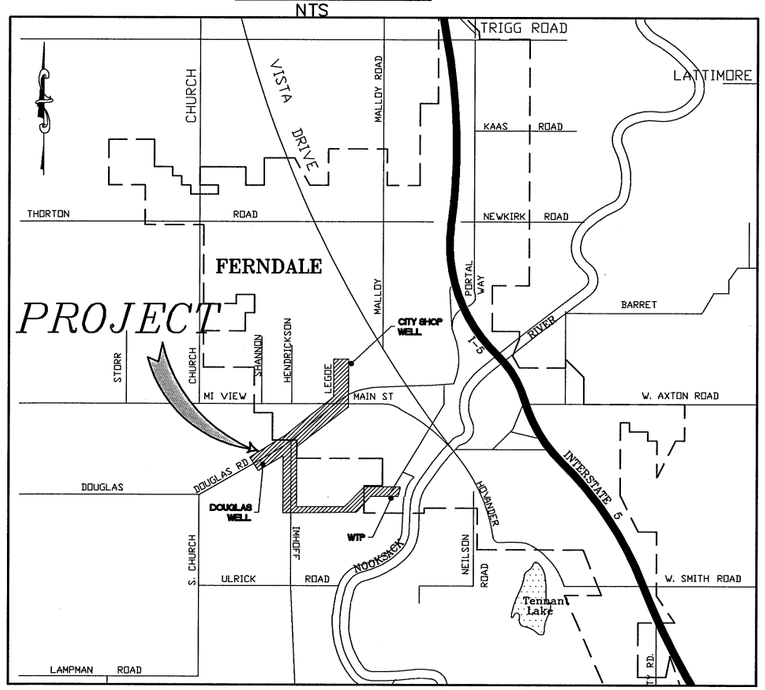
WELL WATER SUPPLY PROJECT
SCHEDULE B (WATER MAIN)

CITY OF FERNDALE

APRIL 2011

VICINITY MAP

NTS



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4 DEMOLITION & ESC
STA: 111+50 TO 123+64.8

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STA 200+00 TO 208+50

6 DEMOLITION & ESC
STA 208+50 TO 219+50

7 DEMOLITION & ESC
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LUIS A. PRINCE
STATE OF WASHINGTON
38378
REGISTERED PROFESSIONAL ENGINEER
4/20/11

DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
DRAWN BY BEK			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK
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CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT

