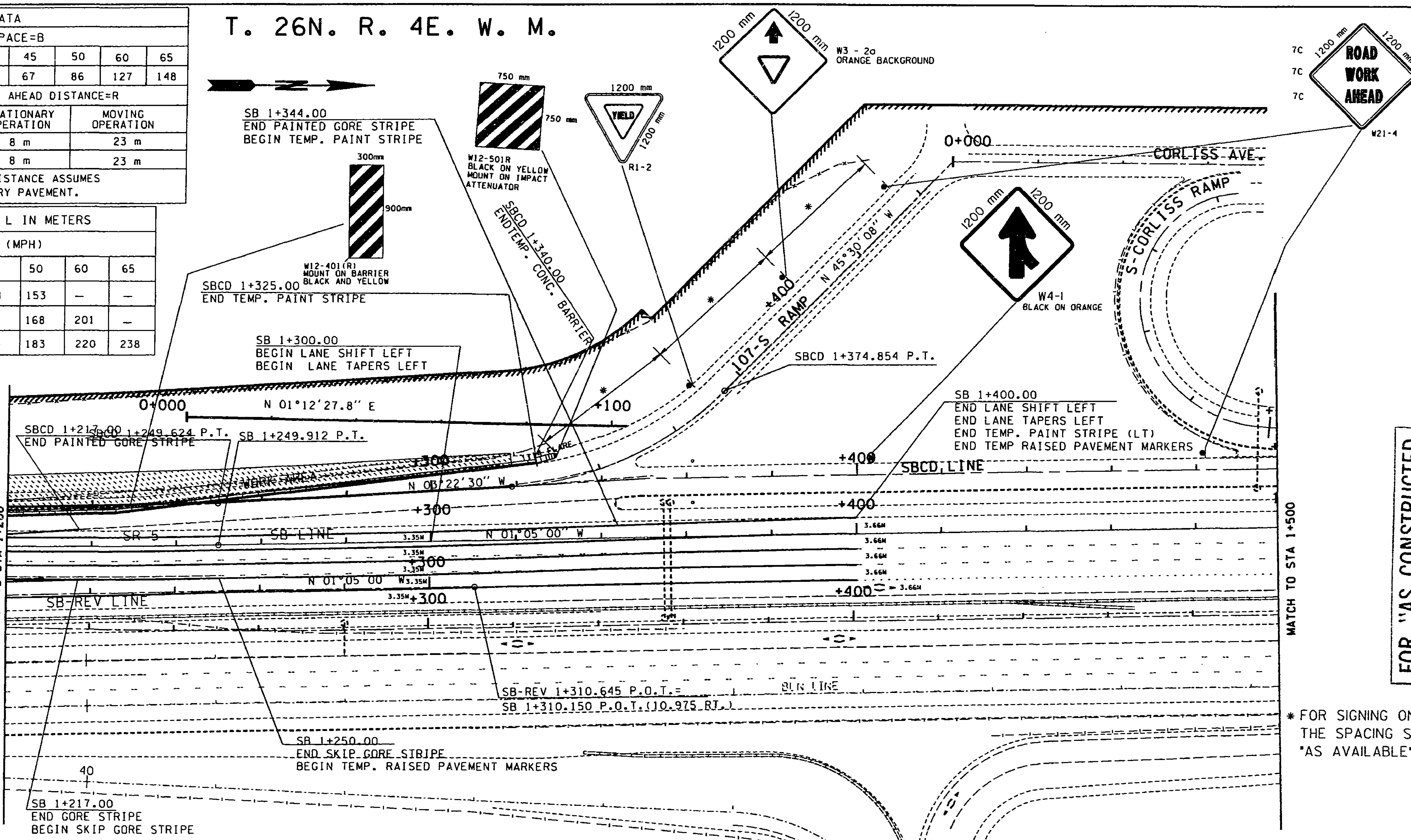
BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	–	–
3.35	51	69	90	151	168	201	–
3.66	55	75	98	165	183	220	238

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

* FOR SIGNING ON RAMPS, THE SPACING SHALL BE "AS AVAILABLE"

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- CONSTRUCTION SIGN

SELECT FROM THE FOLLOWING LIST OF IMPACT ATTENUATORS FOR THIS LOCATION

CONSTRUCTION ZONE GUARD RAIL ENERGY ABSORBING TERMINAL (G.R.E.A.T. CZ 3 BAY) AS MANUFACTURED BY ENERGY ABSORPTION SYATEMS INC.

BREAKMASTER AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC., WITH TYPE 1 TRANSITION AND TYPE B CONNECTION.

ADVANCED DYNAMIC IMPACT ESTENSION MODUEL (A.D.I.E.M. II) AS MANFACTURED BY SYRO INC.

CRASH CUSHION/ATTENUATING TERMINAL (C.A.T.) AS MANUFACTURED BY SYRO INC. WITH A TYPE 1 TRANSITION AND TYPE B CONNECTION.

0 10 20 30 40 50
SCALE IN METERS

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

DESIGNED BY	D. BISHOP					
ENTERED BY	M. GOUDARZI					
CHECKED BY	R. SUAFOA					
PROJ. ENGR.	J. JOHNSON					
REGIONAL ADM.	J. OKAMOTO	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 3

TC15

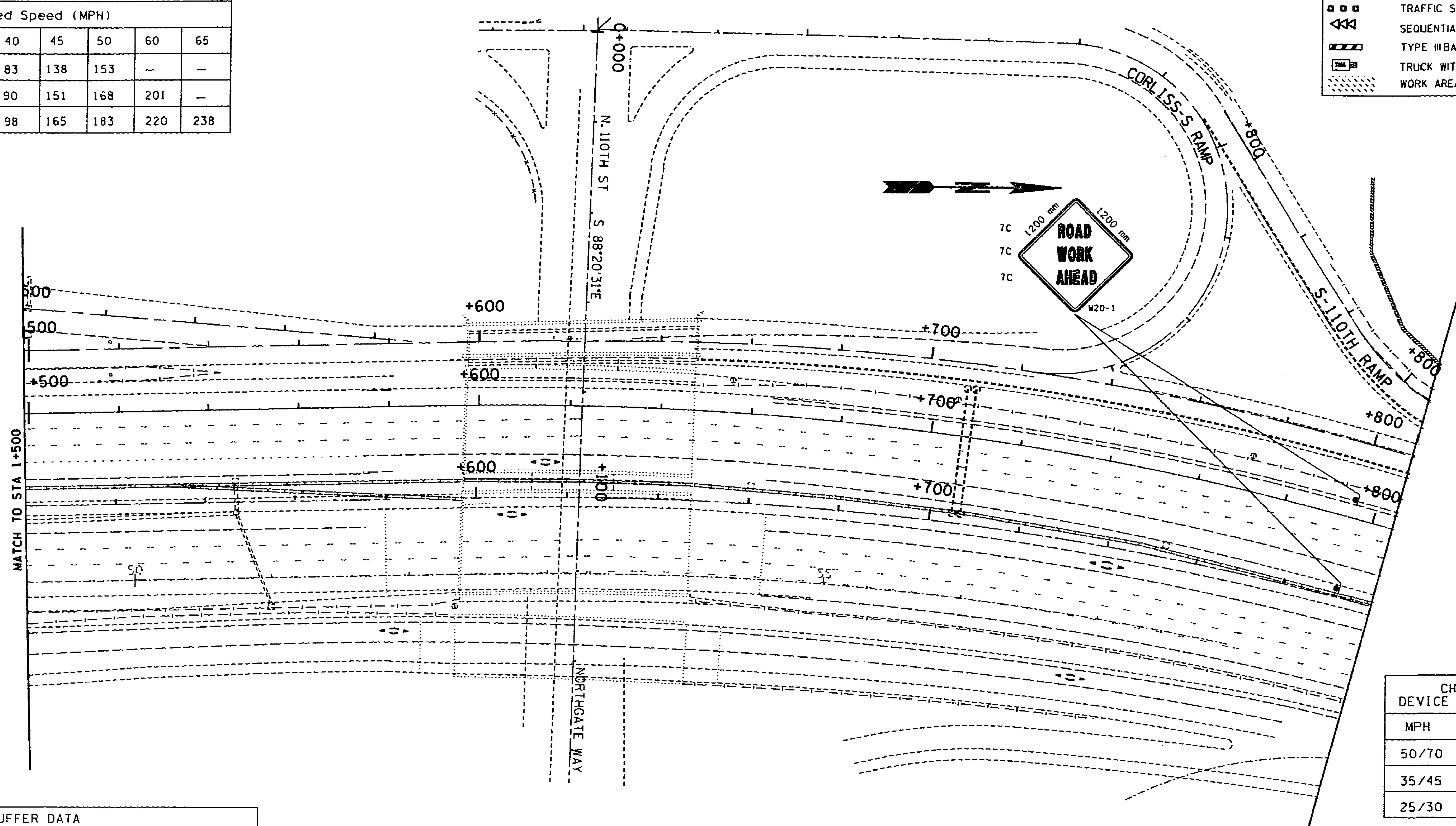
SHEET 116 OF 138 SHEETS

PLOT6 15 DEC 97 s:\412353\projects\ol2538\ol2538tc3.dgn 412353

T. 26N. R. 4E. W. M.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

LEGEND	
▫▫▫	TRAFFIC SAFETY DRUMS
⋘	SEQUENTIAL ARROW SIGN
▭	TYPE III BARRICADE
▭	TRUCK WITH MOUNTED ATTENUATOR
⋯	WORK AREA



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R

BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

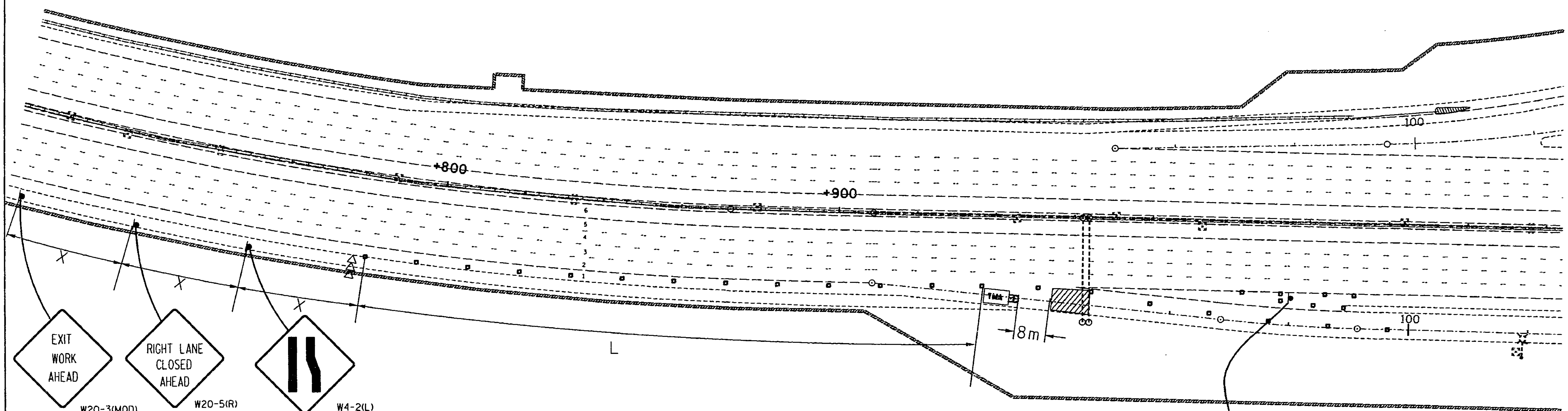
TRAFFIC CONTROL - STAGE 3

TC16

SHEET 117 OF 138 SHEETS

06 JAN 98 s:\412353\projects\ol2538\ol2538tc3.dgn wujim

PLOT21



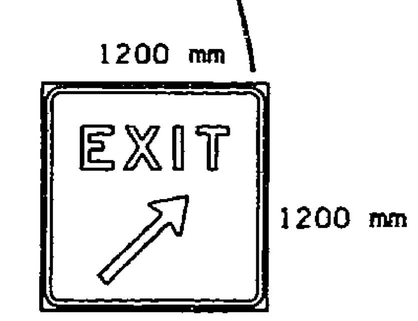
MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

FOR "AS CONSTRUCTED PLANS" ONLY

0 10 20 30 40 50
SCALE IN METERS



E5-1
WHITE/GREEN

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY	M. QUINTEIRO			
ENTERED BY	M. QUINTEIRO			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC. NORTHGATE WAY TO VIC. NE 145TH ST.

