

REICHHARDT & EBE ENGINEERING, INC.
CONSULTING ENGINEERS

TRANSMITTAL

TO:	FROM:
ALL BIDDERS	Luis Ponce, P.E.
COMPANY:	DATE:
	8/10/07
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
	24
PHONE NUMBER:	SENDER'S PHONE NUMBER:
	(360) 354-3687
RE:	SENDER'S FAX NUMBER:
City of Ferndale	(360) 354-0407
Addendum 1	
Douglas Road Improvements and	
Signalization Project	
Federal Aid No. STPR-8030 (003)	

ADDENDUM 1

Douglas Road Improvements and Signalization Project
Federal Aid No. STPR-8030 (003)

To the attention of all bidders for the above project:

Please find the enclosed Addendum No. 1 for the above referenced project.

The enclosed ADDENDUM is to be considered as much a part of the Contract Documents as if it were included in the body of the plans and specifications, and will be incorporated in and made a part of the contract when awarded and when formally executed.

The Bidder shall acknowledge in writing, on the bid form, this addendum in order to have the bid considered.



Luis Ponce, P.E.

423 FRONT STREET
LYNDEN, WASHINGTON 98264
360-354-3687

ADDENDUM NO. 1

To the Contract Provisions for
City of Ferndale, Washington

**Douglas Road Improvements and Signalization Project
Federal Aid No. STPR-8030 (003)**

ITEM 1

The Bid Proposal Form is replaced in its entirety with the attached **REVISED BID PROPOSAL FORM**. Only bids submitted on the **REVISED BID PROPOSAL FORM** will be considered responsive.

Bid Proposal Form, ITEM NO. 22, 'Construction Geotextile for Separation' has been added to the Bid Proposal Form.

Bid Proposal Form, ITEM NO. 29, the quantity for 'Planing Bituminous Pavement' has been increased.

Bid Proposal Form, ITEM NO. 57, 'Plant Selection Thuja Pyramidis Occidentalis, Emerald Green' has been added to the Bid Proposal Form.

ITEM 2

Plan Sheet 3

The attached Plan Sheet 3 dated Rev 8-10-07 shall replace the Plan Sheet 3 dated 7-20-07. The scale was corrected.

ITEM 3

Plan Sheet 8

The attached Plan Sheet 8 dated Rev 8-10-07 shall replace the Plan Sheet 8 dated 7-20-07. The planing limits have been extended further south along Douglas Road. The planing limits shown on Plan Sheet 8 dated Rev 8-10-07 shall supersede the planing limits shown on all other Plan Sheets.

ITEM 4

Plan Sheet 10

The attached Plan Sheet 10 dated Rev 8-10-07 shall replace the Plan Sheet 10 dated 7-20-07. The elevation calls outs for the Retaining Wall Type 1 were corrected and the additional line on the Retaining Wall Type 1 profile view was removed. The location of 'Plant Selection Thuja Pyramidis Occidentalis, Emerald Green Tree' is added.

ITEM 5

Plan Sheet 15

The attached Plan Sheet 15 dated Rev 8-10-07 shall replace the Plan Sheet 15 dated 7-20-07. The elevation calls outs were corrected and the additional line on the Retaining Wall Type 1 view was removed.

ITEM 6

Plan Sheet 16

The attached Plan Sheet 16 dated Rev 8-10-07 shall replace the Plan Sheet 16 dated 7-20-07. The typical roadway cross section was revised.

ITEM 7

Plan Sheet TS1

The attached Plan Sheet TS1 dated Rev. 8-10-07 shall replace the Plan Sheet TS1 dated Rev. 7-20-07. The traffic signal phasing for the westbound left turn movement has been revised from permissive only to protected/permissive phasing. A five section cluster signal head labeled 11/61 shall replace signal head 61. Vehicle detector loop L11 shall call signal phase 1 instead of signal phase 6. Emergency vehicle preemption circuit A shall call signal phases 1 and 6 instead of signal phases 2 and 6.

ITEM 8

Plan Sheet TS2

The attached Plan Sheet TS2 dated Rev. 8-10-07 shall replace the Plan Sheet TS2 dated Rev. 7-20-07. A five section cluster signal head labeled 11/61 shall replace signal head 61. A seven-conductor cable shall feed signal head 11/61 connected to signal phases 1 and 6 as shown.

ITEM 9

Plan Sheet TS3

The attached Plan Sheet TS3 dated Rev. 8-10-07 shall replace the Plan Sheet TS3 dated Rev. 7-20-07. The five section cluster signal head 11/61 shall be mounted at location B3 (22.5 feet). The tenon at location B4 (18.5 feet) shall be capped. Wind areas for the protected/permissive scenarios at poles 2 and 5 shall be 14.4 sq. ft. instead of 11.0 sq. feet. XYZ wind loads have been recalculated.

ITEM 10

Contract Documents Cover Sheet

The City of Ferndale phone number is revised to read:

(360)-384-4006

ITEM 11

DIVISION 7

DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

7-18 SIDE SEWERS

7-18.4 Measurement

Page 171, Lines 35-36, are revised to read:

The following items shall be incidental and included in the unit price for "PVC Sanitary Sewer Pipe, 6 In. Diam.":

ITEM 12

8-02 ROADSIDE PLANTING

8-02.3 Construction Requirements

Section 8-02.2 is supplemented with the following:

Thuja Pyramidis Occidentalis, Emerald Green, shall be 2 inches to 2.5 inches caliper and a minimum of 6 feet high. Measurements, caliper, branching, grading, quality, balling and burlapping shall follow the Code of Standards of the American Association of Nurserymen Standard for Nursery Stock. All plants shall have a natural shape. Plants shall be spaced at 2.5 feet on center.

All backfill material shall meet the planting material specifications as follows:

1. Tree Pit Planting Mix: Type "A" sandy loam topsoil complying to Section 9-14.1(1) of the Standard Specifications. Hydrogel shall be added at a rate per manufacturer's instructions.
2. Fertilizer/Amendments: All fertilizers and amendments shall be packed in new, waterproof bags clearly labeled as to weight, manufacturer, and content. The following fertilizers and amendments shall be supplied by the Contractor, incorporated, and mixed thoroughly into the soil at the following rates per 10 cubic yards:

1.8 lbs.	Calcium carbonate limestone (agricultural)
10.8 lbs.	Dolomite limestone
2.7 lbs.	Treble superphosphate (0-45-0)
2.7 lbs.	Potassium sulfate
1.08 lbs.	Ammonium nitrate
13.5 lbs.	Gypsum (calcium sulfate)

Post-plant application:

4-2-2 "Transplanter" at 8 oz. per tree
20-10-5, 21-gram planting tablet at 4 tablets per tree

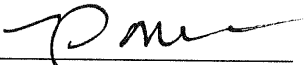
Root barriers shall be installed on two sides of each tree being planted as shown on the plans. Root barriers shall be "Biobarrier" as supplied by Reemay, Inc. at 70 Old Hickory Boulevard, Old Hickory, Tennessee, (800-284-2780). Biobarrier shall be installed as per manufacturer's recommendations.

All trees and tree rootballs shall be properly protected against harm from wind, unusual weather, and the public. The Contractor shall perform all necessary maintenance including watering, pruning, and spraying trees for two years after initial acceptance. All trees must be in vigorous growing condition at the end of the one-year maintenance and guarantee period. Defective materials, as determined by the Engineer, shall be replaced immediately with specimens of the same species and size as the original."

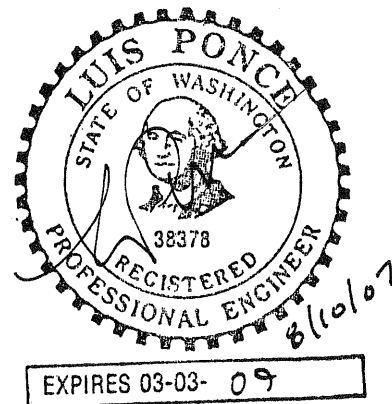
8-02.5 Payment

Section 8-02.5 is supplemented with the following:

Payment shall be at the unit price per each for "Plant Selection Thuja Pyramidis Occidentalis, Emerald Green" and shall be full compensation for all labor, material, and equipment necessary to perform this item of work as specified including, but not limited to, tree staking, root barriers, bark mulch, topsoil backfill, fertilizers, hydrogels, post-plant applications, and maintenance for one year after initial acceptance.



Luis Ponce, P.E.
Project Manager



BID PROPOSAL FORM
 DOUGLAS ROAD IMPROVEMENTS PROJECT
 FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
1	LUMP SUM	MOBILIZATION (1-09.7)	L.S.	\$
2	CALCULATED	MINOR CHANGE (1-04)	CALC.	\$25,000.00
3	LUMP SUM	SPILL PREVENTON, CONTROL & COUNTERMEASURES PLAN (1-07)	L.S.	\$
4	1,750 HOURS	FLAGGERS AND SPOTTERS (1-10)	\$ per HR	\$
5	175 HOURS	OTHER TRAFFIC CONTROL LABOR (1-10)	\$ per HR	\$
6	LUMP SUM	PROJECT TEMPORARY TRAFFIC CONTROL (1-10)	L.S.	\$
7	LUMP SUM	CLEARING AND GRUBBING (2-01)	L.S.	\$
8	LUMP SUM	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (2-02)	L.S.	\$
9	1 HUNDRED	REMOVING RAISED PAVEMENT MARKERS (2-02)	\$ per HUN	\$
10	4,000 LINEAL FEET-INCH	SAWCUT ACP (2-02)	\$ per LF-IN	\$