COVER SHEET

JOB# / DWG 10020 SP1

SCALE H: N/A V: N/A

DATE 4-20-11

SHEET 1 of 33

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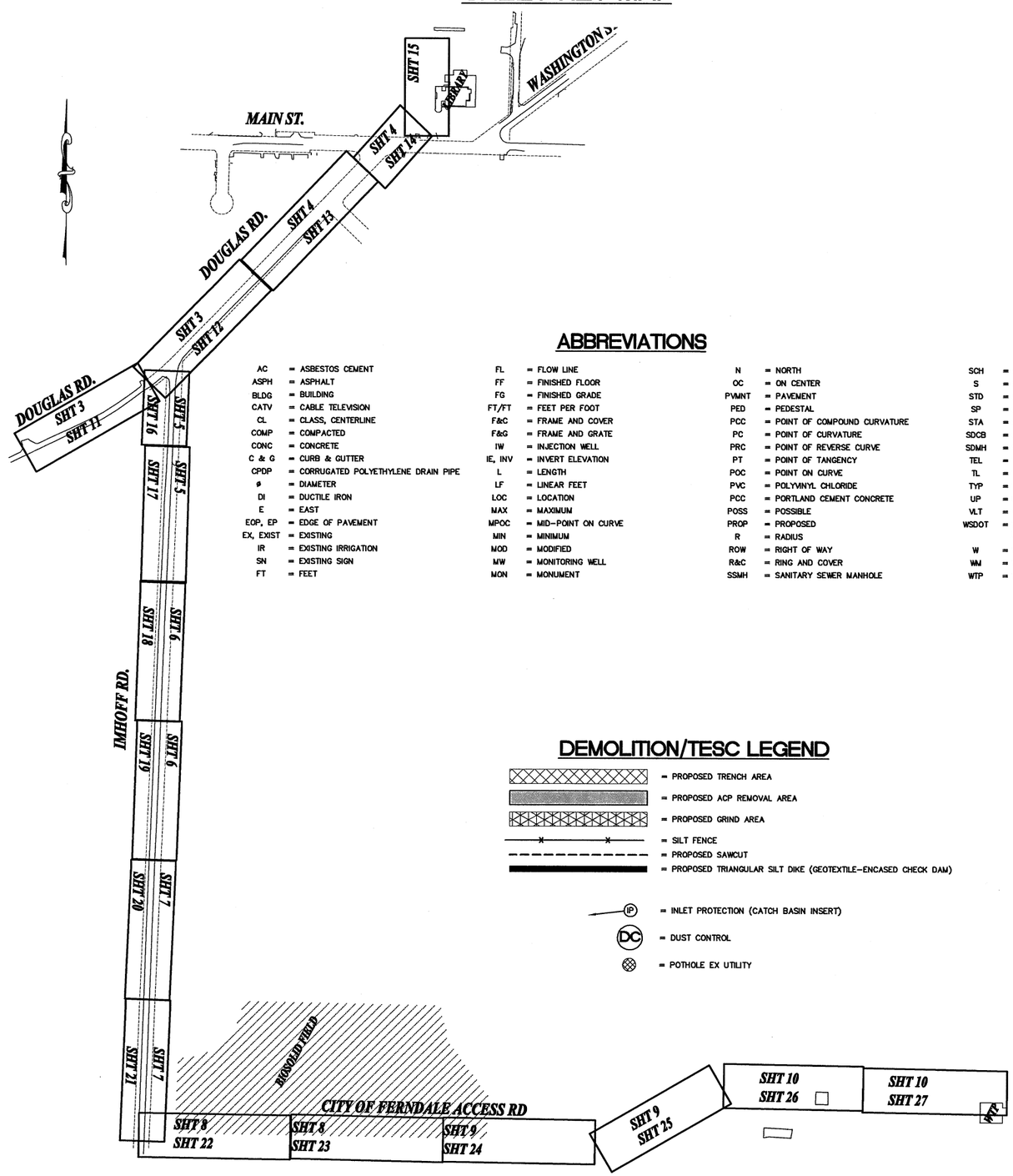
SHEET KEY MAP



ABBREVIATIONS

AC	= ASBESTOS CEMENT	FL	= FLOW LINE	N	= NORTH	SCH	= SCHEDULE
ASPH	= ASPHALT	FF	= FINISHED FLOOR	OC	= ON CENTER	S	= SOUTH
BLDG	= BUILDING	FG	= FINISHED GRADE	PVMNT	= PAVEMENT	STD	= STANDARD
CATV	= CABLE TELEVISION	FT/FT	= FEET PER FOOT	PED	= PEDESTAL	SP	= STANDARD PLAN
CL	= CLASS, CENTERLINE	F&C	= FRAME AND COVER	PCC	= POINT OF COMPOUND CURVATURE	STA	= STATION
COMP	= COMPACTED	F&G	= FRAME AND GRATE	PC	= POINT OF CURVATURE	SDCB	= STORM DRAIN CATCH BASIN
CONC	= CONCRETE	IW	= INJECTION WELL	PRC	= POINT OF REVERSE CURVE	SDMH	= STORM DRAIN MANHOLE
C & G	= CURB & GUTTER	IE, INV	= INVERT ELEVATION	PT	= POINT OF TANGENCY	TEL	= TELEPHONE
CPDP	= CORRUGATED POLYETHYLENE DRAIN PIPE	L	= LENGTH	POC	= POINT ON CURVE	TL	= TRAFFIC LOOP
ø	= DIAMETER	LF	= LINEAR FEET	PVC	= POLYVINYL CHLORIDE	TYP	= TYPICAL
DI	= DUCTILE IRON	LOC	= LOCATION	PCC	= PORTLAND CEMENT CONCRETE	UP	= UTILITY POLE
E	= EAST	MAX	= MAXIMUM	POSS	= POSSIBLE	VLT	= VAULT
EOP, EP	= EDGE OF PAVEMENT	MPOC	= MID-POINT ON CURVE	PROP	= PROPOSED	WSDOT	= WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
EX, EXIST	= EXISTING	MIN	= MINIMUM	R	= RADIUS		
IR	= EXISTING IRRIGATION	MOD	= MODIFIED	ROW	= RIGHT OF WAY	W	= WEST
SN	= EXISTING SIGN	MW	= MONITORING WELL	R&C	= RING AND COVER	WM	= WATER METER
FT	= FEET	MON	= MONUMENT	SSMH	= SANITARY SEWER MANHOLE	WTP	= WATER TREATMENT PLANT