TRAFFIC CONTROL - STAGE 3

TC17

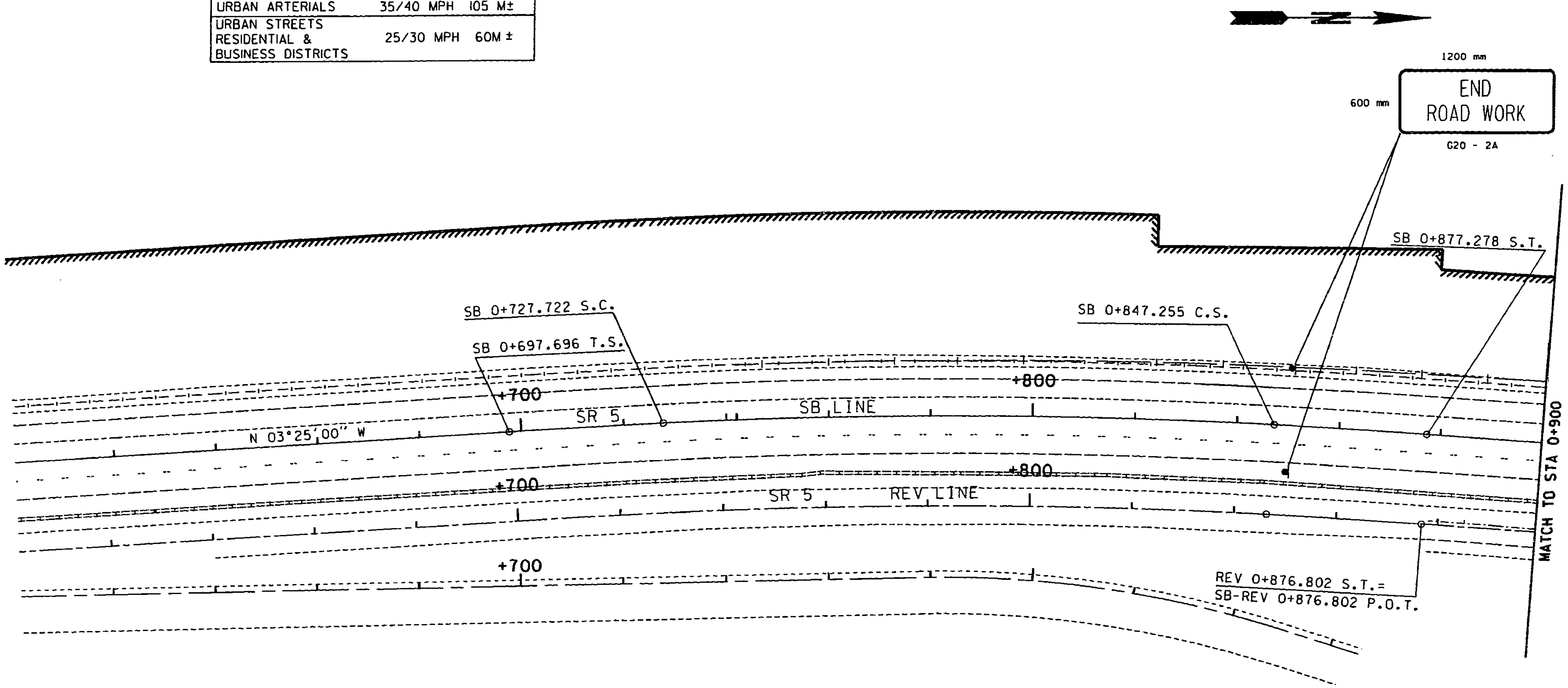
SHEET 118 OF 138 SHEETS

15 DEC 97 s:\412353\projects\ol2538\ol2538tc4.dgn quintem

PLOT3

T. 26N. R. 4E. W. M.

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±



FOR "AS CONSTRUCTED PLANS" ONLY

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

0 10 20 30 40 50
SCALE IN METERS

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP			
ENTERED BY M. GOUDARZI			
CHECKED BY R. SUAFOA			
PROJ. ENGR. J. JOHNSON			
REGIONAL ADM. J. OKAMOTO			
DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 4

TC18

SHEET 119 OF 138 SHEETS

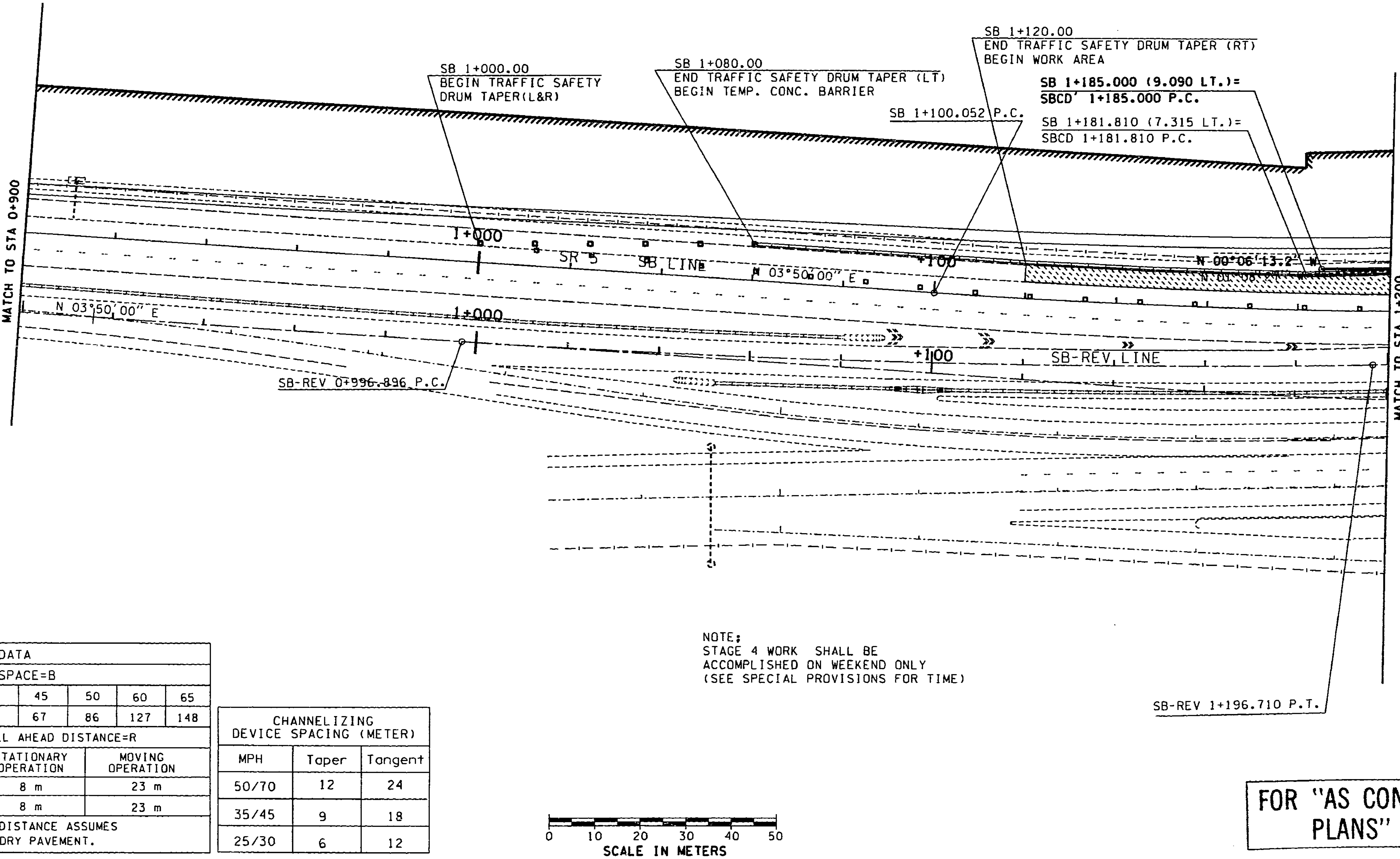
T. 26N. R. 4E. W. M.

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238



NOTE:
STAGE 4 WORK SHALL BE ACCOMPLISHED ON WEEKEND ONLY (SEE SPECIAL PROVISIONS FOR TIME)

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 4

TC19

SHEET 120 OF 138 SHEETS

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

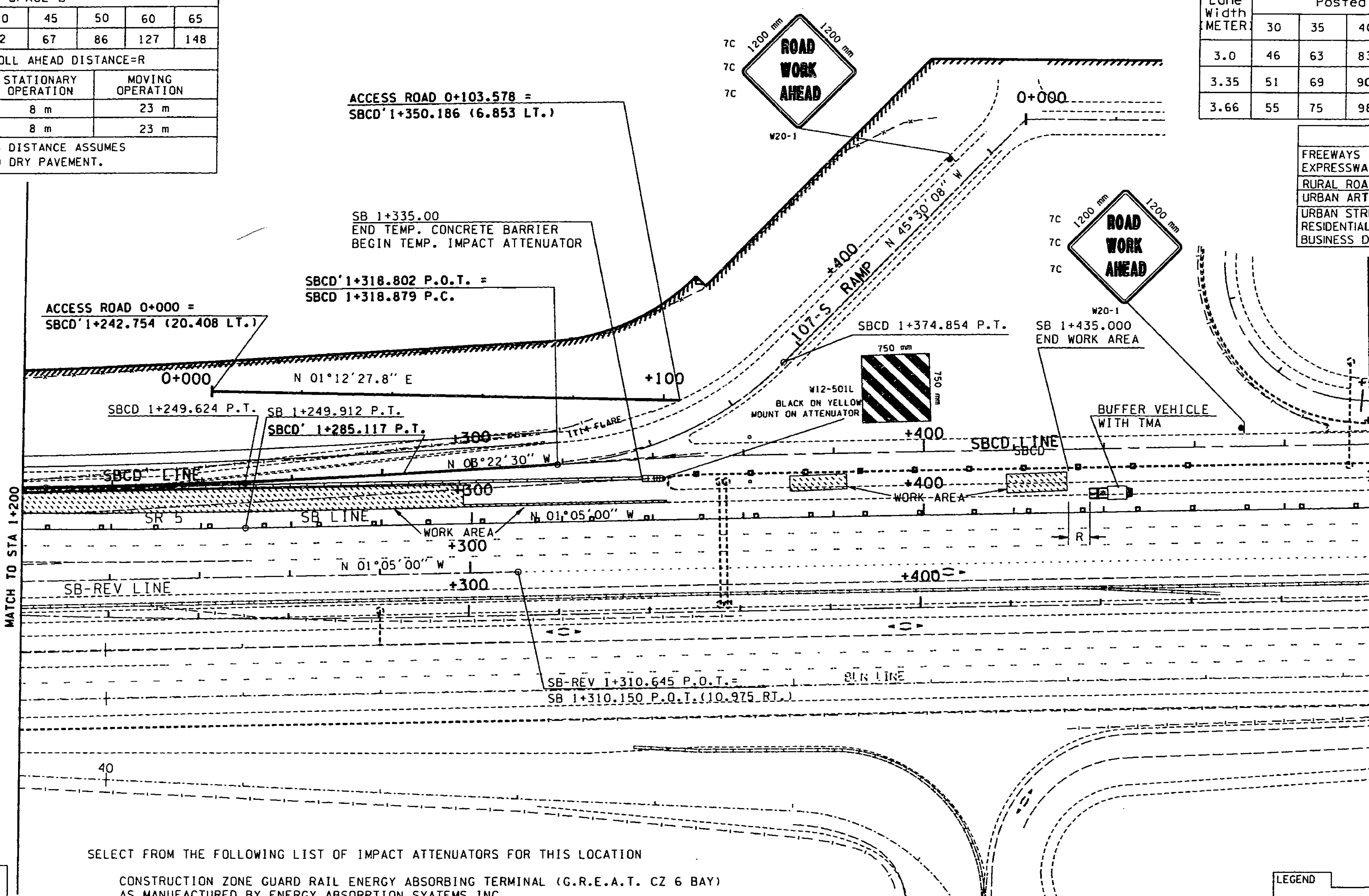
BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

T. 26N. R. 4E. W. M.

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±



FOR "AS CONSTRUCTED PLANS" ONLY

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

SELECT FROM THE FOLLOWING LIST OF IMPACT ATTENUATORS FOR THIS LOCATION

CONSTRUCTION ZONE GUARD RAIL ENERGY ABSORBING TERMINAL (G.R.E.A.T. CZ 6 BAY) AS MANUFACTURED BY ENERGY ABSORPTION SYATEMS INC.

BREAKMASTER AS MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC., WITH TYPE 1 TRANSITION AND TYPE B CONNECTION.

ADVANCED DYNAMIC IMPACT ESTENSION MODUEL (A.D.I.E.M. II) AS MANFACTURED BY SYRO INC.

CRASH CUSHION/ATTENUATING TERMINAL (C.A.T.) AS MANUFACTURED BY SYRO INC. WITH A TYPE 1 TRANSITION AND TYPE B CONNECTION.