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDAL, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
11	900 LINEAL FEET-INCH	SAWCUT PCC (2-02)	\$ per LF-IN	\$
12	11 EACH	REMOVING DRAINAGE STRUCTURES (2-02)	\$ per EA	\$
13	100 LINEAL FEET	REMOVING EXISTING CULVERTS (2-02)	\$ per L.F.	\$
14	75 LINEAL FEET	REMOVING EXISTING DRAINAGE PIPES (2-02)	\$ per L.F.	\$
15	600 CUBIC YARDS	REMOVING PORTLAND CEMENT CONCRETE PAVEMENT (2-02)	\$ per C.Y.	\$
16	1,300 CUBIC YARDS	ROADWAY EXCAVATION INCLUDING HAUL (2-03)	\$ per C.Y.	\$
17	200 CUBIC YARDS	EMBANKMENT COMPACTION, INCL. HAUL (2-03)	\$ per C.Y.	\$
18	400 CUBIC YARDS	UNSUITABLE FOUNDATION EXCAVATION INCLUDING HAUL (2-03)	\$ per C.Y.	\$
19	100 M. GALLON	WATER (2-07)	\$ per M.GAL	\$

BID PROPOSAL FORM
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 FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
20	1000 CUBIC YARDS	STRUCTURE EXCAVATION CI B INCLUDING HAUL (2-09)	\$ per C.Y.	\$
21	5,000 SQUARE FEET	SHORING OR EXTRA EXCAVATION, CLASS B (2-09)	\$ per S.F.	\$
22	5,000 SQUARE FEET	CONSTRUCTION GEOTEXTILE FOR SEPARATION (2-12)	\$ per S.F.	\$
23	5,650 TONS	GRAVEL BASE (4-02)	\$ per TON	\$
24	175 TONS	CRUSHED SURFACING TOP COURSE (4-04)	\$ per TON	\$
25	1,400 TONS	HMA CI 1/2" PG 64-22 (5-04)	\$ per TON	\$
26	1,300 TONS	HMA CI 1" PG 64-22 (5-04)	\$ per TON	\$
27	CALCULATED	JOB MIX COMPLIANCE PRICE ADJUSTMENT (5-04)	CALC.	\$0.00
28	CALCULATED	COMPACTION PRICE ADJUSTMENT (5-04)	CALC.	\$0.00
29	450 SQUARE YARDS	PLANING BITUMINOUS PAVEMENT (5-04)	\$ per S.Y.	\$

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
30	400 SQUARE FEET	BLOCK WALL (6-13)	\$	\$
			per S.F.	
31	130 TON	CRUSHED SURFACING TOP COURSE FOR WALL BACKFILL INCL. HAUL (6-13)	\$	\$
			per TON	
32	200 LINEAL FEET	UNDERDRAIN PIPE, 4 INCH DIAMETER (7-01)	\$	\$
			per LF	
33	50 LINEAL FEET	SOLID WALL PVC STORM SEWER PIPE, 6 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
34	150 LINEAL FEET	CORRUGATED POLY STORM SEWER PIPE 8 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
35	270 LINEAL FEET	CORRUGATED POLY STORM SEWER PIPE 12 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
36	650 LINEAL FEET	CORRUGATED POLY STORM SEWER PIPE 18 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
37	160 LINEAL FEET	DUCTILE IRON PIPE FOR STORM DRAIN 8 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
38	1 EACH	CONCRETE INLET (7-05)	\$	\$
			per EA	
39	7 EACH	CATCHBASIN TYPE 1 (7-05)	\$	\$
			per EA	

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ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
40	1 EACH	CATCH BASIN TYPE 1 WITH BEEHIVE FRAME AND GRATE (7-05)	\$	\$
			per EA	
41	8 EACH	CATCHBASIN TYPE 1L (7-05)	\$	\$
			per EA	
42	2 EACH	CATCHBASIN TYPE 2, 48 INCH DIAMETER (7-05)	\$	\$
			per EA	
43	LUMP SUM	ADJUSTMENT TO FINISHED GRADE (7-05)	L.S.	\$
44	7 EACH	SOLID LOCKING RING & COVER (7-05)	\$	\$
			per EA	
45	1 EACH	TAPPING SLEEVE AND GATE VALVE ASSEMBLY, 12" X 6" (7-09)	\$	\$
			per EA	
46	25 LINEAL FEET	D.I. PIPE FOR WATERMAIN 6 INCH DIAMETER (7-09)	\$	\$
			per L.F.	
47	LUMP SUM	TESTING WATERMAIN (7-09)	L.S.	\$
48	1 EACH	CONNECT TO EXISTING WATERMAIN, 6 INCH DIAMETER (7-09)	\$	\$
			per EA	
49	1 EACH	HYDRANT ASSEMBLY (7-14)	\$	\$
			per EA	

BID PROPOSAL FORM
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FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
50	8 EACH	SERVICE CONNECTION, 1 INCH DIAMETER (7-15)	\$	\$
			per EA	
51	200 LINEAL FEET	PVC SANITARY SEWER PIPE, 6 INCH DIAMETER (7-18)	\$	\$
			per L.F.	
52	LUMP SUM	ESC LEAD (8-01)	L.S.	\$
53	100 SQUARE YARDS	PERMANENT EROSION CONTROL BLANKET (8-01)	\$	\$
			per S.Y.	
54	170 SQUARE YARDS	STABILIZED CONSTRUCTION ENTRANCE (8-01)	\$	\$
			per S.Y.	
55	1300 LINEAL FEET	SILT FENCE (8-01)	\$	\$
			per L.F.	
56	20 EACH	INLET PROTECTION (8-01)	\$	\$
			per EA	
57	EACH	125 PLANT SELECTION THUJA PYRAMIDIS OCCIDENTALIS, EMERALD GREEN (8-02)	\$	\$
			per EA	
58	100 CUBIC YARDS	TOPSOIL TYPE A, IN PLACE (8-02)	\$	\$
			per C.Y.	
59	750 SQUARE YARDS	SEEDED LAWN INSTALLATION (8-02)	\$	\$
			per S.Y.	

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
60	FORCE ACCOUNT	LANDSCAPE RESTORATION (8-02)	F.A.	\$10,000.00
61	1,750 LINEAL FEET	CEMENT CONCRETE TRAFFIC CURB & GUTTER (8-04)	\$ per L.F.	\$
62	130 LINEAL FEET	CEMENT CONCRETE GUTTER (8-04)	\$ per L.F.	\$
63	120 LINEAL FEET	ROUNDBOUT CENTRAL ISLAND CEMENT CONCRETE CURB (8-04)	\$ per L.F.	\$
64	170 LINEAL FEET	CEMENT CONCRETE EXTRUDED CURB (8-04)	\$ per L.F.	\$
65	7.20 HUNDRED	RAISED PAVEMENT MARKER, TYPE 1Y (8-09)	\$ per HUN	\$
66	1.44 HUNDRED	RAISED PAVEMENT MARKER, TYPE 2YY (8-09)	\$ per HUN	\$
67	0.9 HUNDRED	RAISED PAVEMENT MARKER, TYPE 1W (8-09)	\$ per HUN	\$
68	0.16 HUNDRED	RAISED PAVEMENT MARKER, TYPE 2W (8-09)	\$ per HUN	\$
69	1,000 SQUARE YARDS	CEMENT CONCRETE SIDEWALK (8-14)	\$ per S.Y.	\$

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
70	35 SQUARE YARD	MONOLITHIC CEMENT CONCRETE CURB AND SIDEWALK (8-14)	\$	\$
			per S.Y.	
71	130 SQUARE YARDS	CEMENT CONCRETE DRIVEWAY 6 INCHES THICK (8-14)	\$	\$
			per S.Y.	
72	1 EACH	CEMENT CONCRETE SIDEWALK RAMP TYPE 2 (8-14)	\$	\$
			per EA	
73	1 EACH	CEMENT CONCRETE SIDEWALK RAMP TYPE 2, SINGLE RAMP (8-14)	\$	\$
			per EA	
74	1 EACH	CEMENT CONCRETE SIDEWALK RAMP TYPE 2, 10-FEET (8-14)	\$	\$
			per EA	
75	1 EACH	CEMENT CONCRETE SIDEWALK RAMP TYPE 4B (8-14)	\$	\$
			per EA	
76	4 EACH	MAILBOX SUPPORT TYPE 1 (8-18)	\$	\$
			per EA	
77	2 EACH	MAILBOX SUPPORT TYPE 2 (8-18)	\$	\$
			per EA	
78	LUMP SUM	TRAFFIC SIGNAL AND ILLUMINATION SYSTEM COMPLETE (8-20)	L.S.	\$
79	FORCE ACCOUNT	FORCE ACCOUNT LIGHTED SIGN RELOCATE (8-20)	F.A.	\$5,000.00

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
80	LUMP SUM	PERMANENT SIGNING (8-21)	L.S.	\$
81	600 SQUARE FEET	PLASTIC CROSSWALK LINE (8-22)	\$ per S.F.	\$
82	90 LINEAL FEET	PLASTIC STOP LINE (8-22)	\$ per L.F.	\$
83	7 EACH	PLASTIC TRAFFIC ARROW (8-22)	\$ per EA	\$
84	1,500 LINEAL FEET	PAINT LINE (8-22)	\$ per LF	\$
85	110 SQUARE FEET	GRAVITY BLOCK WALL (8-24)	\$ per S.F.	\$
86	20 EACH	POTHOLE EXISTING UNDERGROUND UTILITY (8-30)	\$ per EA	\$
87	FORCE ACCOUNT	REPAIR EXISTING PUBLIC AND PRIVATE FACILITIES (8-31)	F.A.	\$20,000.00

TOTAL ITEMS 1 THROUGH 87	\$
SALES TAX @ 8.4% (ITEMS 45-51)	\$
SUBTOTAL BASE BID	\$

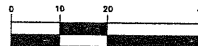
BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
ALTERNATE A1				
RETAINING WALL TYPE 1				
A1	400 CUBIC YARDS	STRUCTURE EXCAVATION CL A, INCLUDING HAUL (2-09)	\$	\$
			per C.Y.	
A2	LUMP SUM	SHORING OR EXTRA EXCAVATION CLASS A (2-09)	L.S.	\$
A3	2,100 SQUARE FEET	RETAINING WALL, TYPE 1 (6-02)	\$	\$
			per S.F.	
A4	460 TONS	GRAVEL BACKFILL FOR WALL (6-02)	\$	\$
			per TON	
A5	380 LINEAL FEET	PEDESTRIAN RAILING (6-06)	\$	\$
			per L.F.	
A6	425 LINEAL FEET	UNDERDRAIN PIPE, 4 INCH DIAMETER (7-01)	\$	\$
			per L.F.	
A7	175 LINEAL FEET	SOLID WALL PVC STORM SEWER PIPE, 6 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
TOTAL ALTERNATE A1, ITEMS A1-A7			\$	\$