DEMOLITION/TESC LEGEND

- = PROPOSED TRENCH AREA
- = PROPOSED ACP REMOVAL AREA
- = PROPOSED GRIND AREA
- = SILT FENCE
- = PROPOSED SAWCUT
- = PROPOSED TRIANGULAR SILT DIKE (GEOTEXTILE-ENCASED CHECK DAM)
- IP = INLET PROTECTION (CATCH BASIN INSERT)
- DC = DUST CONTROL
- = POTHOLE EX UTILITY

LEGEND

EXISTING

- BB = EX TOE OF BANK
- OH = EX OVERHEAD POWER
- = EX CONCRETE
- 95 = EX MAJOR CONTOUR
- 95 = EX MINOR CONTOUR
- = EX CULVERT
- = EX DITCH CL
- X = EX FENCE
- FO = EX FIBER OPTICS LINE
- G = EX GAS MAIN
- = EX GUARDRAIL
- = EX GRAVEL
- = EX PROPERTY BOUNDARY
- PR = EX POWER LINE
- = EX ROAD CL
- = EX EDGE OF PAVEMENT
- = EX RIGHT OF WAY
- = EX TREE LINE
- SD = EX STORM DRAIN
- TS = EX TRAFFIC SIGNAL CONDUCTOR
- SS = EX SANITARY SEWER
- = EX TRAFFIC STRIPING
- = EX PARKING STRIPING
- TB = EX TOP OF BANK
- T = EX TELEPHONE LINE
- OT = EX OVERHEAD TELEPHONE
- TV = EX TV LINE
- W = EX WATER LINE
- = EX SIDEWALK
- = EX WETLANDS BOUNDARY
- = EX EASEMENT
- = EX GRADE BREAK
- FM = EX SANITARY SEWER FORCE MAIN
- = EX FLOWLINE
- = EXISTING RR TRACKS
- = EX BUILDING
- = EX CONCRETE
- = EX BIOSOLID FIELD (PROTECTED)
- = EX MONITORING WELL
- = EX SOIL BORING LOCATION
- = EX GUY WIRE
- = EX STORM CLEANOUT
- = EX SEWER CLEANOUT
- = EX JBOX
- = EX STREET LIGHT
- MB = EX MAIL BOX
- = EX WATER METER
- = EX WATER SPIGOT
- = EX WATER VALVE
- = EX FIRE HYDRANT
- = EX TRAFFIC SIGNAL VAULT
- = EX SEWER MANHOLE
- = EX STORM DRAIN CATCH BASIN TYPE I
- = EX STORM DRAIN CATCH BASIN TYPE II
- = EX UTILITY POLE
- = EX GAS METER
- = EX TRANSFORMER PAD
- P = EX POWER VAULT
- = EX SIGN
- = EX TELEPHONE PEDESTAL
- = EX SIGNAL POLE AND ARM W/ LUMINAIRE
- = EX TREE
- = EX VEGETATION