SCALE IN METERS (0 10 20 30 40 50)

LEGEND	
▫▫▫	TRAFFIC SAFETY DRUMS
◁◁◁	SEQUENTIAL ARROW SIGN
▬	TYPE III BARRICADE
▭	TRUCK WITH MOUNTED ATTENUATOR
░	WORK AREA

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 4

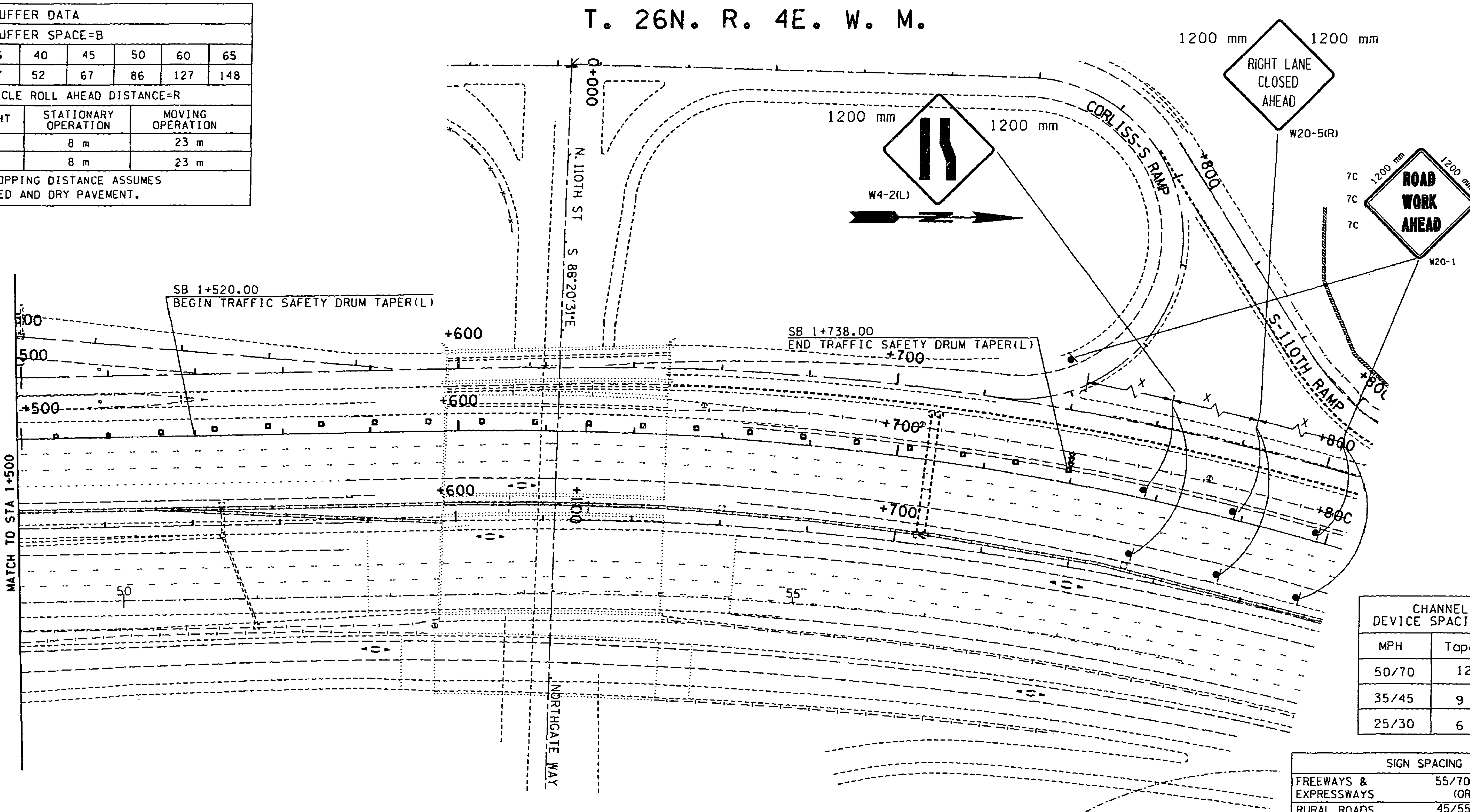
TC20

PLOT6 15 DEC 97 s:\412353\projects\o12538\o12538tc4.dgn quintem

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

T. 26N. R. 4E. W. M.



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP
ENTERED BY M. GOUDARZI
CHECKED BY R. SUAFOA
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - STAGE 4

TC21

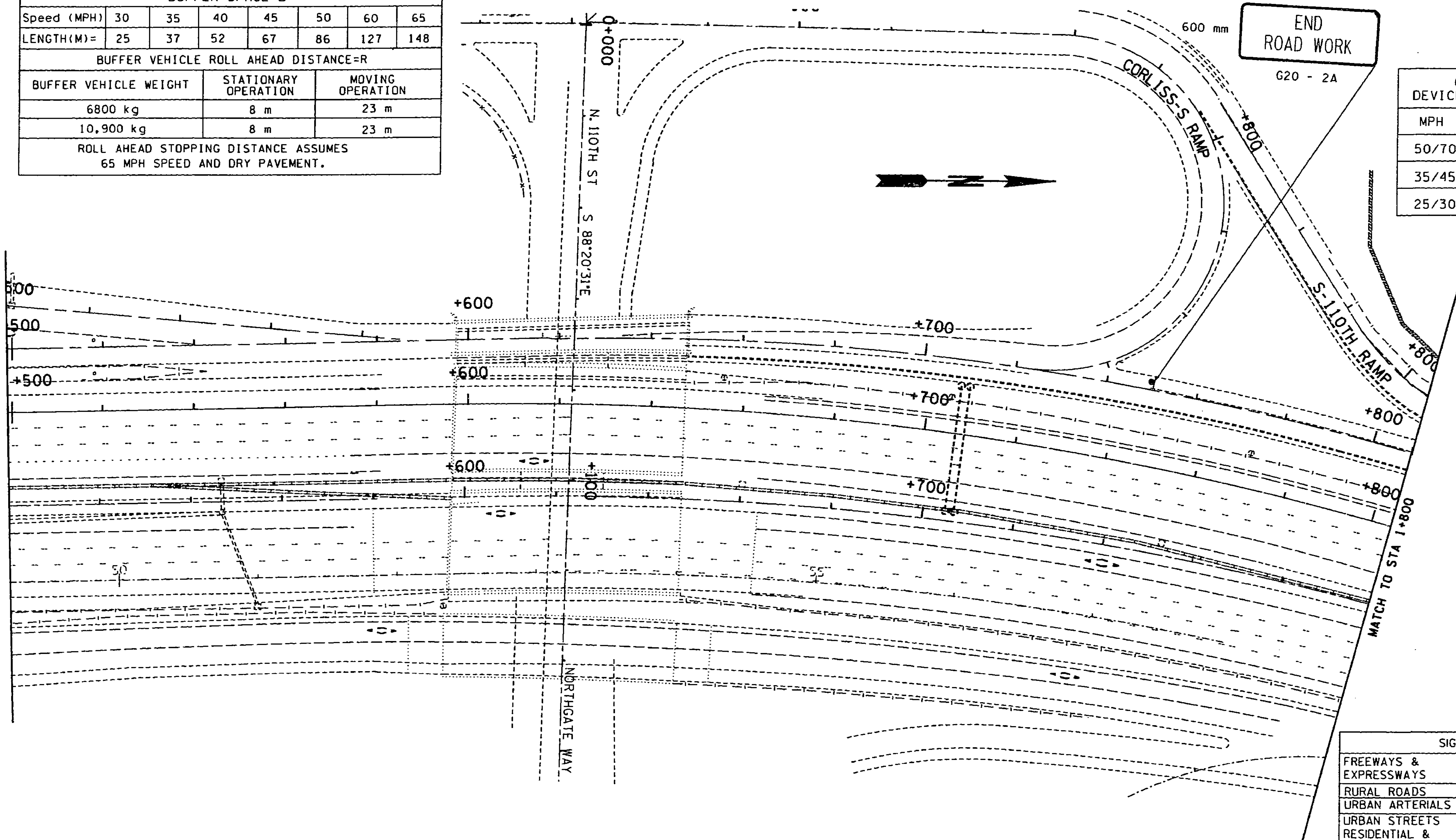
SHEET 122 OF 138 SHEETS

PLOT6 15 DEC 97 s:\412353\projects\ol2538\110thsb-tc.dgn 412353

T. 26N. R. 4E. W. M.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		



CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP
ENTERED BY M. GOUDARZI
CHECKED BY R. SUAFOA
PROJ. ENGR. J. JOHNSON
REGIONAL ADM. J. OKAMOTO

DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED. AID PROJ. NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC22

SHEET 123 OF 136 SHEETS

15 DEC 97 s:\412353\projects\ol2538\110thsb-tc.dgn 412353

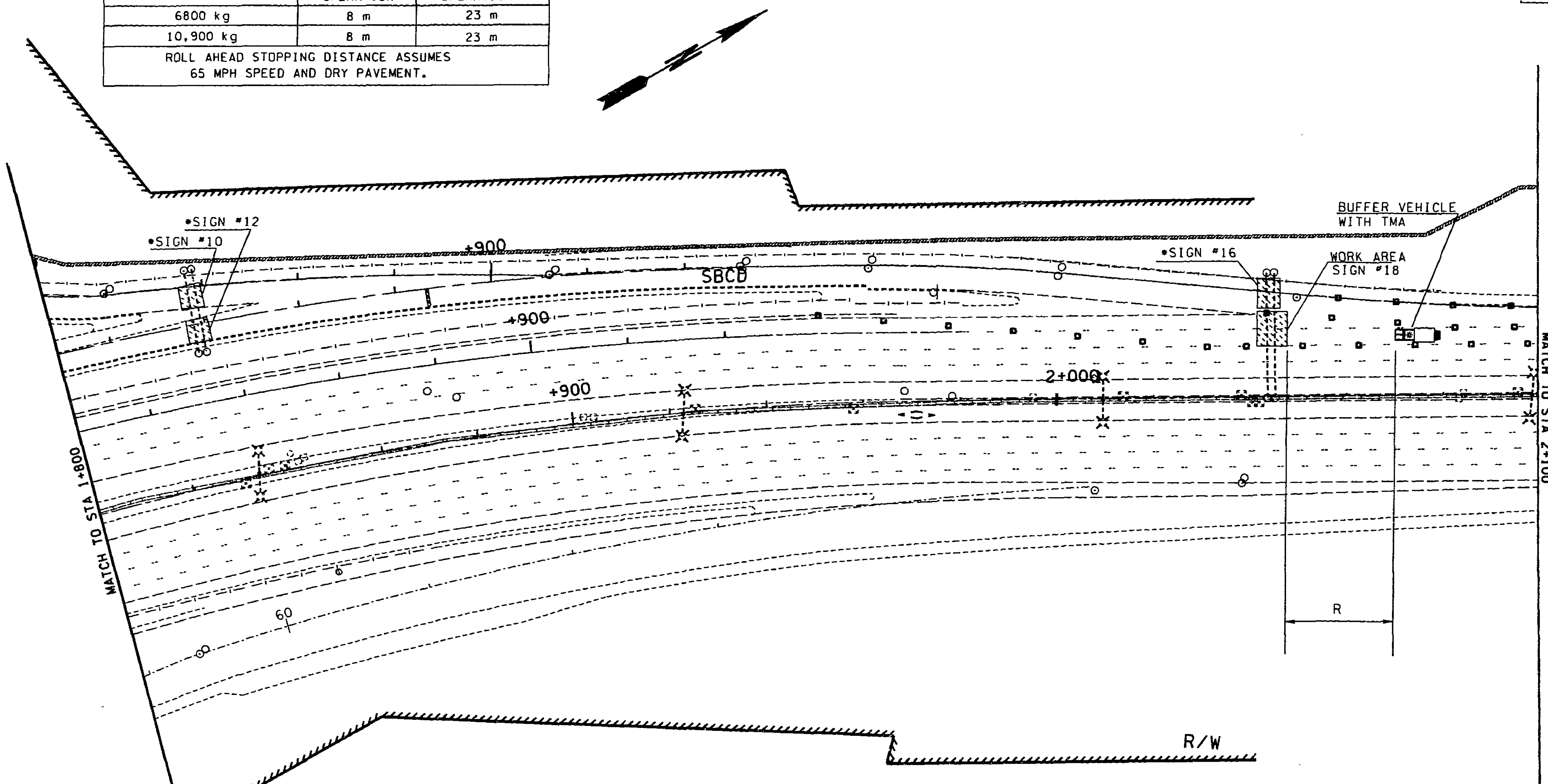
PLOT7

T. 26N. R. 4E. W. M.

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



• NOTE:
WORK ON SIGNS #6, 10, 12, & 16 SHALL BE PERFORMED WHEN THE SBCD RAMP IS CLOSED. (SEE DETOUR PLAN SHEET FOR SBCD AND N. 110TH OFF RAMP) SEE SPECIAL PROVISIONS FOR CLOSURE TIMES