BID PROPOSAL FORM
DOUGLAS ROAD IMPROVEMENTS PROJECT
FERNDALE, WASHINGTON

ITEM NO.	APPROX. QUANTITY	ITEM	UNIT PRICE	TOTAL
ALTERNATE A2 BLOCK WALL				
A2-1	175 CUBIC YARDS	STRUCTURE EXCAVATION, CL B INCLUDING HAUL (2-09)	\$	\$
			per C.Y.	
A2-2	1200 SQUARE FEET	SHORING OR EXTRA EXCAVATION CLASS B (2-09)	\$	\$
			per S.F.	
A2-3	380 LINEAL FEET	PEDESTRIAN RAILING (6-06)	\$	\$
			per L.F.	
A2-4	1,900 SQUARE FEET	BLOCK WALL (8-24)	\$	\$
			per S.F.	
A2-5	750 TON	CRUSHED SURFACING TOP COURSE FOR WALL BACKFILL INCLUDING HAUL (6-13)	\$	\$
			per TON	
A2-6	425 LINEAL FEET	UNDERDRAIN PIPE 4 INCH DIAMETER (7-01)	\$	\$
			per L.F.	
A2-7	175 LINEAL FEET	SOLID WALL PVC STORM SEWER PIPE, 6 INCH DIAMETER (7-04)	\$	\$
			per L.F.	
TOTAL ALTERNATE A2, ITEMS A2-1 THROUGH A2-7			\$	
TOTAL BASE BID AND ALTERNATE A1 (INCLUDING SALES TAX)			\$	
TOTAL BASE BID AND ALTERNATE A2 (INCLUDING SALES TAX)			\$	

GRAPHIC SCALE

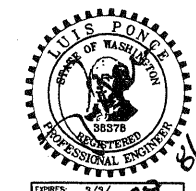
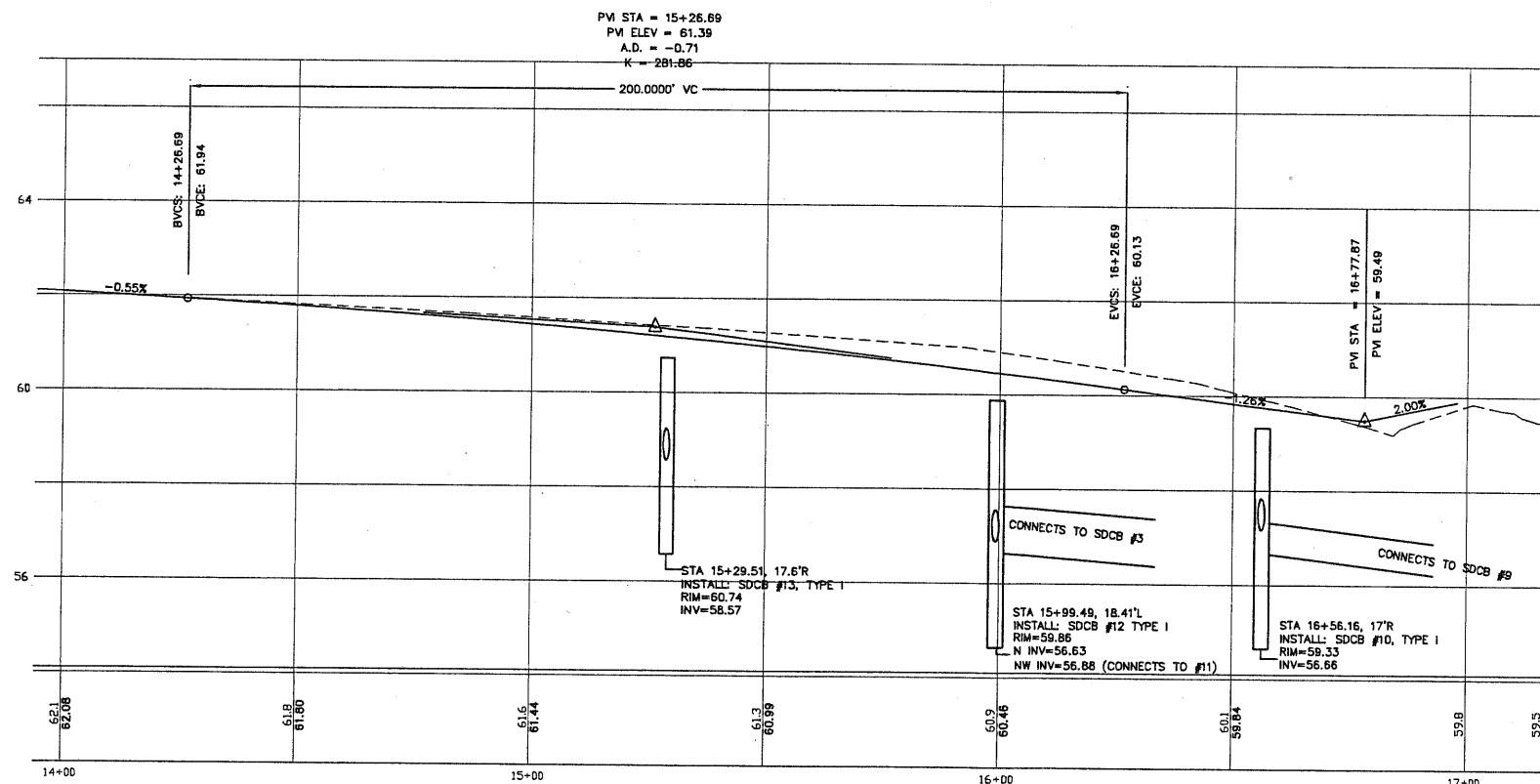
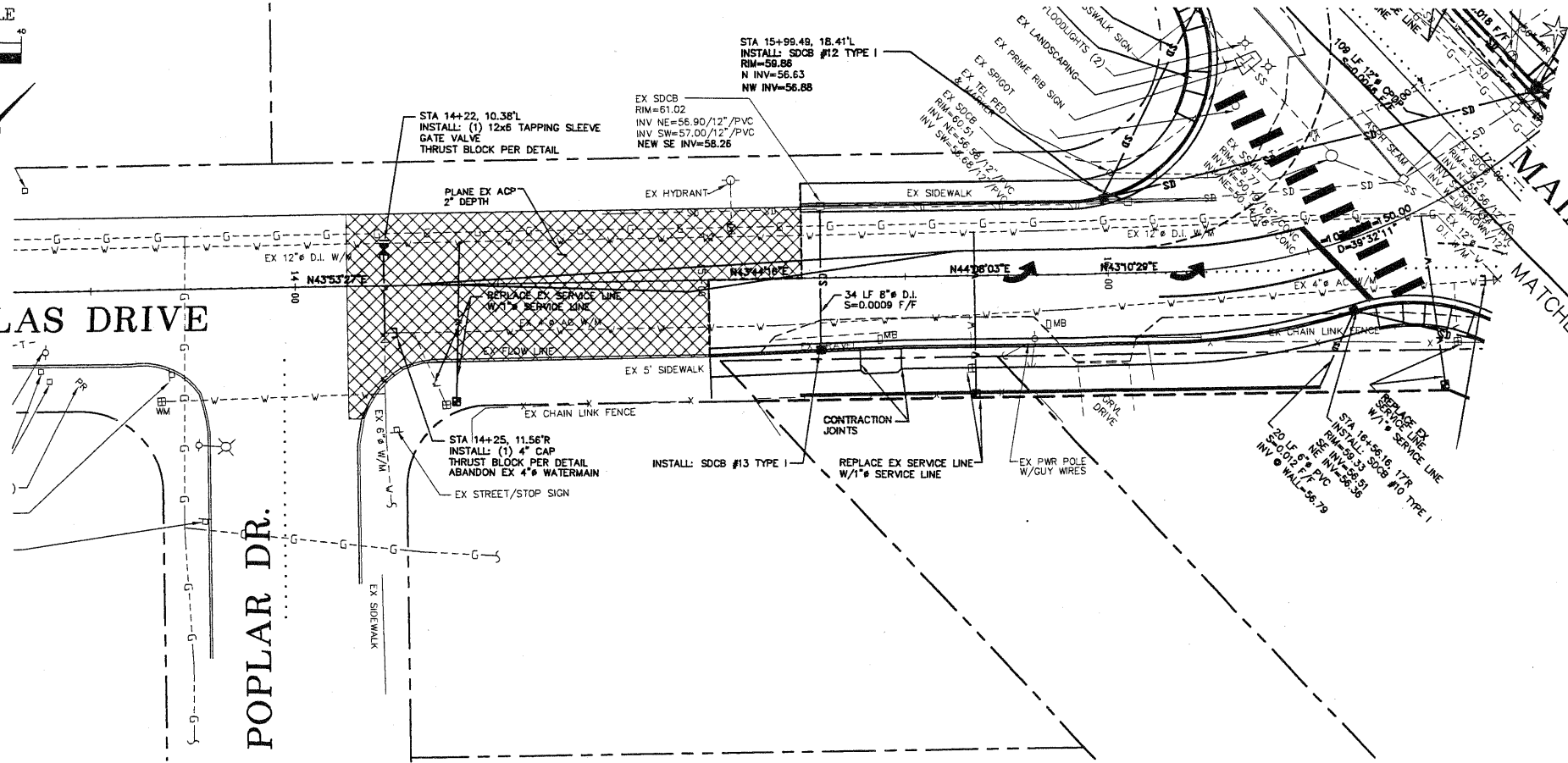


(IN FEET)
1 inch = 20 ft.