PROPOSED

- = PROPOSED AUTOTURN
- = PROPOSED DITCH CL
- = PROPOSED BUILDING
- BB = PROPOSED TOE OF BANK
- = PROPOSED CONDUIT
- TB = PROPOSED TOP OF BANK
- 95 = PROPOSED MAJOR CONTOUR
- 95 = PROPOSED MINOR CONTOUR
- X = PROPOSED FENCE
- = PROPOSED HANDRAIL
- = PROPOSED CONSTRUCTION EASEMENT
- FM = PROPOSED SANITARY SEWER FORCE MAIN
- FO = PROPOSED FIBER OPTICS
- = PROPOSED GRADE BREAK
- = PROPOSED GUARDRAIL
- = PROPOSED GRAVEL
- = PROPOSED PATH
- = PROPOSED PARKING STRIPE
- = PROPOSED TRAFFIC STRIPE
- = PROPOSED ROCK WALL
- = PROPOSED BACK OF CURB
- = PROPOSED ROAD CL
- = PROPOSED ROAD EDGE OF PAVEMENT
- = PROPOSED ROAD FACE OF CURB
- = PROPOSED ROAD LIP OF GUTTER
- = PROPOSED RIGHT OF WAY
- = PROPOSED SAWCUT
- SD = PROPOSED STORM DRAIN
- SD = PROPOSED FIELD STORM DRAIN
- TS = PROPOSED TRAFFIC SIGNAL CONDUCTOR
- = PROPOSED SILT FENCE
- SS = PROPOSED SANITARY SEWER
- = PROPOSED TREE LINE
- W = PROPOSED WATERMAIN
- = PROPOSED SIDEWALK
- = PROPOSED PAVEMENT VALLEY
- = PROPOSED CLEAR AND GRUB / GRAVEL REMOVAL
- = PROPOSED ASPHALT/CONC. REMOVAL
- = PROPOSED GRIND
- =PROPOSED ROW TAKE
- = PROPOSED CONC. SIDEWALK / DRIVEWAY
- = PROPOSED ASPHALT
- = PROPOSED CDF
- = PROPOSED BUILDING
- = PROPOSED MONITORING WELL
- = PROPOSED STORM DRAIN CATCH BASIN TYPE I
- = PROPOSED STORM DRAIN CATCH BASIN TYPE II
- = PROP STORM CLEANOUT
- = PROPOSED STORM DRAIN INLET
- = PROPOSED SANITARY SEWER MANHOLE
- = PROPOSED SANITARY SEWER MANHOLE
- = PROPOSED SANITARY SEWER CLEAN OUT
- = PROPOSED HYDRANT
- = PROPOSED WATER METER
- = PROPOSED WATER VALVE
- = PROPOSED COUPLER
- = PROPOSED BLOW OFF VALVE
- = PROPOSED COMBINATION AIR/VAC RELEASE VALVE
- = PROPOSED UTILITY POLE
- = PROPOSED SIGN
- = FLOW ARROW
- = PROPOSED TREE

LUIS PASCE — STATE OF WASHINGTON — 38378 — REGISTERED PROFESSIONAL ENGINEER — 4/20/11

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DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK
CHECKED BY LP			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT

LEGEND

JOB# / DWG: 10020 SP1
SCALE: H:N/A V:N/A
DATE: 4-20-11
SHEET: 2 of 33

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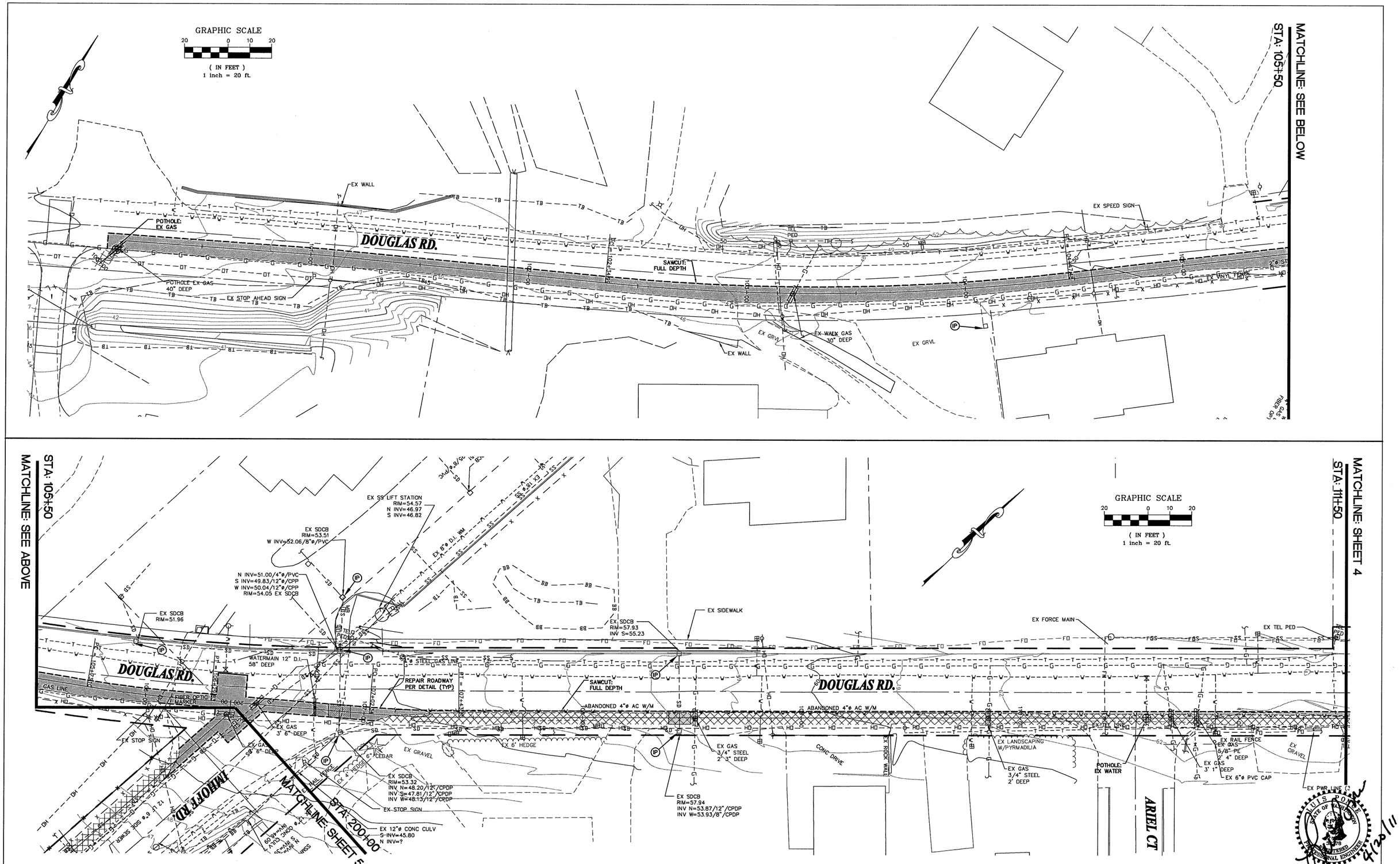

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1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK

CITY OF FERNDALE
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FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
DOUGLAS RD