0 10 20 30 40 50
SCALE IN METERS

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

LEGEND

▫▫▫	TRAFFIC SAFETY DRUMS
⋘	SEQUENTIAL ARROW SIGN
▭	TYPE III BARRICADE
▭	TRUCK WITH MOUNTED ATTENUATOR
⋰	WORK AREA

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

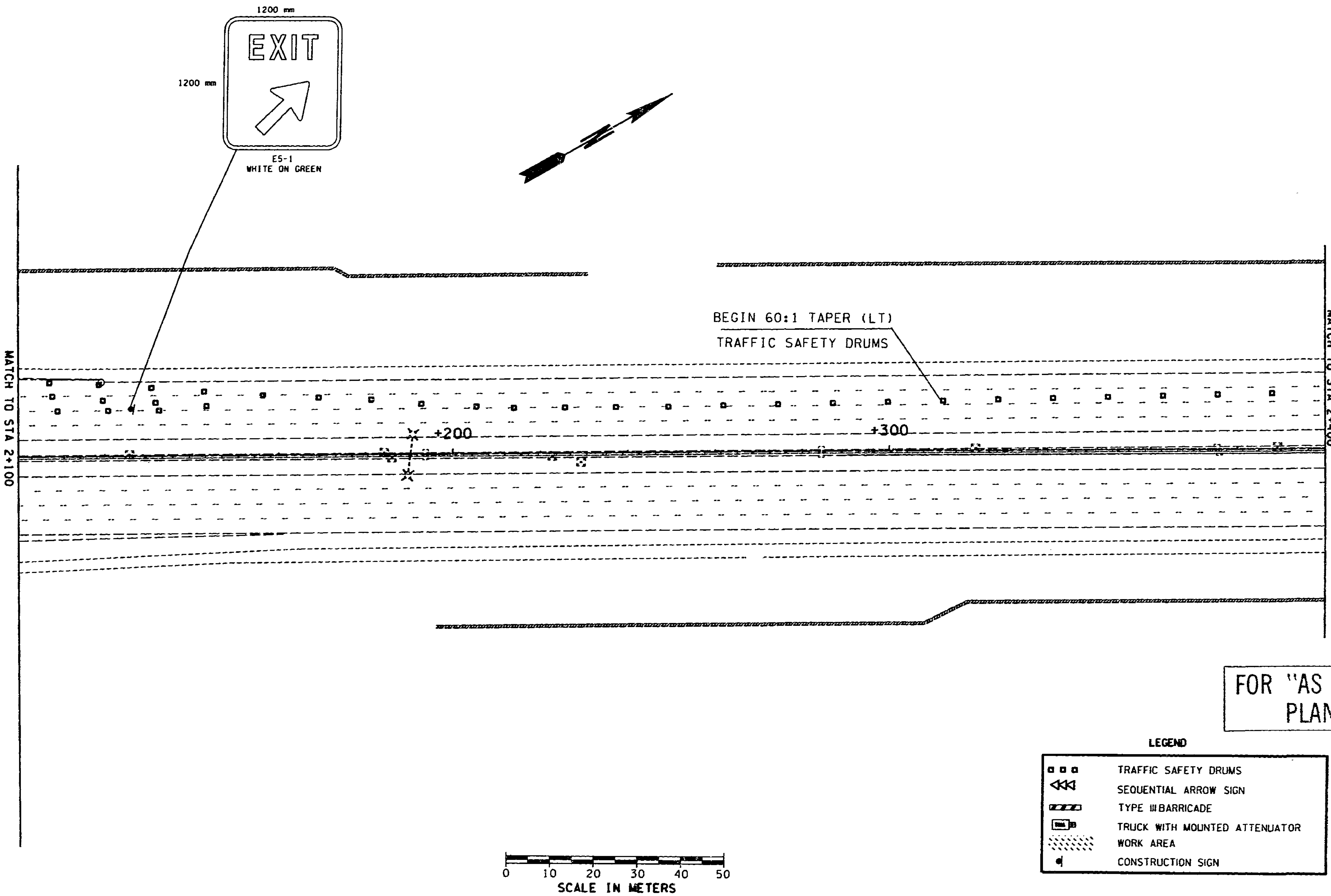
TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC23

SHEET 124 OF 138 SHEETS

PLOT8 05 JAN 98 s:\412353\projects\o12538\110thsb-tc.dgn wujim

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND

▫ ▫ ▫	TRAFFIC SAFETY DRUMS
⋘	SEQUENTIAL ARROW SIGN
▬	TYPE III BARRICADE
▭	TRUCK WITH MOUNTED ATTENUATOR
░	WORK AREA
◂	CONSTRUCTION SIGN

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

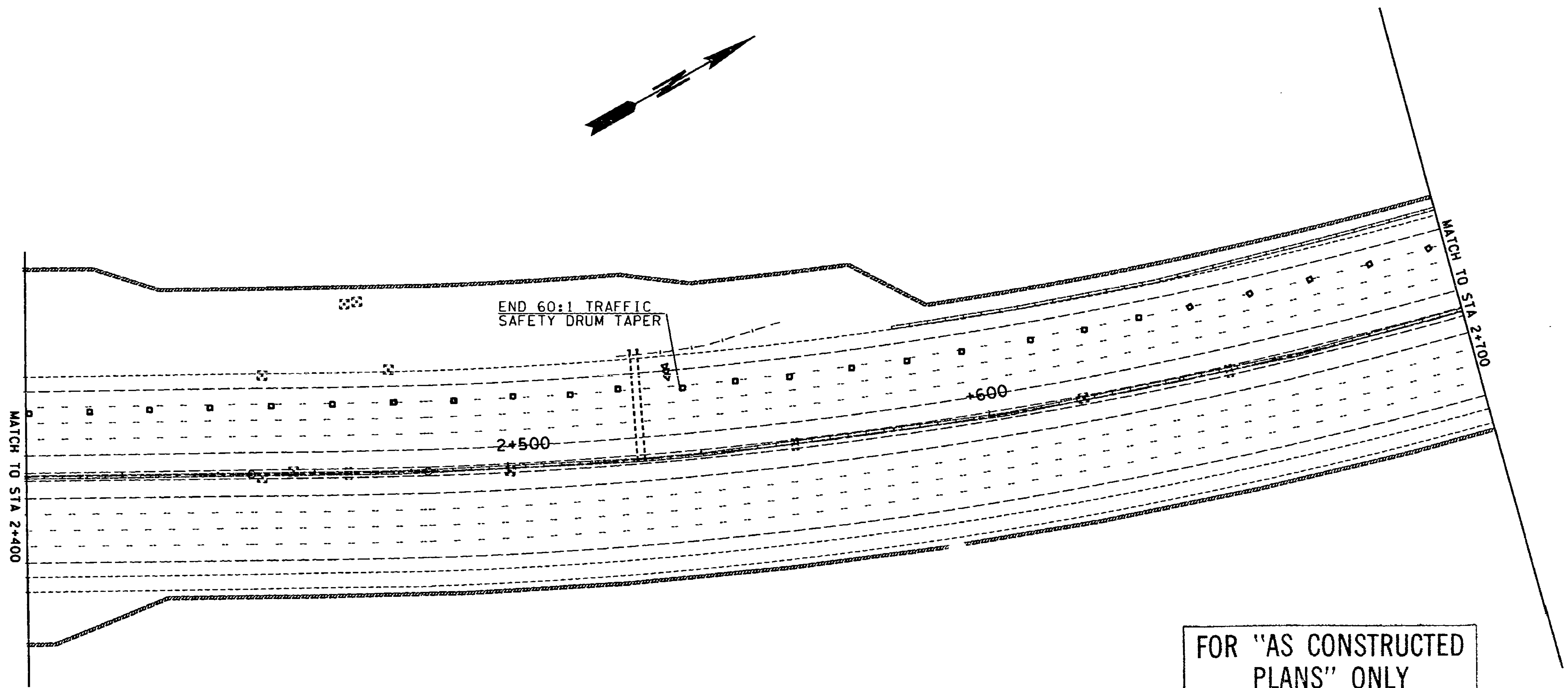
TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC24

SHEET 125 OF 138 SHEETS

PLOT9 05 JAN 98s:\412353\projects\o12538\110thsb-tc.dgn wujim

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- CONSTRUCTION SIGN

0 10 20 30 40 50
SCALE IN METERS

DESIGNED BY D. BISHOP					
ENTERED BY M. GOUDARZI					
CHECKED BY R. SUAFOA					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO. 10 | STATE WASH | FED. AID PROJ. NO.

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

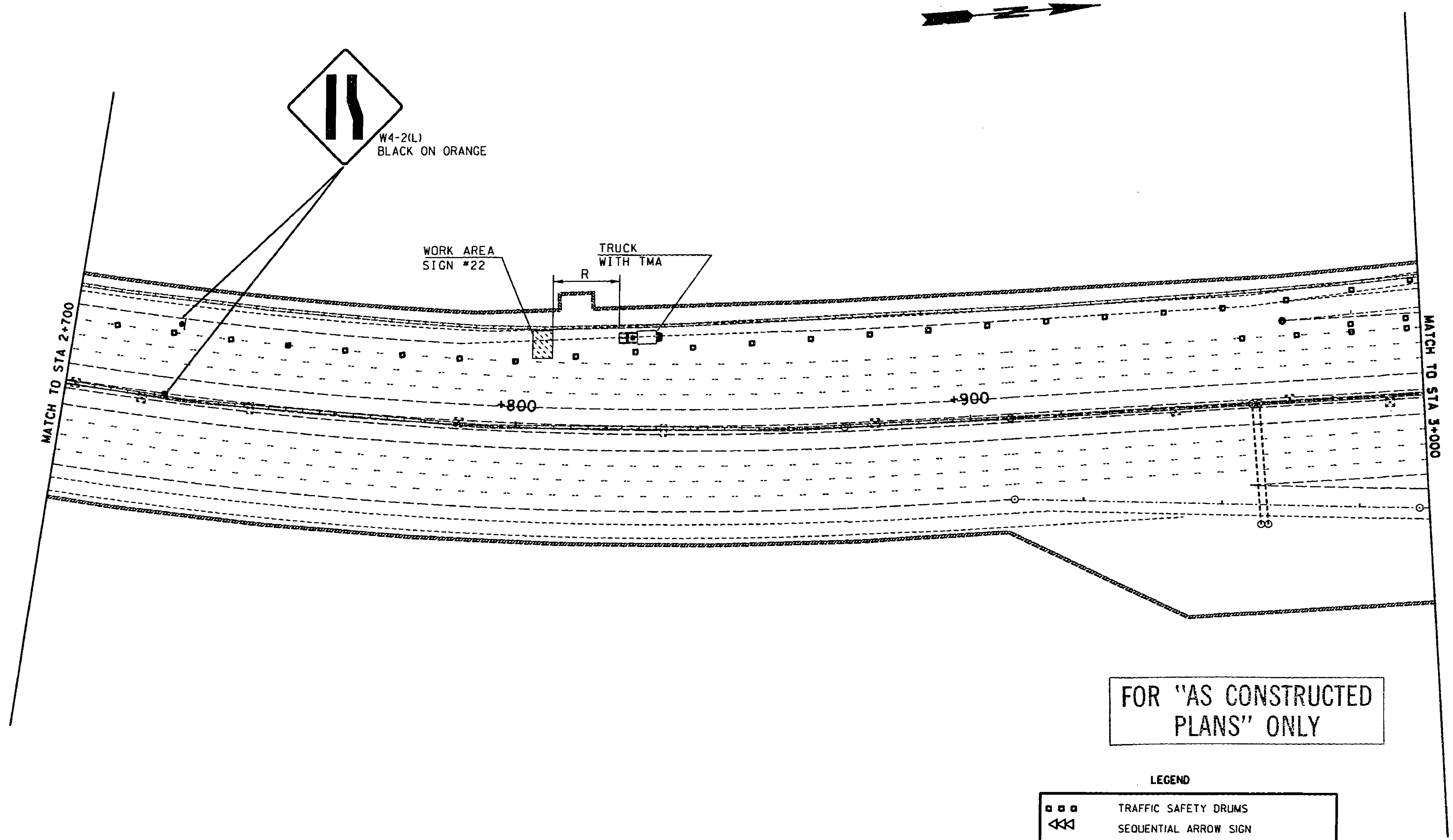
TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC25

SHEET 126 OF 138 SHEETS

PLOT10 05 JAN 98 s:\412353\projects\o12538\110thsb-tc.dgn wujim

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- CONSTRUCTION SIGN

0 10 20 30 40 50
SCALE IN METERS

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

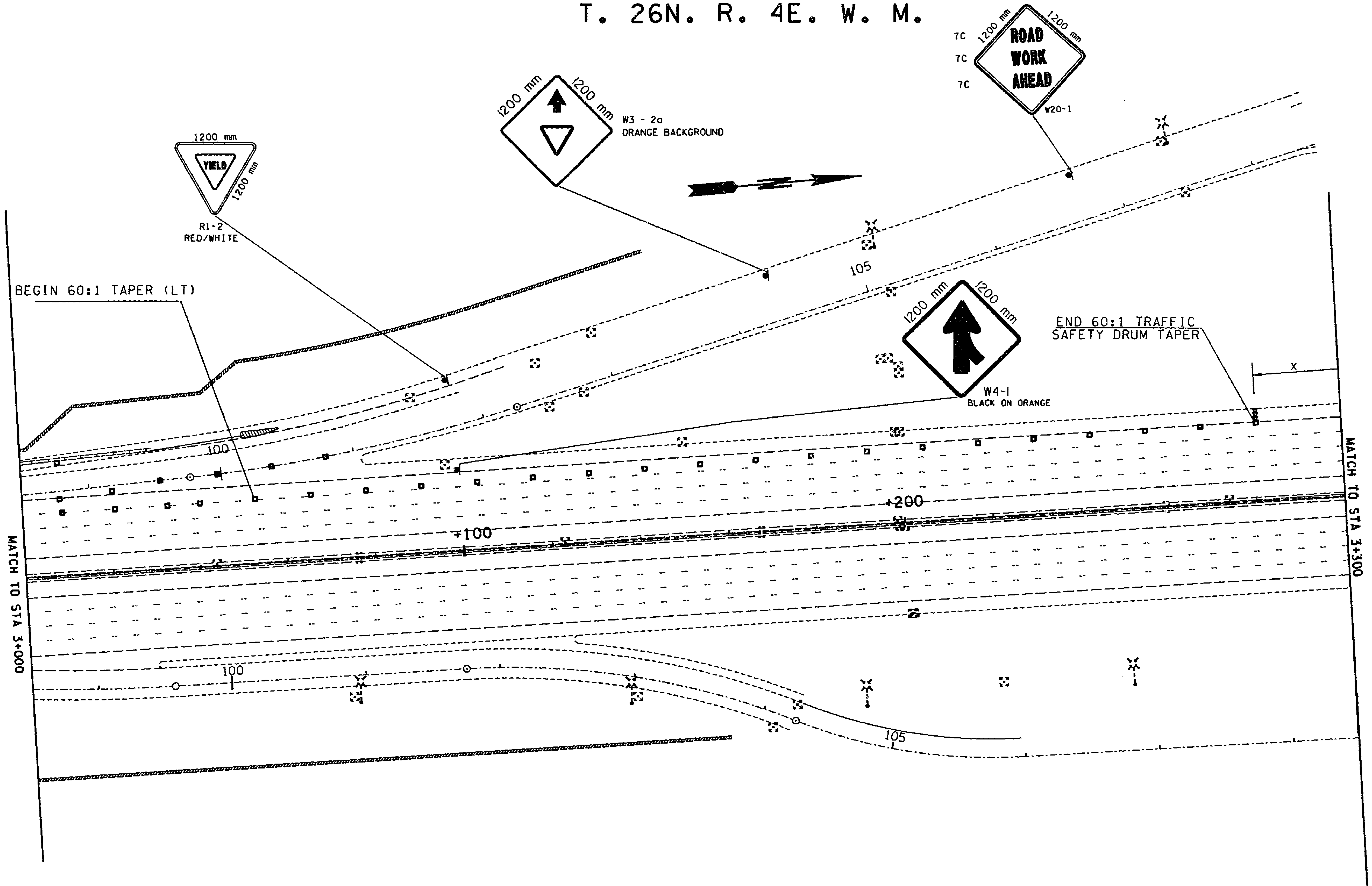
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC26