DOUGLAS DRIVE

POPLAR DR.

MAIN STREET
MATCHLINE SHEET 5



8/6/07

EXPRES 3/3/09

DESIGNED BY LP
DRAWN BY LMC
CHECKED BY



REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS

PO Box 978 423 Front St., Ste 201 Ph (360) 354-3687
Lynden, Washington 98264 Fax (360) 354-0407

NO.	DATE	REVISION	BY
	8-10-07	ADDENDUM 1	LP

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

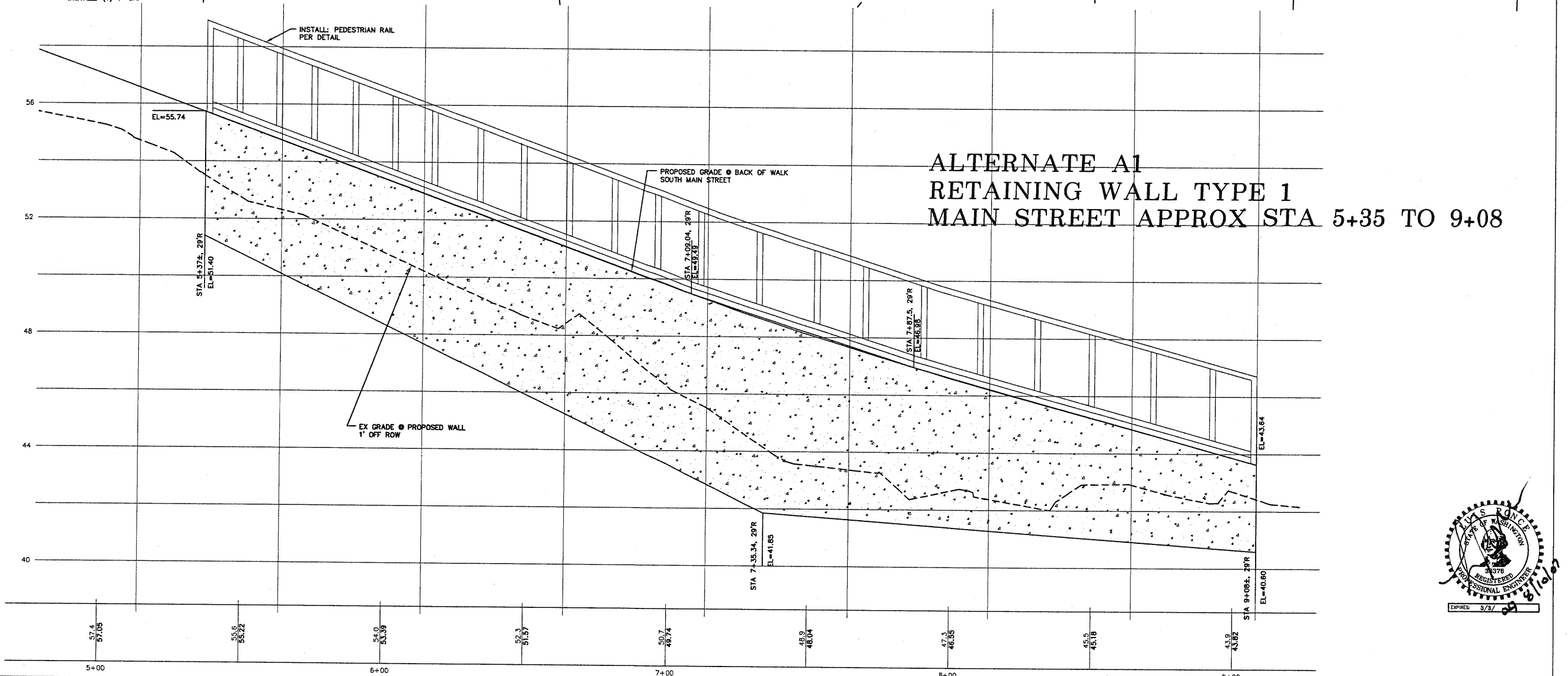
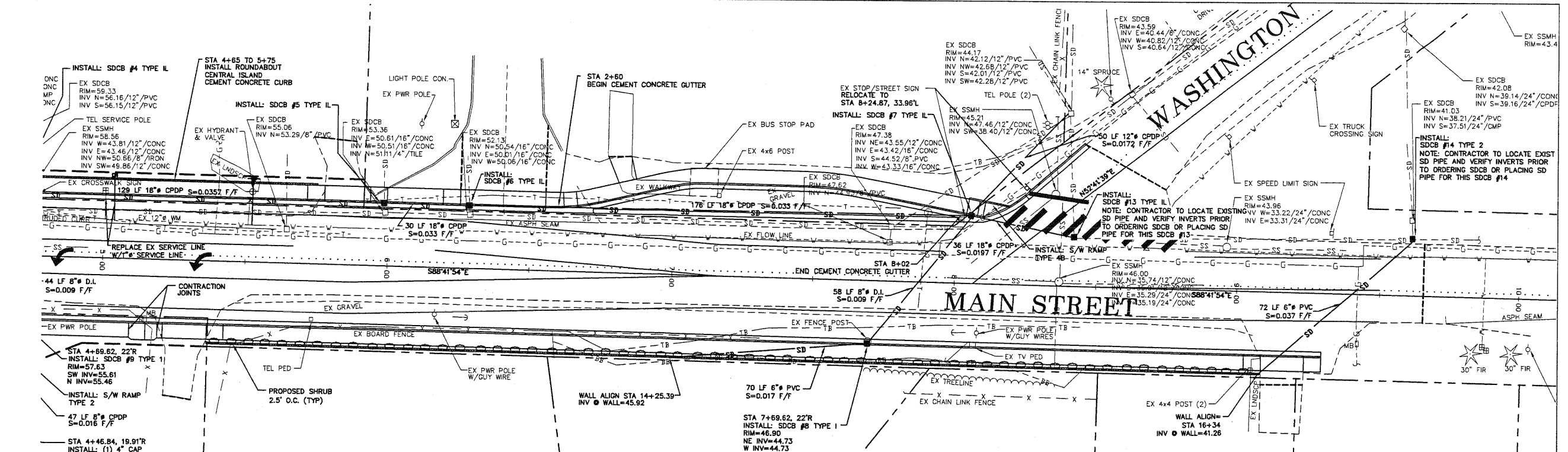
DOUGLAS AND MAIN
STREET IMPROVEMENTS
DOUGLAS STA 14+00 TO 17+25

JOB# / DWG	DATE
00008 00008.SP2	7-20-07
SCALE	SHEET
H:1"=20' V:1"=2'	8 of 17

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



ALTERNATE A1
RETAINING WALL TYPE 1
MAIN STREET APPROX STA 5+35 TO 9+08

DESIGNED BY LP
DRAWN BY LMC
CHECKED BY



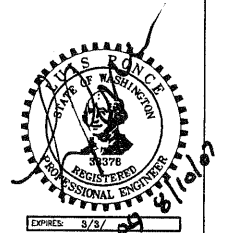
REICHHARDT & EBE
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CONSULTING ENGINEERS
PO Box 978 423 Front St., Ste 201 Ph (360) 354-3687
Lynden, Washington 98264 Fax (360) 354-0407

NO.	DATE	REVISION	BY
	8-10-07	ADDENDUM 1	LP

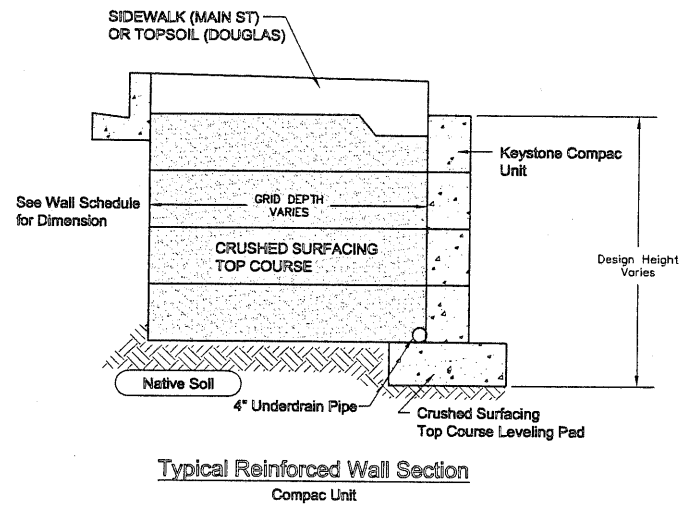
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

DOUGLAS AND MAIN
RETAINING WALL MAIN STA 5+35 - 9+08

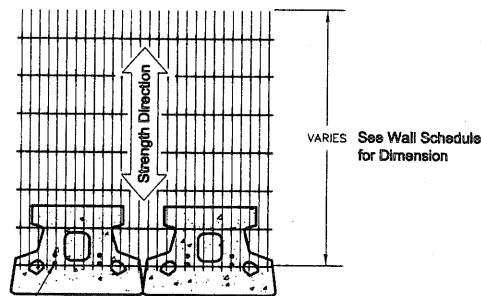
JOB# / DWG	DATE
00008 00008.SP2	7-20-07
SCALE	SHEET
h:1"=20' v:1"=2'	10 of 17