JOB# / DWG	10020 SP1
SCALE	H:1"=20' V:N/A
DATE	4-20-11
SHEET	3 of 33

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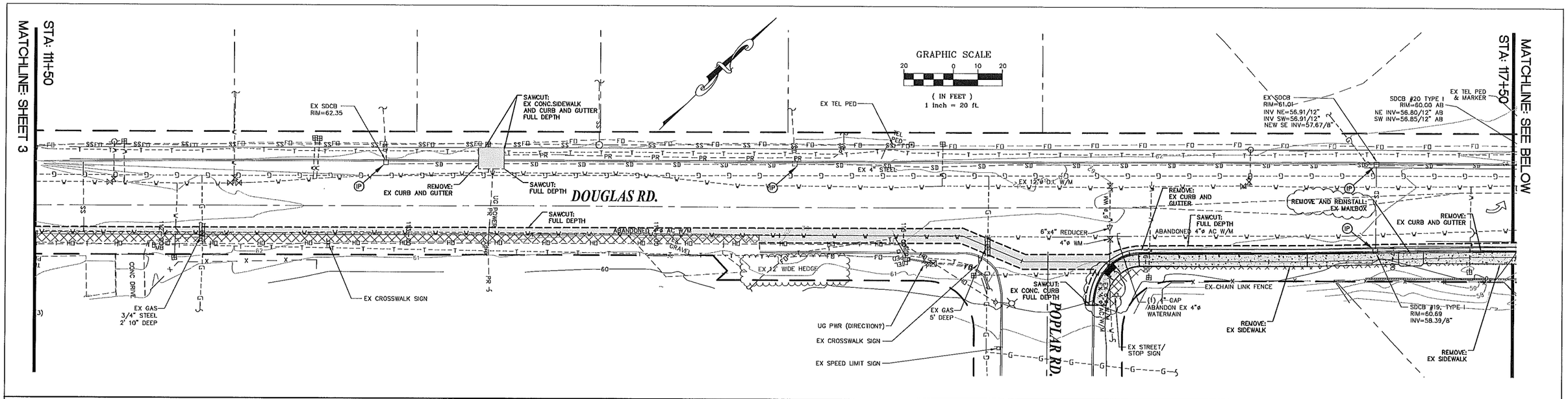