SHEET 127 OF 138 SHEETS

T. 26N. R. 4E. W. M.



0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

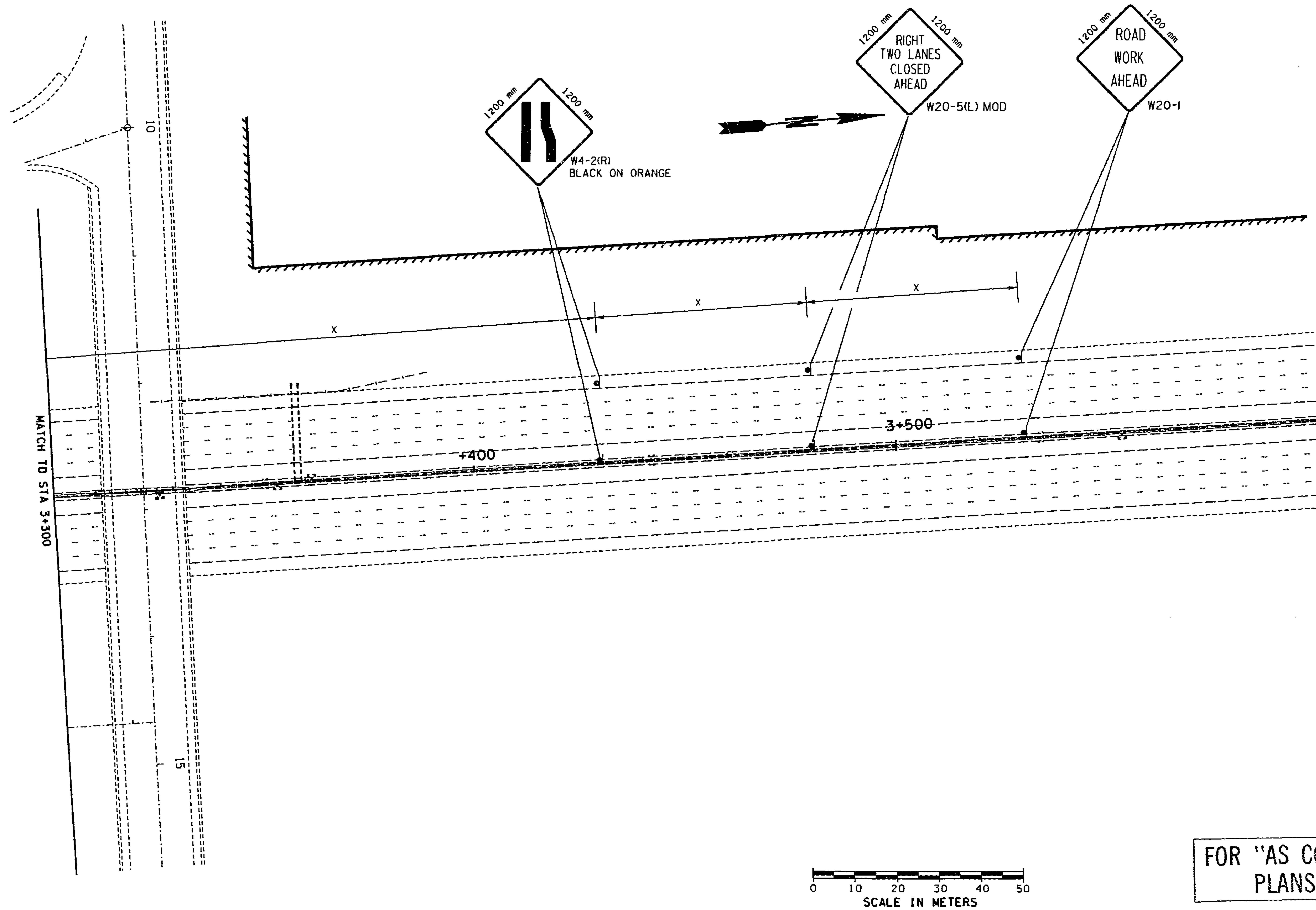
TC27

SHEET 128 OF 138 SHEETS

PLOT12

05 JAN 98s:\412353\projects\ol2538\110thsb-tc.dgn wujim

T. 26N. R. 4E. W. M.



FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO				
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - 110TH ST. SB OFF RAMP

TC28

SHEET 129 OF 138 SHEETS

05 JAN 98s:\412353\projects\ol2538\looprmp-tc.dgn wujim
PLOT5

T. 26N. R. 4E. W. M.

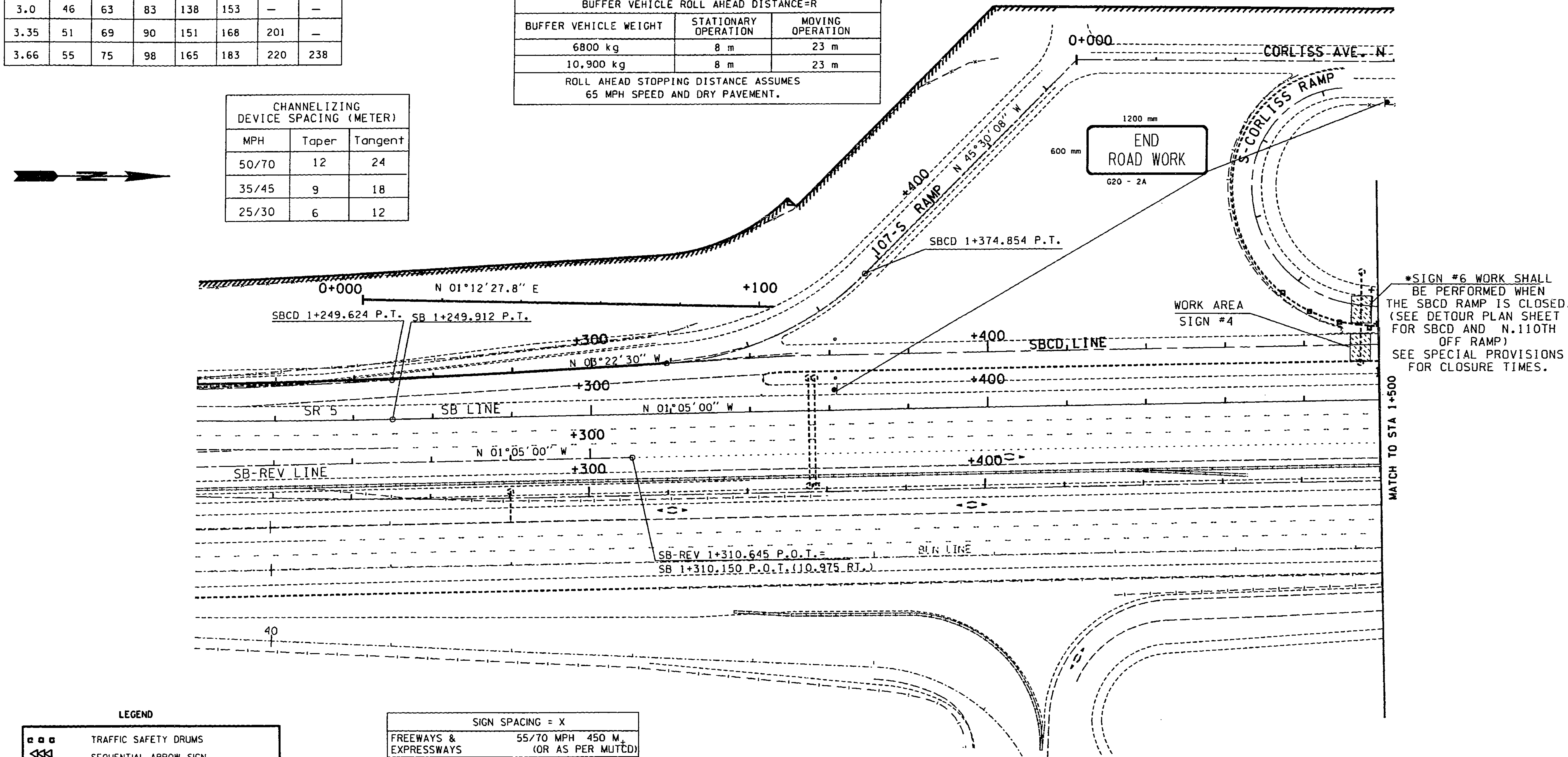
MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12



LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA
- CONSTRUCTION SIGN

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP				
ENTERED BY	M. GOUDARZI				
CHECKED BY	R. SUAFOA				
PROJ. ENGR.	J. JOHNSON				
REGIONAL ADM.	J. OKAMOTO				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

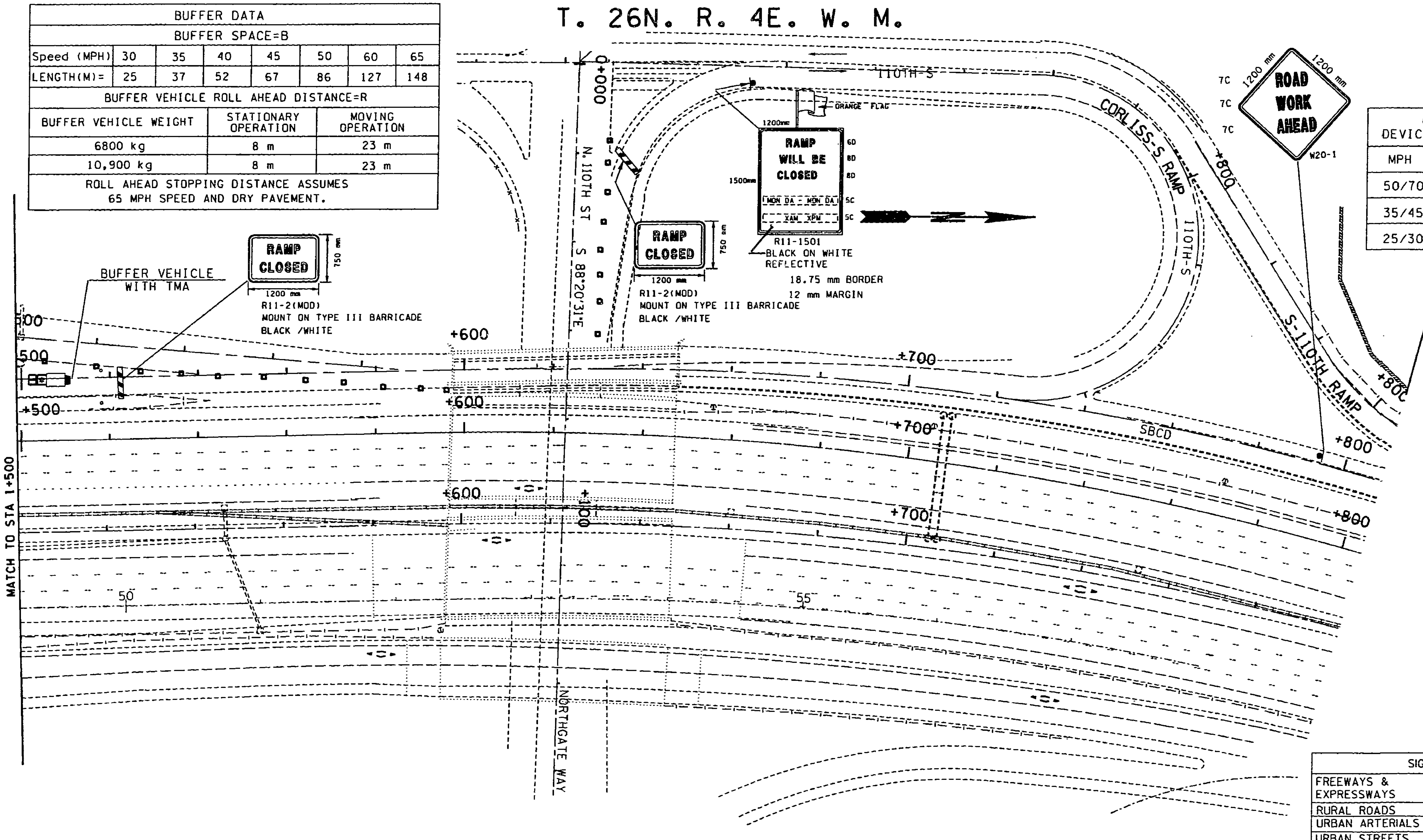
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-RAMP CLOSURES