Projects\00008\dwg\00008.SP2.dwg, P&P, 8/10/2007 1:07:17 PM

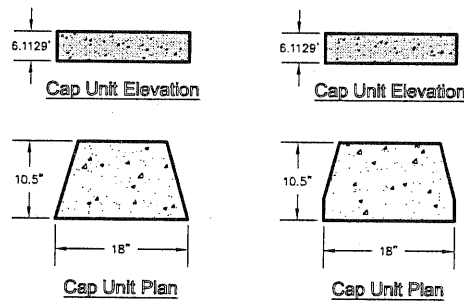


Typical Reinforced Wall Section
Compac Unit



Geogrid is to be placed on level backfill and extended over the 1/2\"/>

Grid & Pin Connection

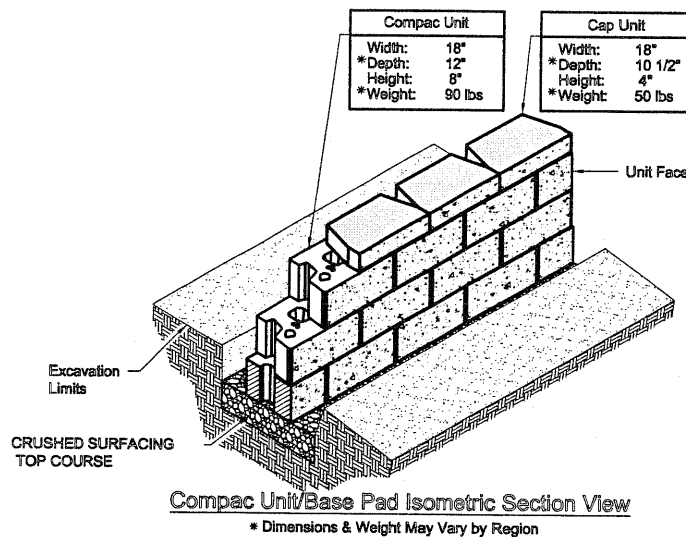


Universal Cap Unit Option
* Dimensions & Availability Will Vary by Region

Straight Split Cap Unit Option
* Dimensions & Availability Will Vary by Region

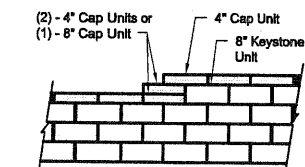
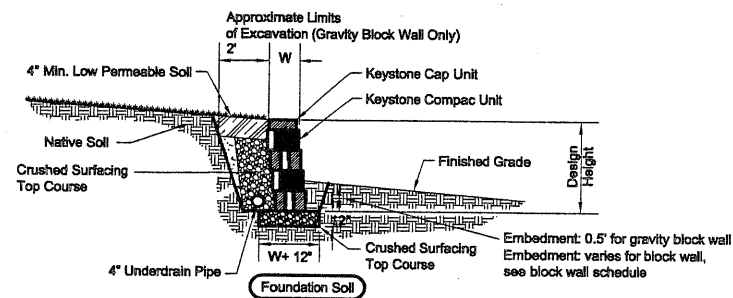
**ALTERNATE A2
BLOCK WALL RETAINING WALL**

NTS



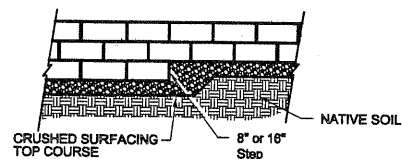
Compac Unit/Base Pad Isometric Section View

* Dimensions & Weight May Vary by Region

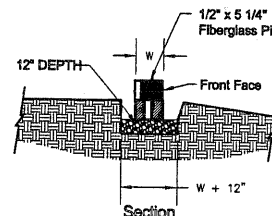


Note:
1. Secure all cap units with Keystone Keepsal or equal.

Top of Gravity and Block Wall Steps



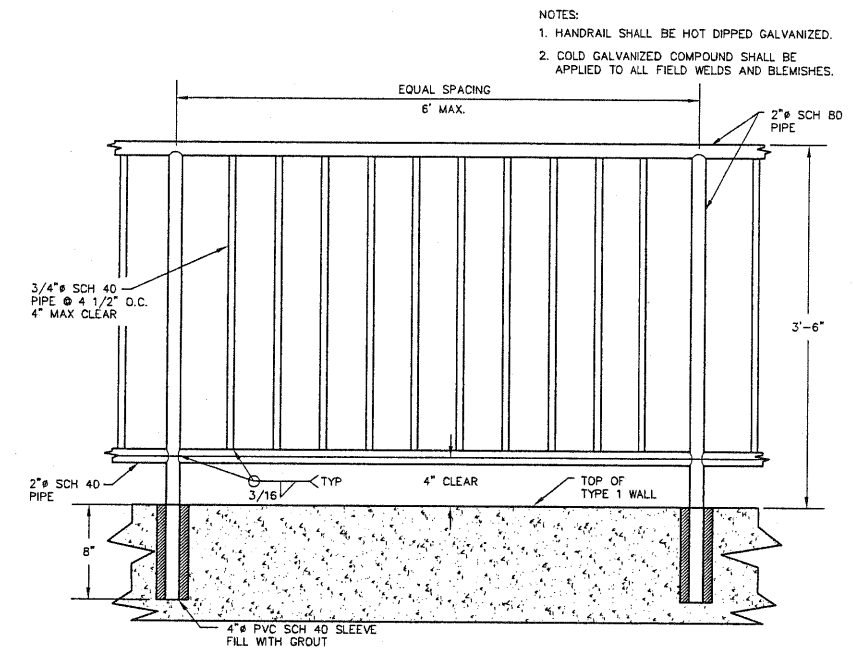
Elevation
TYPICAL GRAVITY AND BLOCK WALL



Leveling Pad Detail

TYPICAL GRAVITY AND BLOCK WALL

NTS

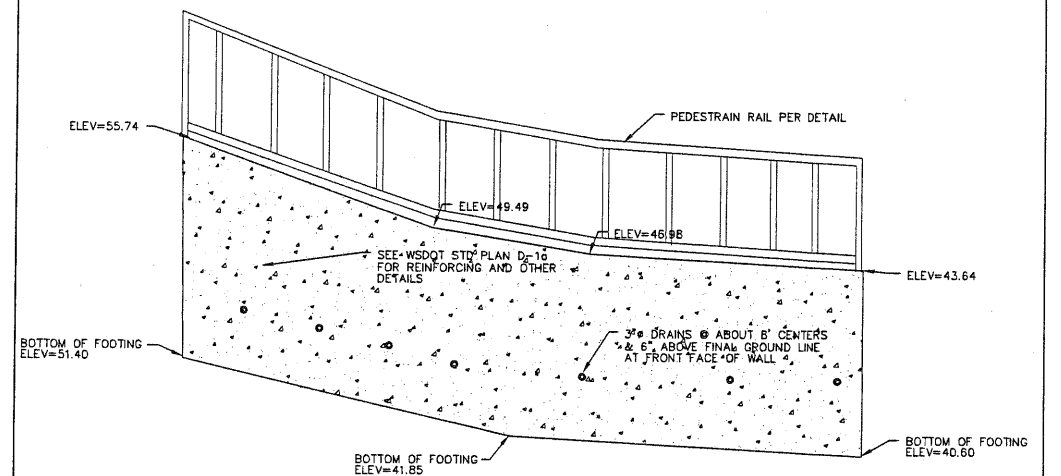


PEDESTRAIN RAIL DETAIL

NTS

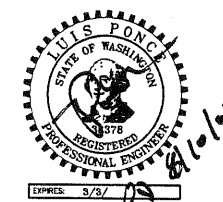
**ALTERNATE A1
RETAINING WALL TYPE 1**

NTS



**RETAINING WALL MAIN STREET
APPROX STA 5+35 TO 9+08 RT**

NTS



DESIGNED BY
LP
DRAWN BY
LMC
CHECKED BY



REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS

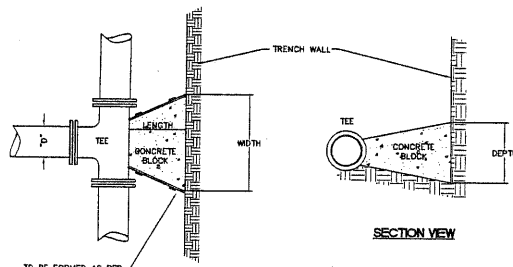
PO Box 978 423 Front St., Ste 201 Ph (360) 354-3687
Lynden, Washington 98264 Fax (360) 354-0407

NO.	DATE	REVISION	BY
	8-10-07	ADDENDUM 1	LP

CITY OF FERNDAL
2095 MAIN STREET
FERNDAL, WA 98248

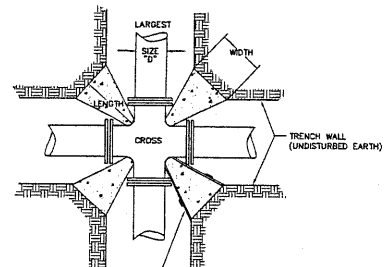
**DOUGLAS AND MAIN
STREET IMPROVEMENTS
DETAILS**

JOB# / DWG	DATE
00008 00008.DET	7-20-07
SCALE	SHEET
n/a	15 of 17



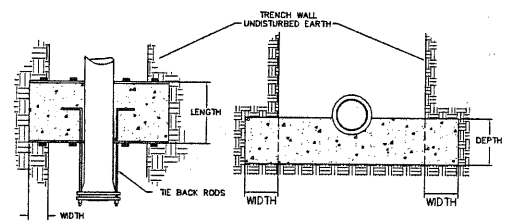
"D"	WIDTH	DEPTH	LENGTH	VOL.
6"	1'-6"	1'-6"	12'	3.0
8"	2'-0"	2'-0"	12'	4.5
10"	2'-6"	2'-6"	12'	7.0
12"	3'-0"	3'-0"	12'	14.0

VOL. = Approx. Volume of Blocking Material Required in cu. ft.
 SOIL BEARING CAPACITY 1500 PSF MINIMUM
 100 P.S.I. OPERATING PRESSURE



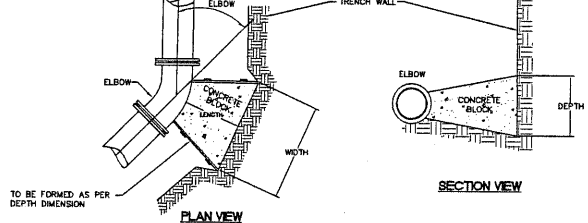
"D"	WIDTH	DEPTH	LENGTH	VOL.	X4 blocks/joint
6"	1'-0"	1'-0"	12'	0.63	2.50 cu. ft.
8"	1'-3"	1'-3"	12'	1.00	4.01 cu. ft.
10"	1'-6"	1'-6"	12'	1.63	6.50 cu. ft.
12"	1'-9"	1'-9"	12'	3.05	12.19 cu. ft.

VOL. = Approx. Volume of Blocking Material Required in cu. ft.



"D"	WIDTH	DEPTH	LENGTH	VOL.	# OF RODS	ROD DIA.
6"	1'-6"	1'-6"	12'	7.5	2	1/2"
8"	2'-0"	2'-0"	18'	20.0	2	5/8"
10"	2'-6"	2'-6"	24'	37.5	2	3/4"
12"	2'-9"	2'-9"	24'	44.0	4	3/4"

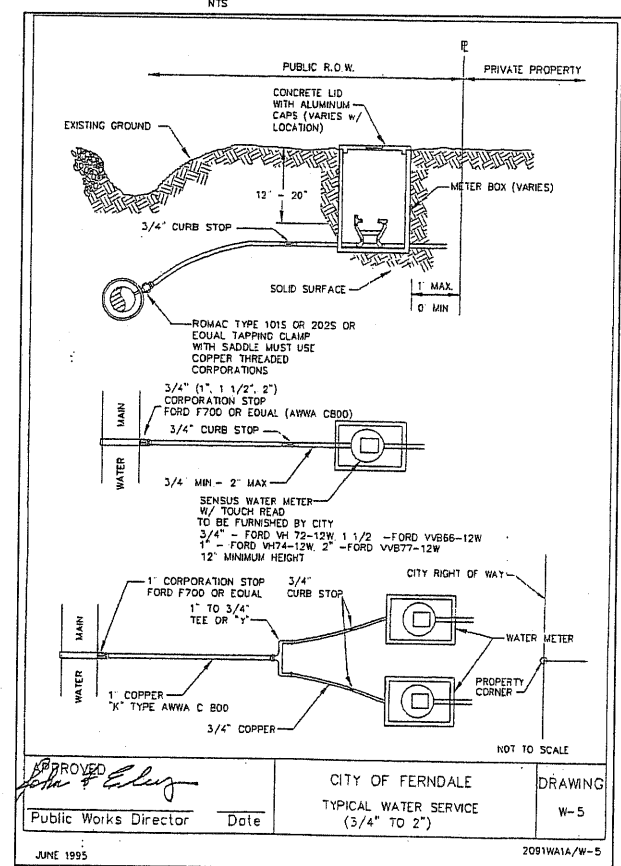
*VOL. = Approx. Volume of Blocking Material Required in cu. ft.
 RODS: A36 STEEL MINIMUM



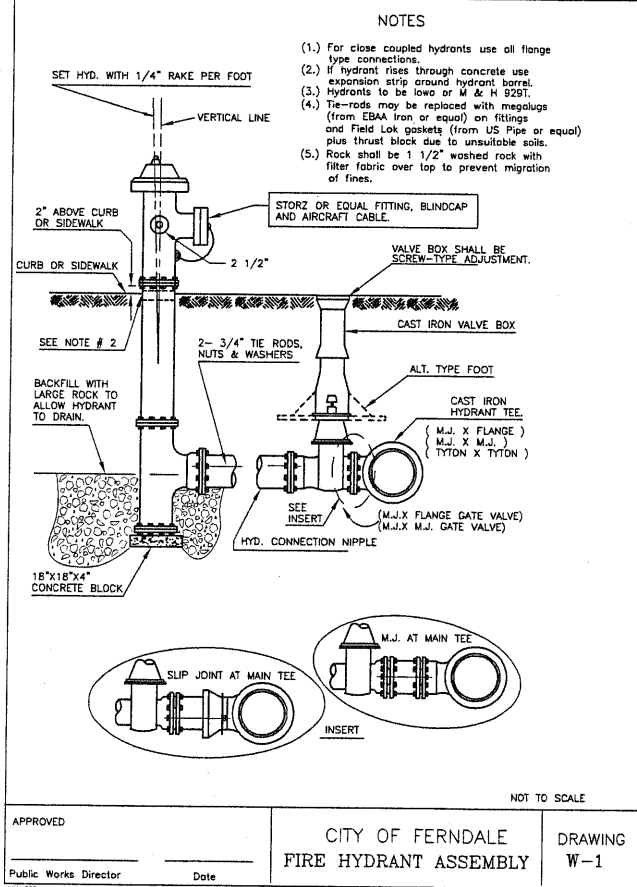
SIZE	LENGTH	11 1/4"	22 1/2"	45"	90"
6"	12"	1'-0"	1'-0"	1'-0"	1'-6"
8"	12"	1'-3"	1'-3"	1'-3"	1'-9"
10"	12"	1'-6"	1'-6"	1'-6"	2'-3"
12"	18"	2'-0"	2'-0"	2'-0"	3'-0"

VOL. = Approx. Volume of Blocking Material Required in cu. ft.

THRUST BLOCKING

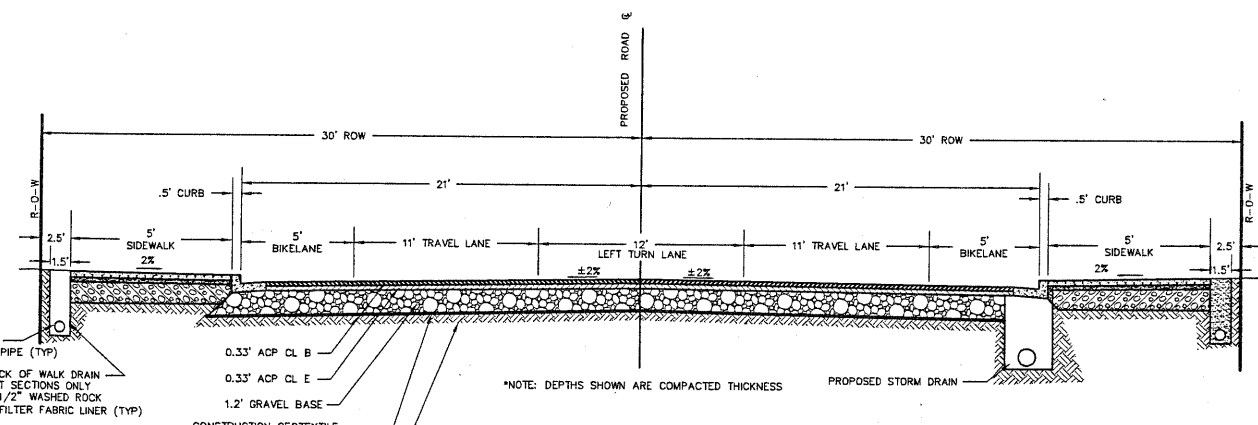


APPROVED: [Signature]
 Public Works Director
 CITY OF FERNDAL
 TYPICAL WATER SERVICE (3/4" to 2")
 DRAWING W-5
 JUNE 1995 2091WA1A/W-5

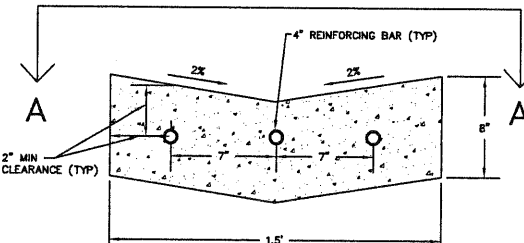


NOTES:
 (1) For close coupled hydrants use all flange type connections.
 (2) If hydrant rises through concrete use expansion strip around hydrant barrel.
 (3) Hydrants to be low or M & H 925T.
 (4) Tie-rods may be replaced with magalugs (from EBAK Iron or equal) on fittings and Field Lok gaskets (from US Pipe or equal) plus thrust block due to unsuitable soils.
 (5) Rock shall be 1 1/2" washed rock with filter fabric over top to prevent migration of fines.

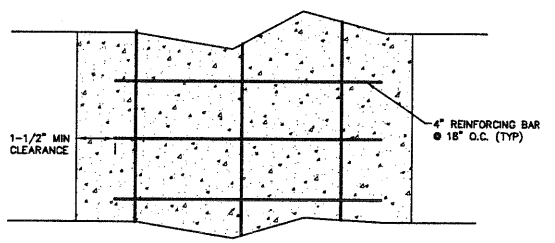
APPROVED: [Signature]
 Public Works Director
 CITY OF FERNDAL
 FIRE HYDRANT ASSEMBLY
 DRAWING W-1
 JUNE 2001



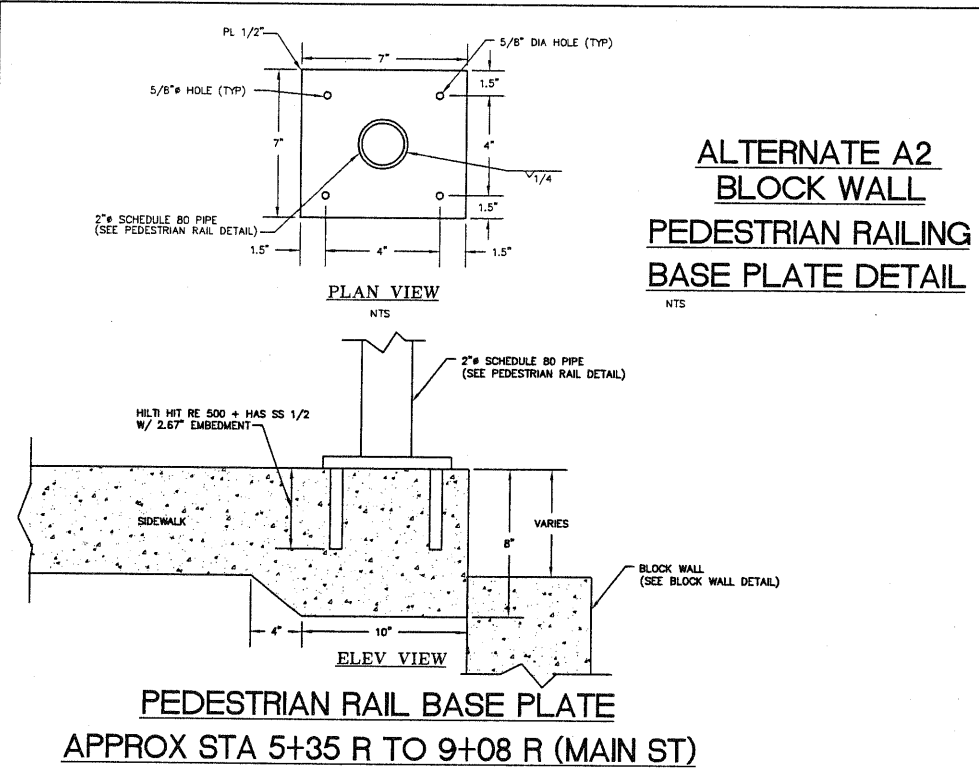
CROSS SECTION (TYP)