TC29

SHEET 130 OF 138 SHEETS

T. 26N. R. 4E. W. M.



BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

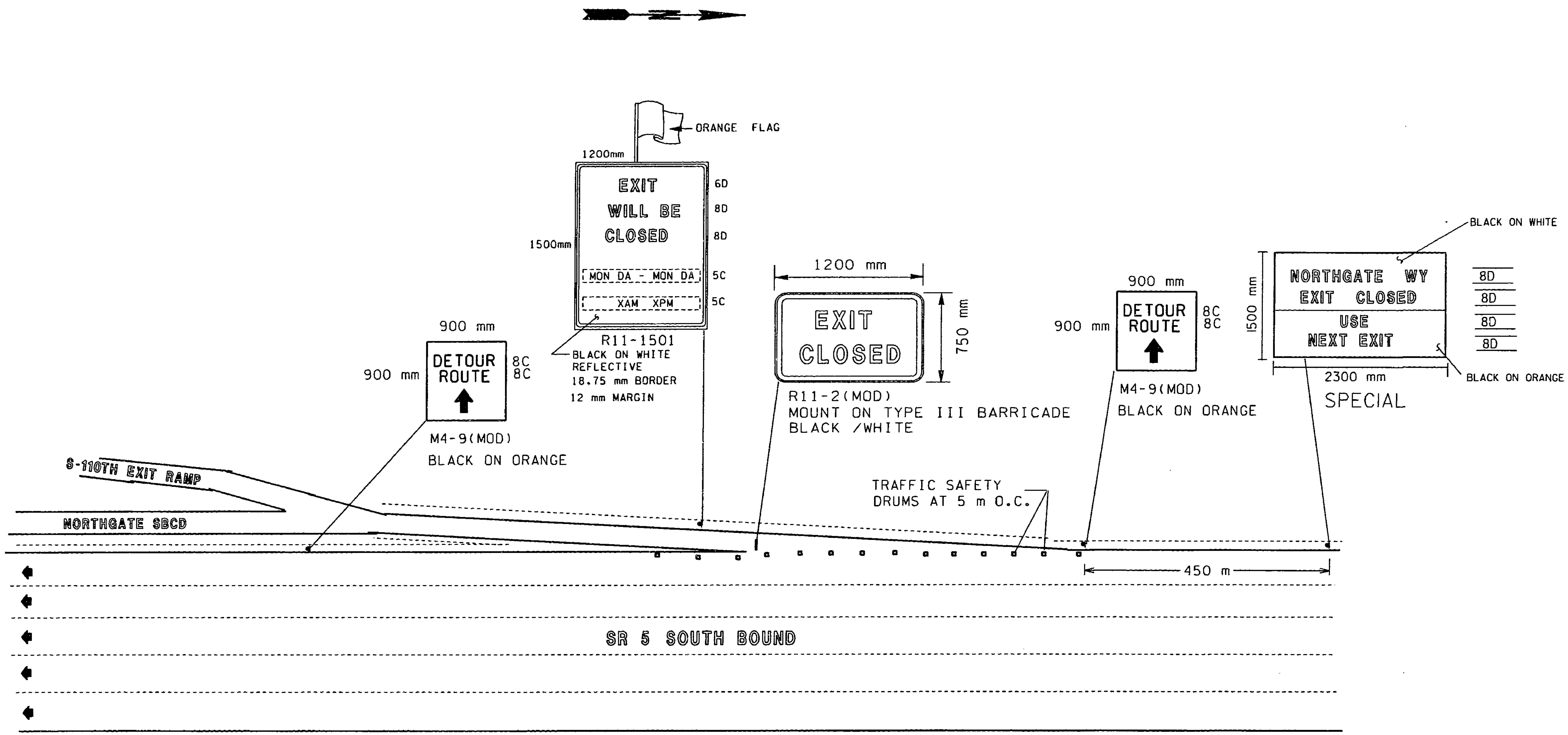
Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-RAMP CLOSURES

TC30

SHEET 131 OF 138 SHEETS



NOT TO SCALE

NOTE: See SBCD Detour Sheet for Detour Route

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND

- TRAFFIC SAFETY DRUMS
- TYPE III BARRICADE
- CONSTRUCTION SIGN

DESIGNED BY	D. BISHOP			
ENTERED BY	D. BISHOP			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

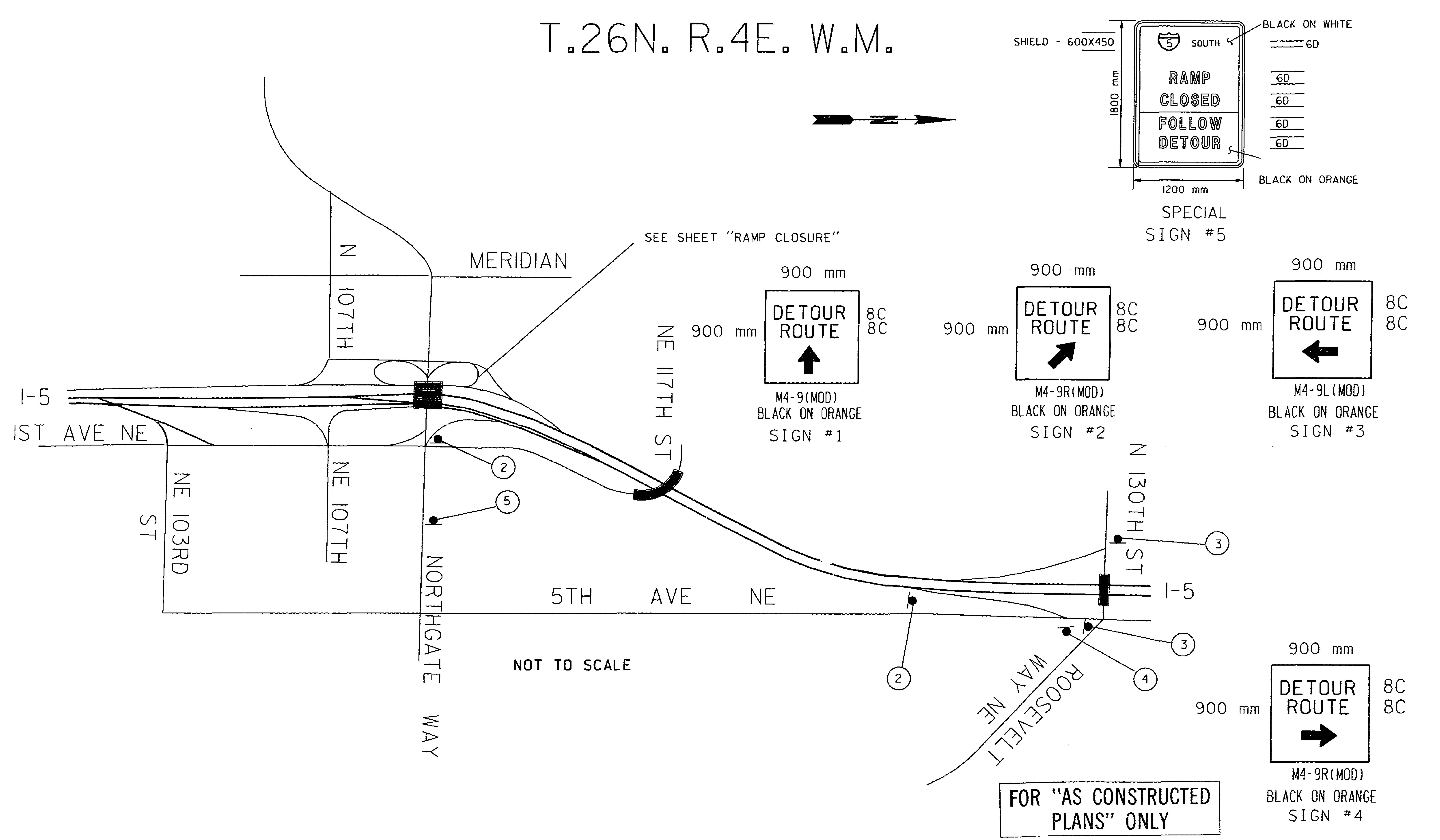
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-RAMP CLOSURES

TC31

SHEET 132 OF 138 SHEETS

wujim s:\412353\projects\ol2538\sbcdramp.dgn 05 JAN 98 PLOT22



DESIGNED BY	D. BISHOP			
ENTERED BY	D. BISHOP			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

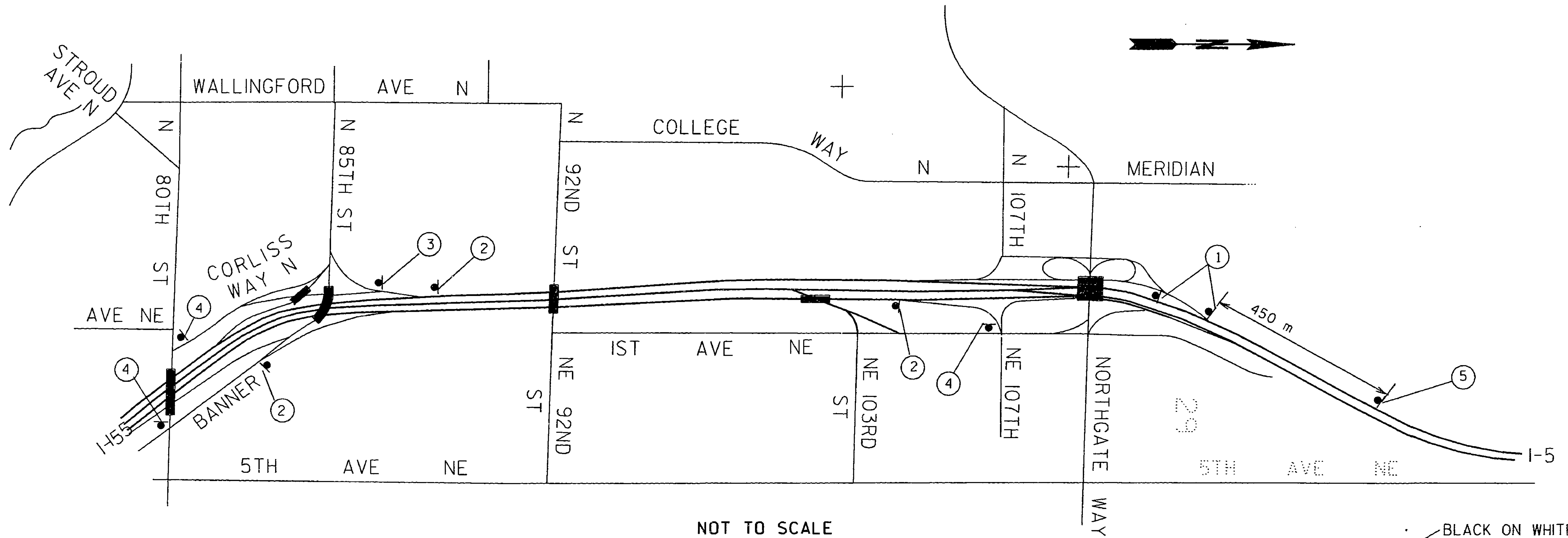
TRAFFIC CONTROL - RAMP DETOUR

TC32

SHEET 133 OF 138 SHEETS

PLOT21 05 JAN 98 s:\412353\projects\ol2538\sbcdramp.dgn wujim

T.26N. R.4E. W.M.



NOT TO SCALE

900 mm × 900 mm		
DETOUR ROUTE (↑)	8C 8C	M4-9(MOD) BLACK ON ORANGE SIGN #1
DETOUR ROUTE (↗)	8C 8C	M4-9R(MOD) BLACK ON ORANGE SIGN #2
DETOUR ROUTE (↖)	8C 8C	M4-9R(MOD) BLACK ON ORANGE SIGN #3
DETOUR ROUTE (←)	8C 8C	M4-9L(MOD) BLACK ON ORANGE SIGN #4

NORTHGATE WY EXIT CLOSED — 8D, 8D — BLACK ON WHITE
USE NEXT EXIT — 8D, 8D — BLACK ON ORANGE

1500 mm × 2300 mm

SPECIAL SIGN #5

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY D. BISHOP				
ENTERED BY D. BISHOP				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER 97W058 | CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - RAMP DETOUR