CEMENT CONCRETE GUTTER STA 6+72 L TO 8+01 L (MAIN ST)

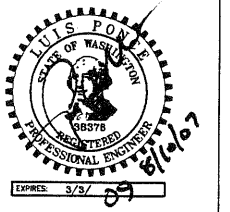


CEMENT CONCRETE GUTTER SECTION A-A



PEDESTRIAN RAIL BASE PLATE APPROX STA 5+35 R TO 9+08 R (MAIN ST)

ALTERNATE A2 BLOCK WALL PEDESTRIAN RAILING BASE PLATE DETAIL

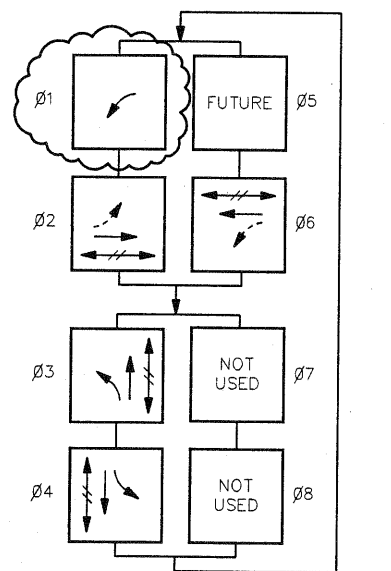


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LEGEND

- VEHICLE SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- LIGHT STANDARD AND LUMINAIRE
- MAST ARM AND LUMINAIRE
- SIGNAL STANDARD, TYPE III OR SD
- TYPE 1 JUNCTION BOX, J-11a
- TYPE 2 JUNCTION BOX, J-11a
- 30"x60" JUNCTION BOX, COB EL-452
- PREEMPTION DETECTOR
- VIDEO DETECTION CAMERA
- CONDUIT
- 6" TYPE 2 INDUCTION LOOP, WSDOT J-8a, COB EL-462
- VIDEO DETECTION ZONE
- CONTROLLER CABINET
- SERVICE CABINET, COB EL-444
- SIGNAL STANDARD-MOUNTED SIGN SEE SHEET TS3
- SIGNAL STANDARD NO.
- CONSTRUCTION NOTE
- WIRE NOTE

SIGNAL PHASING DIAGRAM



DISPLAY NOTES:

- ALL VEHICLE SIGNAL HEADS SHALL BE CONVENTIONAL TYPE, POWDER COATED DARK OLIVE GREEN, WITH SQUARE DOORS, ALL LED INDICATIONS, VISORS AND 5" BACKPLATES. HEADS 11/61, 33, 41, 42, 62 SHALL USE TUNNEL VISORS. HEADS 21, 22, 31, 32 SHALL USE ANGLED VISORS. ALL HEADS SHALL USE MOUNTING TYPE M WITH PLUMBIZERS LOCATED BETWEEN THE RED AND YELLOW SECTIONS, EXCEPT HEAD 33 WHICH SHALL USE MOUNTING TYPE D. USE STANDARD PLANS J-6f, J-6g AND J-6h.
- ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE LED SYMBOLIC LEGENDS AND 'Z' CRATE VISORS. ALL HEADS SHALL USE MOUNTING TYPE E, EXCEPT HEAD 68 WHICH SHALL USE MOUNTING TYPE D. USE STANDARD PLAN J-6f.

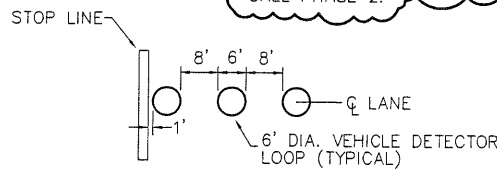
BREAKER SCHEDULE

SINGLE PHASE 120/240 VOLT SERVICE

SERVICE/CIRCUITS	MAIN BREAKER	BRANCH BREAKER	CONTACTOR	VOLTAGE
MAIN	100 AMPS			
PE CONTROL		15 AMPS		120
RECEPTACLE		20 AMPS		120
SIGNAL		50 AMPS		120
ILLUM. A		40 AMPS	60 AMPS	240
ILLUM. (SPARE)		40 AMPS	60 AMPS	240

STOP LINE LOOP LAYOUT DETAIL

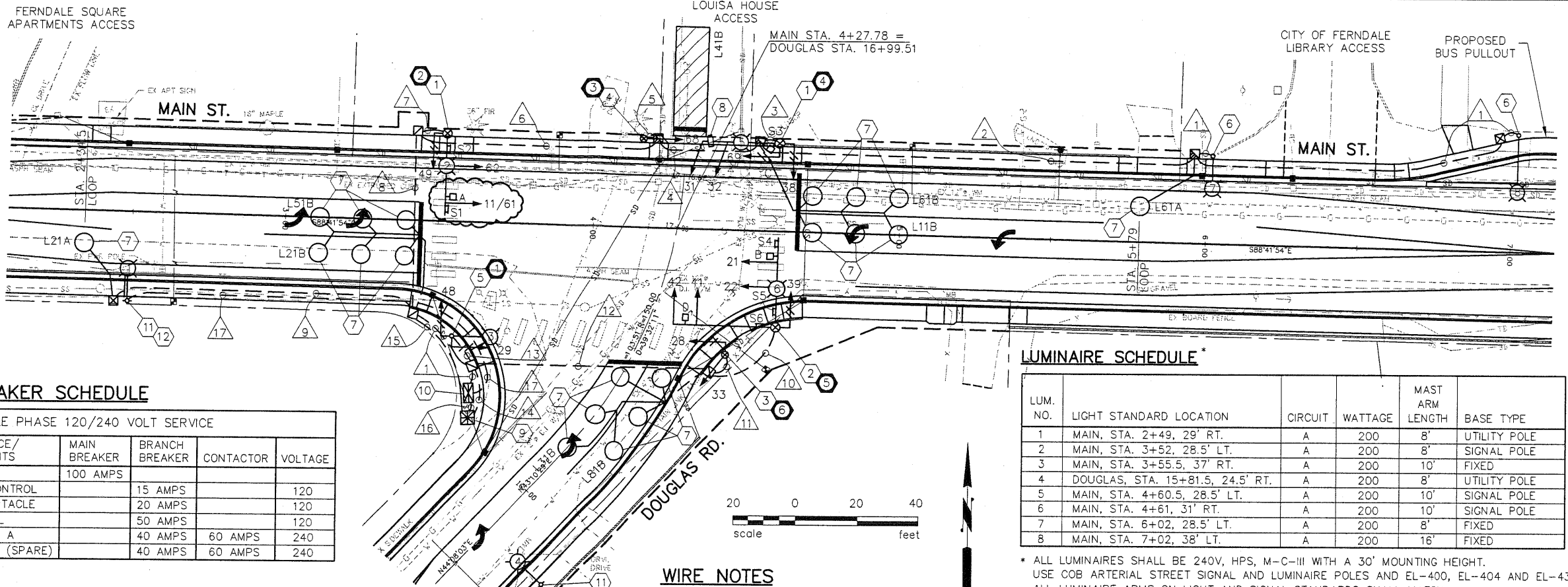
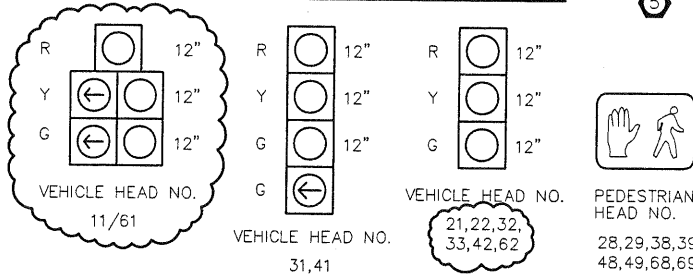
NOTE: THE THREE LOOPS IN EACH LANE SHALL BE SERIES CONNECTED IN THE JUNCTION BOX. L81B SHALL BE PROGRAMMED IN THE CONTROLLER TO CALL PHASE 3. L51B SHALL CALL PHASE 2.



PREEMPTION SCHEDULE

CIRCUIT	PHASES
A	1+6
B	2+6
C	3
D	4

SIGNAL DISPLAY SCHEDULE



LUMINAIRE SCHEDULE*

LUM. NO.	LIGHT STANDARD LOCATION	CIRCUIT	WATTAGE	MAST ARM LENGTH	BASE TYPE
1	MAIN, STA. 2+49, 29' RT.	A	200	8'	UTILITY POLE
2	MAIN, STA. 3+52, 28.5' LT.	A	200	8'	SIGNAL POLE
3	MAIN, STA. 3+55.5, 37' RT.	A	200	10'	FIXED
4	DOUGLAS, STA. 15+81.5, 24.5' RT.	A	200	8'	UTILITY POLE
5	MAIN, STA. 4+60.5, 28.5' LT.	A	200	10'	SIGNAL POLE
6	MAIN, STA. 4+61, 31' RT.	A	200	10'	SIGNAL POLE
7	MAIN, STA. 6+02, 28.5' LT.	A	200	8'	FIXED
8	MAIN, STA. 7+02, 38' LT.	A	200	16'	FIXED

* ALL LUMINAIRES SHALL BE 240V, HPS, M-C-III WITH A 30' MOUNTING HEIGHT. USE COB ARTERIAL STREET SIGNAL AND LUMINAIRE POLES AND EL-400, EL-404 AND EL-432. ALL LUMINAIRE ARMS ON LIGHT AND SIGNAL STANDARDS SHALL MATCH.