TC33

SHEET 134 OF 138 SHEETS

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

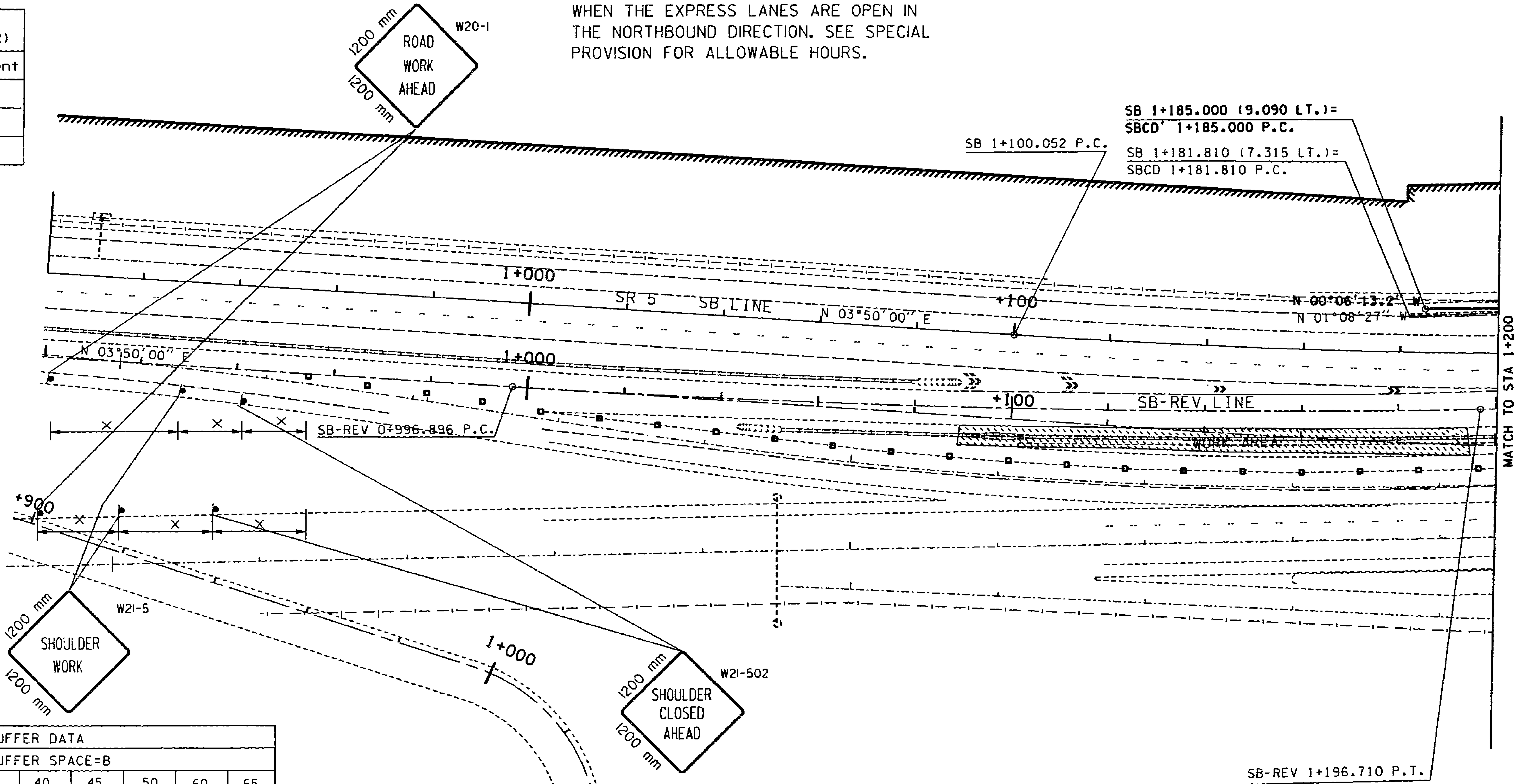
MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

T. 26N. R. 4E. W. M.

LEGEND	
▫ ▫ ▫	TRAFFIC SAFETY DRUMS
⋘	SEQUENTIAL ARROW SIGN
	TYPE III BARRICADE
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

GENERAL NOTES:
THE SHOULDER CLOSURE FOR THE MEDIAN GATE WORK SHALL BE APPLICABLE ONLY WHEN THE EXPRESS LANES ARE OPEN IN THE NORTHBOUND DIRECTION. SEE SPECIAL PROVISION FOR ALLOWABLE HOURS.



BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-NORTHBOUND GATES

TC34

SHEET 135 OF 140 SHEETS

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.

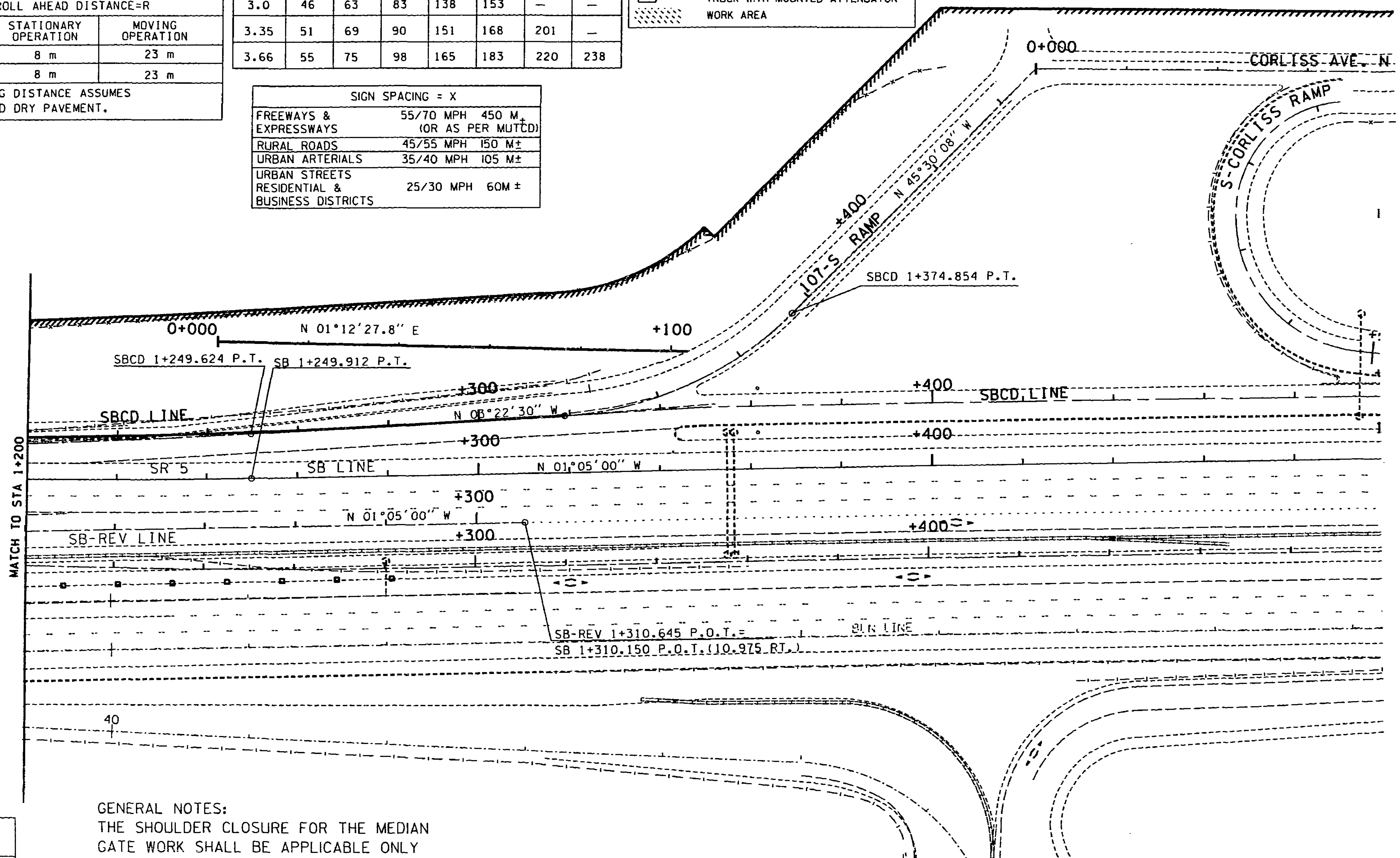
MINIMUM TAPER LENGTH = L IN METERS							
Lane Width METER	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	55/70 MPH	450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH	150 M±
URBAN ARTERIALS	35/40 MPH	105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	60M ±

LEGEND

- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

T. 26N. R. 4E. W. M.



GENERAL NOTES:
THE SHOULDER CLOSURE FOR THE MEDIAN GATE WORK SHALL BE APPLICABLE ONLY WHEN THE EXPRESS LANES ARE OPEN IN THE NORTHBOUND DIRECTION. SEE SPECIAL PROVISION FOR ALLOWABLE HOURS.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

0 10 20 30 40 50
SCALE IN METERS

FOR "AS CONSTRUCTED PLANS" ONLY

DESIGNED BY	D. BISHOP			
ENTERED BY	M. GOUDARZI			
CHECKED BY	R. SUAFOA			
PROJ. ENGR.	J. JOHNSON			
REGIONAL ADM.	J. OKAMOTO			
	DATE	DATE	REVISION	BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 97W058
CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

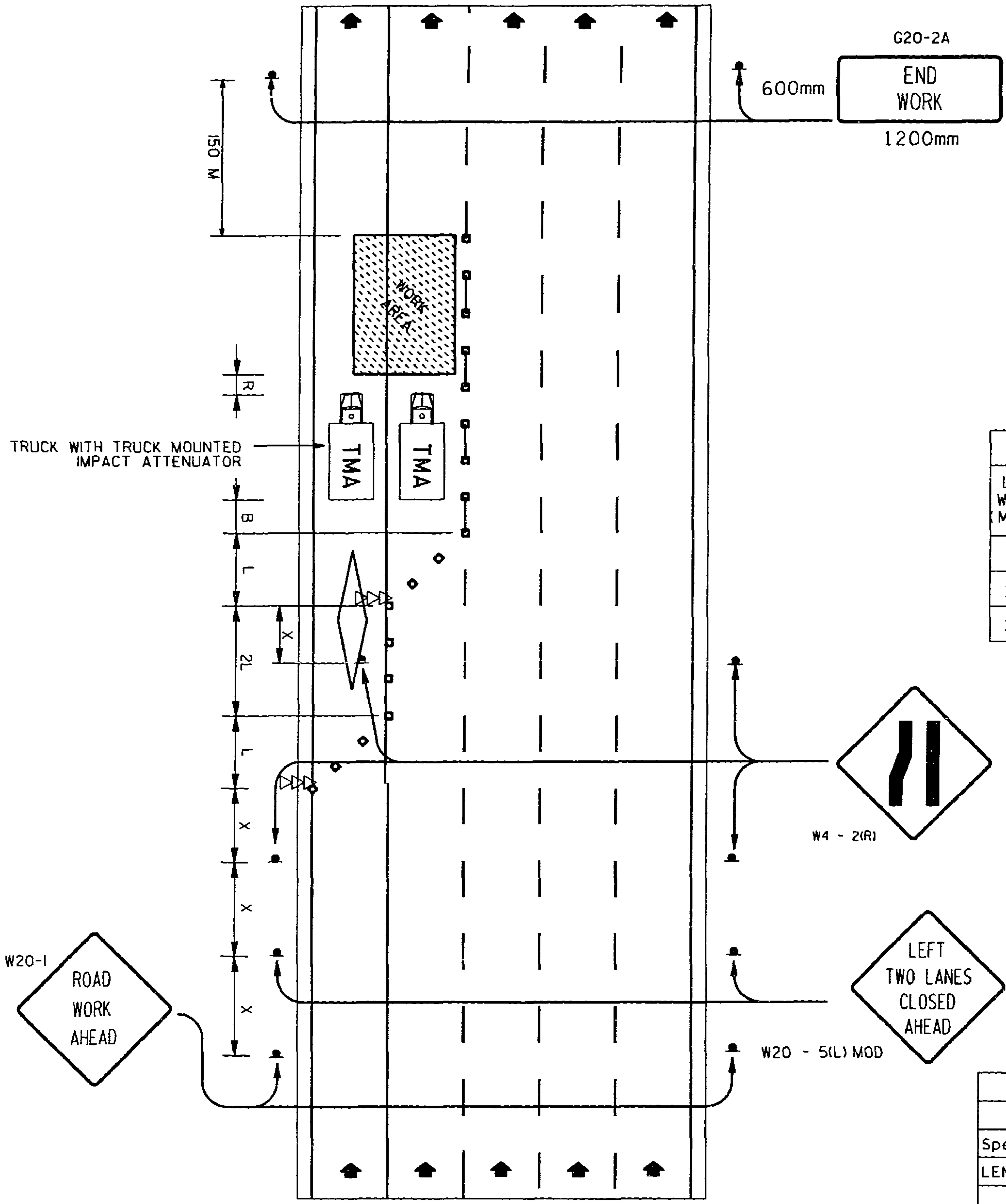
SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL-NORTHBOUND GATES

TC35

SHEET 136 OF 140 SHEETS

PLOTS 06 JAN 98 s:\412353\projects\o12538\nbgates-tc.dgn wujim



TYPICAL TWO LANE CLOSURES

GENERAL NOTE:
IF BUFFER VEHICLE IS NOT USED, SEE BUFFER DATA FOR REQUIRED BUFFER SPECIAL DISTANCE.