CONSTRUCTION NOTES

- CONSTRUCT FOUNDATION AND INSTALL TYPE III SIGNAL STANDARD WITH RECESSED TERMINAL COMPARTMENT, SIGNAL HEADS, EVPE DETECTOR, PPB-M(S), LUMINAIRE AND TRAFFIC SIGNS.
- CONSTRUCT FOUNDATION AND INSTALL TYPE SD SIGNAL STANDARD WITH RECESSED TERMINAL COMPARTMENT, SIGNAL HEADS, EVPE DETECTORS, PPB-M AND TRAFFIC SIGNS.
- CONSTRUCT FOUNDATION AND INSTALL TYPE I SIGNAL STANDARD, SIGNAL HEADS AND PPB-M.
- CONSTRUCT FOUNDATION AND INSTALL TYPE PS SIGNAL STANDARD, SIGNAL HEAD AND PPB-M.
- CONSTRUCT FOUNDATION AND INSTALL LIGHT STANDARD, LUMINAIRE, SIGNAL HEADS AND PPB-M'S.
- CONSTRUCT FOUNDATION AND INSTALL LIGHT STANDARD AND LUMINAIRE.
- INSTALL 6' DIAMETER TYPE 2 INDUCTION LOOP. USE WSDOT J-8a, COB EL-462 AND STOP LINE LOOP LAYOUT DETAIL ON THIS SHEET.
- INSTALL VIDEO DETECTION CAMERA AND ARTICULATED ARM ON SIGNAL MAST ARM PER MANUFACTURER'S RECOMMENDATIONS.
- CONSTRUCT FOUNDATION/PAD AND INSTALL EIGHT PHASE NEMA SIGNAL CONTROLLER AND TYPE P CABINET (AGENCY-SUPPLIED) WITH DOOR FACING WEST. USE COB EL-436. INSTALL EVP AND VIDEO DETECTION EQUIPMENT IN CONTROLLER CABINET
- CONSTRUCT FOUNDATION AND INSTALL 120/240 VOLT SINGLE PHASE ELECTRICAL SERVICE CABINET WITH DOOR FACING WEST. USE COB EL-444 AND BREAKER SCHEDULE ON THIS SHEET.
- COORDINATE FOR INSTALLATION OF MAST ARM AND LUMINAIRE ON RELOCATED UTILITY POLE PER LUMINAIRE SCHEDULE BY UTILITY COMPANY.
- ROUTE SERVICE ENTRANCE CONDUIT AND CONDUCTORS TO AND UP RELOCATED UTILITY POLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE POWER CONNECTION WITH THE UTILITY COMPANY THROUGH THE ENGINEER.

WIRE NOTES

CONDUCTORS	CONDUIT SIZE	CONDUIT X-SECTION (IN ²)	CONDUIT FILL @ 28% OCC. (IN ²)	ACTUAL CONDUIT FILL (IN ²)	COMMENTS
CITY OF BELLINGHAM 20C (820 IN ²)	2"	3.36	0.87	0.17	
MSA 10C (1,280 IN ²)	2"	3.36	0.87	0.17	
SM 30GH EVPN (082 IN ²)	2"	3.36	0.87	0.10	
MSA 20SH (114) (096 IN ²)	3"	7.38	1.92	0.69	SIGNAL STANDARD NO. 4
NO. 8 BARE GRND (1020 IN ²)	2"	3.36	0.87	0.17	
NO. 2 USE/MLP (132 IN ²)	2"	3.36	0.87	0.17	
NO. 6 USE/MLP (1075 IN ²)	2"	3.36	0.87	0.17	
SC VIDEO CABLE (070 IN ²)	2"	12.72	3.31	2.29	
	2"	3.36	0.87	0.17	
	2"	3.36	0.87	0.10	
	3"	7.38	1.92	1.11	SIGNAL STANDARD NO. 5
	2"	3.36	0.87	0.17	
	2"	3.36	0.87	0.17	SIGNAL STANDARD NO. 6
	4"	12.72	3.31	1.30	
	2"	3.36	0.87	0.17	
	2"	3.36	0.87	0.65	SIGNAL STANDARD NO. 1
	4"	12.72	3.31	1.21	
	4"	12.72	3.31	0.57	
	4"	12.72	3.31	1.49	
	4"	12.72	3.31	1.00	
	2"	3.36	0.87	0.17	CONTROLLER POWER SERVICE
	2"	3.36	0.87	0.40	

DATE	REVISION	BY	APP'D
7/11/07	5/17/07 CITY COMMENTS AND CHANGED TO VIDEO DETECTION ON SB APPROACH		RMH
7/20/07	REVISIONS FOR ADDED EBTL POCKET		RMH
5/3/07	SHIFTED LUMINAIRE #7 & JUNCTION BOX		RMH
8/10/07	BID ADDENDUM #1: PROTECTED/PERMISSIVE WBLT PHASING		RMH

CITY OF FERDALE
2095 Main Street
Ferndale, Washington 98248

ROBERT MARTIN HERMAN
PROFESSIONAL ENGINEER
5-10-07
EXPIRES 01/31/09

HTE HERMAN TRAFFIC ENGINEERING
15324 Southeast 133rd Court, Renton, Washington 98059
425-277-1740 tel. 425-277-5718 fax hte@comcast.net

MAIN STREET / DOUGLAS ROAD IMPROVEMENTS
CITY OF FERDALE

TRAFFIC SIGNAL PLAN

TS1
SHEET OF SHEETS

AC (-)	BUS	PHASE 1 VEH	PHASE 2 VEH	PHASE 3 VEH	PHASE 4 VEH	PHASE 5 VEH	PHASE 6 VEH	PHASE 7 VEH	PHASE 8 VEH	PHASE 2 PED	PHASE 3 PED	PHASE 4 PED	PHASE 6 PED	OLA VEH	OLB VEH	OLC VEH	OLD VEH																													
200	211	212	221	222	223	231	232	233	241	242	243	251	252	253	261	262	263	271	272	273	281	282	283	224	225	234	235	244	245	264	265	201	288	289	290	291	292	293	294	295	296	297	298	299		
WB	W	GW	YW	RW	G	Y	R	GBL	YBL	RBL	GB	YB	RB	GB	YB	RB	GB	YB	RB	GB	YB	RB	GB	YB	RB	GB	YB	RB	GB	YB	RB	G-	Y-	R-	G-	Y-	R-	G-	Y-	R-	G-	Y-	R-	G-	Y-	R-

ALL SPARE CONDUCTORS SHALL BE LABELED AND TIED BACK

POLE #4 - ORANGE

TAPE LOOP #	COLOR	BLACK	WHITE
L11B	10R	813	814
L61B	20R	863	864
L61A	10R,1W	861	862

TYPE P CONTROLLER

CABINET (AGENCY-SUPPLIED)

VIDEO DETECTION CAMERA

EVPE PHASES 2&6 OPTICOM A	521	O	711	PPB PHASE 1
EVPE PHASES 2&6 OPTICOM B	524	O	712	PPB PHASE 2
EVPE PHASE 3 OPTICOM C	527	O	713	PPB PHASE 3
EVPE PHASE 4 OPTICOM D	531	Y	714	PPB PHASE 4
PHASE 1 L11A	811	B	715	PPB PHASE 5
PHASE 1 L11B	812	W	716	PPB PHASE 6
PHASE 2 L21A	821	B	717	PPB PHASE 7
PHASE 2 L21B	822	W	718	PPB PHASE 8
PHASE 2 L21C	921	B	719	PPB PHASE 9
PHASE 2 C21	922	W	720	PPB PHASE 10
PHASE 2 L22A	923	B	721	PPB PHASE 11
PHASE 2 L22B	924	W	722	PPB PHASE 12
PHASE 2 L22C	925	B	723	PPB PHASE 13
PHASE 2 C22	926	W	724	PPB PHASE 14
PHASE 3 L31B	833	B	725	PPB PHASE 15
PHASE 3 L32B	834	W	726	PPB PHASE 16
PHASE 4 L41A	841	B	727	PPB PHASE 17
PHASE 4 L41B	842	W	728	PPB PHASE 18
PHASE 4 L41C	843	B	729	PPB PHASE 19
PHASE 4 C41	844	W	730	PPB PHASE 20
PHASE 4 L42A	845	B	731	PPB PHASE 21
PHASE 4 L42B	846	W	732	PPB PHASE 22
PHASE 4 L42C	847	B	733	PPB PHASE 23
PHASE 4 C42	848	W	734	PPB PHASE 24

POLE #1 - BROWN

TAPE LOOP #	COLOR	BLACK	WHITE
L51B	1BR	853	854
L21B	2BR	823	824
L21A	1BR,1W	821	822

POLE #5 - YELLOW

TAPE LOOP #	COLOR	BLACK	WHITE
L31B	1Y	833	834
L32B	2Y	83B	839

DATE	REVISION	BY	APP'D
7/11/07	5/17/07 CITY COMMENTS AND CHANGED TO VIDEO DETECTION ON SB APPROACH		RMH
7/20/07	REVISIONS FOR ADDED EBLT POCKET SHIFTED LUMINAIRE #7 & JUNCTION BOX		RMH
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CITY OF FERNDAL
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ROBERT MARTIN HERVEY
PROFESSIONAL ENGINEER
30730
8-10-07
EXPIRES 01/31/09

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15324 Southeast 133rd Court, Renton, Washington 98059
425-277-1740 tel. 425-277-5718 fax hte@comcast.net

MAIN STREET / DOUGLAS ROAD IMPROVEMENTS
CITY OF FERNDALE
TRAFFIC SIGNAL WIRING DIAGRAM