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

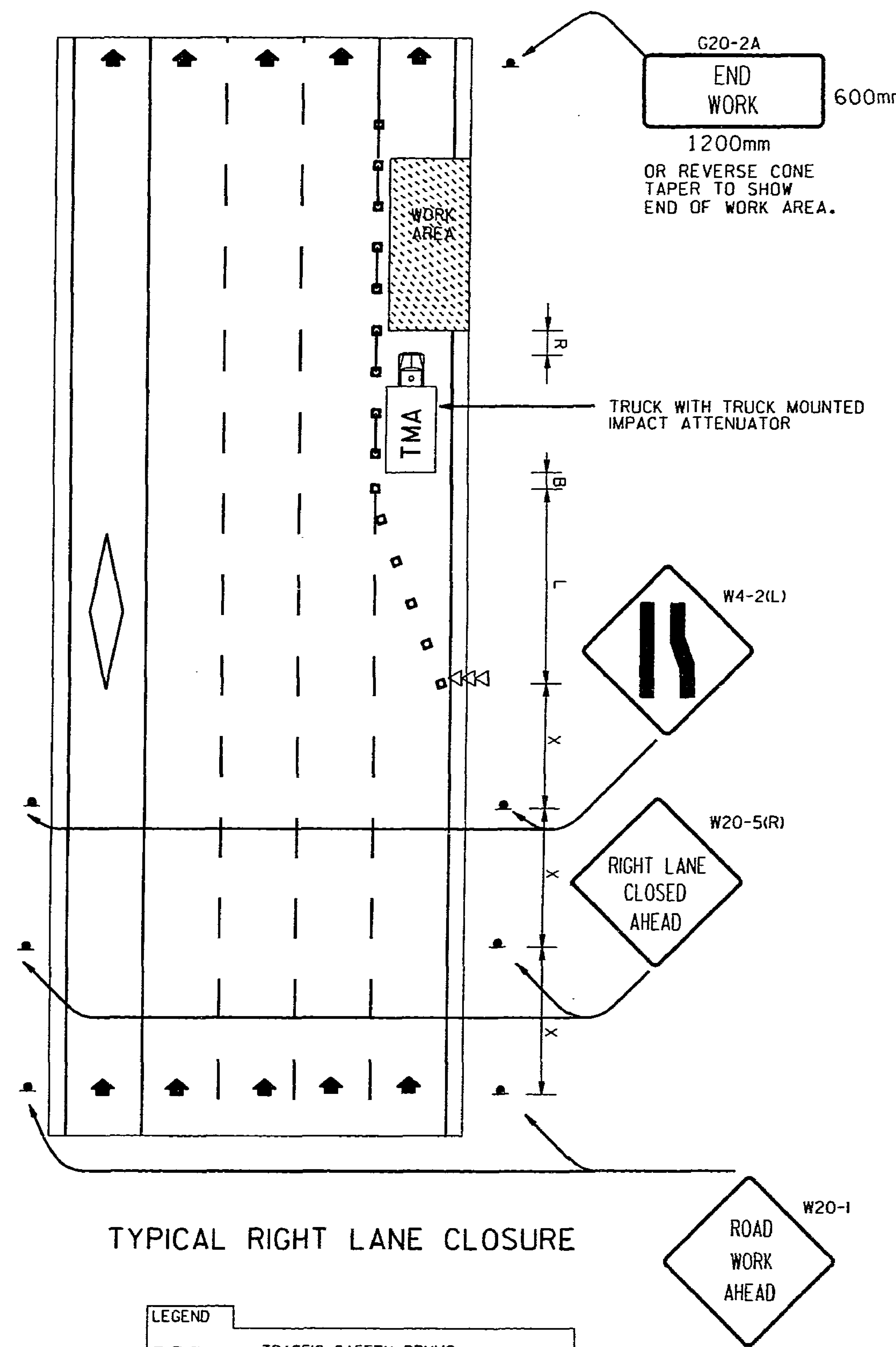
MINIMUM TAPER LENGTH = L IN METERS							
Lane Width (METER)	Posted Speed (MPH)						
	30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	≤5/30 MPH 60M ±

FOR "AS CONSTRUCTED PLANS" ONLY

BUFFER DATA							
BUFFER SPACE=B							
Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R		
BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m
ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.		



TYPICAL RIGHT LANE CLOSURE

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP					
ENTERED BY M. GOUDARZI					
CHECKED BY R. SUAFOA					
PROJ. ENGR. J. JOHNSON					
REGIONAL ADM. J. OKAMOTO					
	DATE	DATE	REVISION	BY	

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER 97W058		
CONTRACT NO.		

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - LANE CLOSURES

TC36

SHEET 137 OF 138 SHEETS

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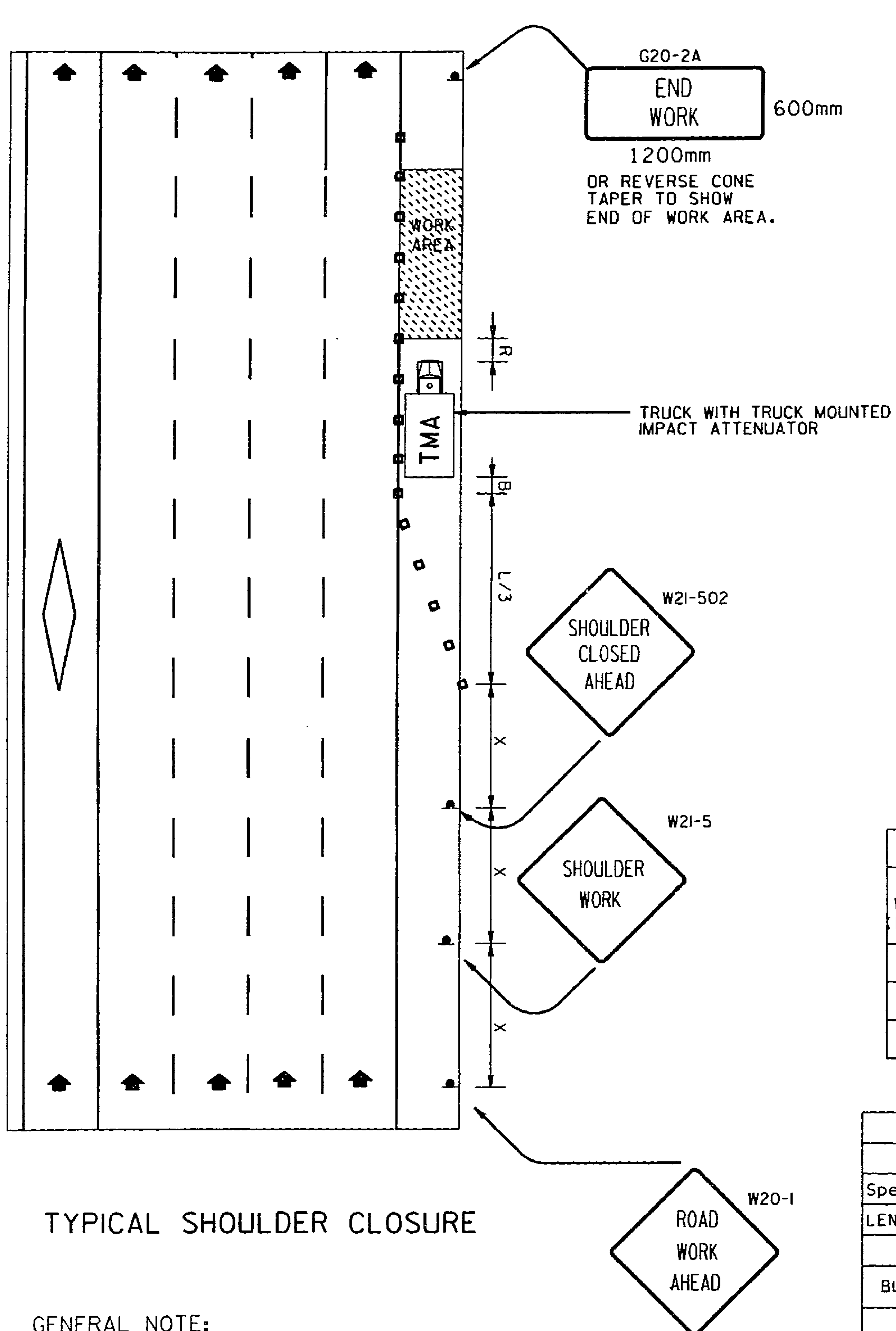
PLOT2



TYPICAL SHOULDER CLOSURE

GENERAL NOTE:
IF BUFFER VEHICLE IS NOT USED, SEE BUFFER DATA FOR REQUIRED BUFFER SPECIAL DISTANCE.

SIGN SPACING = X	
FREEWAYS & EXPRESSWAYS	55/70 MPH 450 M± (OR AS PER MUTCD)
RURAL ROADS	45/55 MPH 150 M±
URBAN ARTERIALS	35/40 MPH 105 M±
URBAN STREETS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH 60M ±

CHANNELIZING DEVICE SPACING (METER)		
MPH	Taper	Tangent
50/70	12	24
35/45	9	18
25/30	6	12

MINIMUM TAPER LENGTH = L IN METERS

Lane Width (METER)	Posted Speed (MPH) 30	35	40	45	50	60	65
3.0	46	63	83	138	153	—	—
3.35	51	69	90	151	168	201	—
3.66	55	75	98	165	183	220	238

BUFFER DATA

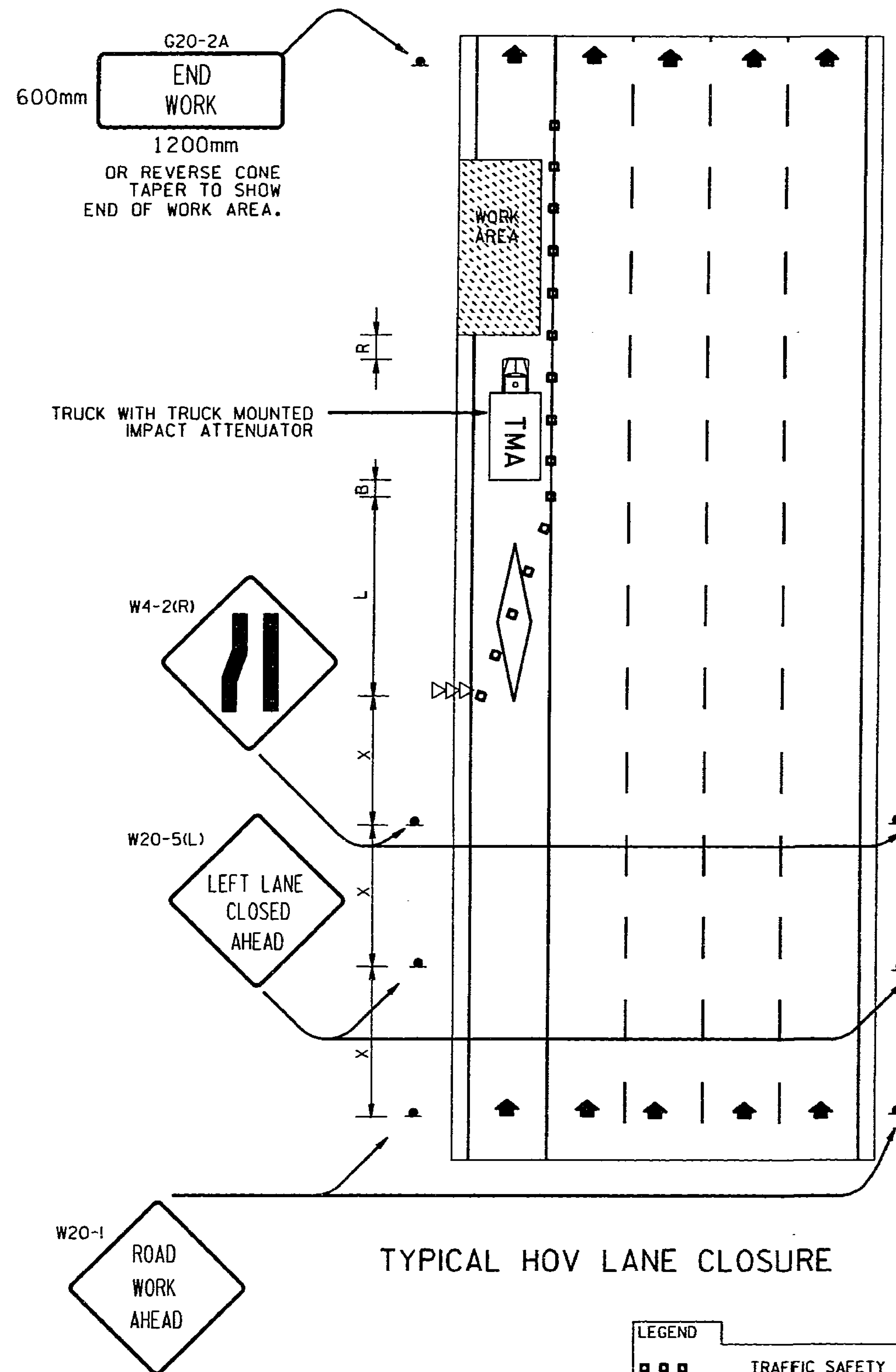
BUFFER SPACE=B

Speed (MPH)	30	35	40	45	50	60	65
LENGTH(M)=	25	37	52	67	86	127	148

BUFFER VEHICLE ROLL AHEAD DISTANCE=R

BUFFER VEHICLE WEIGHT	STATIONARY OPERATION	MOVING OPERATION
6800 kg	8 m	23 m
10,900 kg	8 m	23 m

ROLL AHEAD STOPPING DISTANCE ASSUMES 65 MPH SPEED AND DRY PAVEMENT.



TYPICAL HOV LANE CLOSURE

FOR "AS CONSTRUCTED PLANS" ONLY

LEGEND
- TRAFFIC SAFETY DRUMS
- SEQUENTIAL ARROW SIGN
- TYPE III BARRICADE
- TRUCK WITH MOUNTED ATTENUATOR
- WORK AREA

DESIGNED BY D. BISHOP				
ENTERED BY M. GOUDARZI				
CHECKED BY R. SUAFOA				
PROJ. ENGR. J. JOHNSON				
REGIONAL ADM. J. OKAMOTO	DATE	DATE	REVISION	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER 97W058

CONTRACT NO.

ENVIRONMENTAL AND ENGINEERING SERVICE CENTER

Washington State Department of Transportation

SR 5
VIC NORTHGATE WAY TO VIC NE 145TH ST

TRAFFIC CONTROL - LANE CLOSURES

TC37

SHEET 138 OF 138 SHEETS