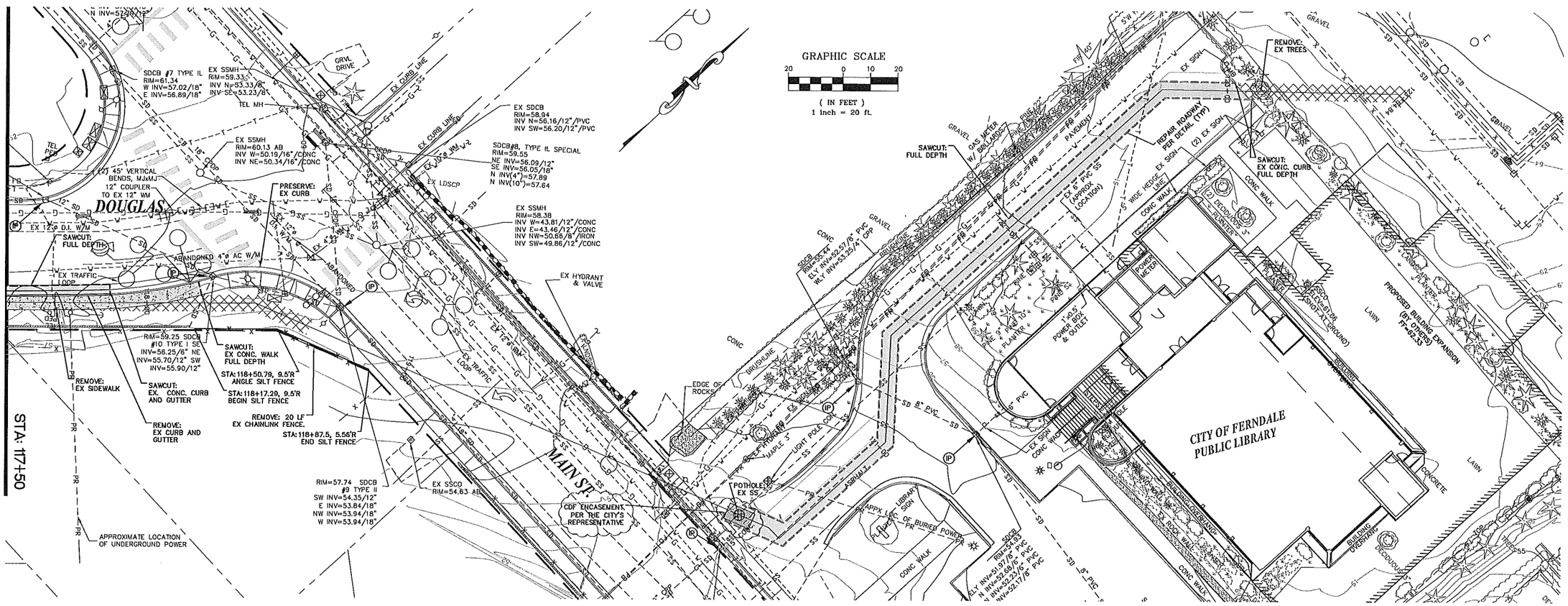

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NO.	DATE	REVISION	BY
1	5/5	ADDENDUM 1	BEK

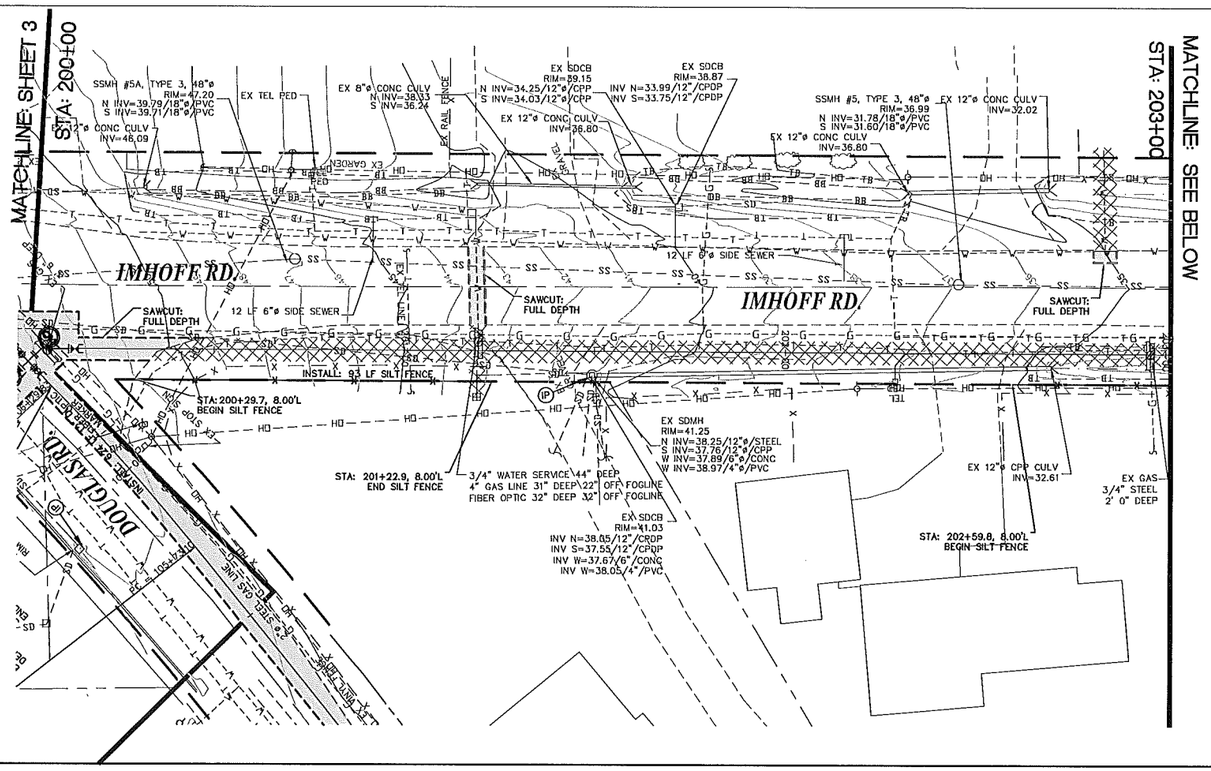
CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
DOUGLAS RD

JOB# / DWG	SCALE	DATE
10020 SP1.1ADD	H:1"=20' V:N/A	5/5/11

SHEET 4 of 33

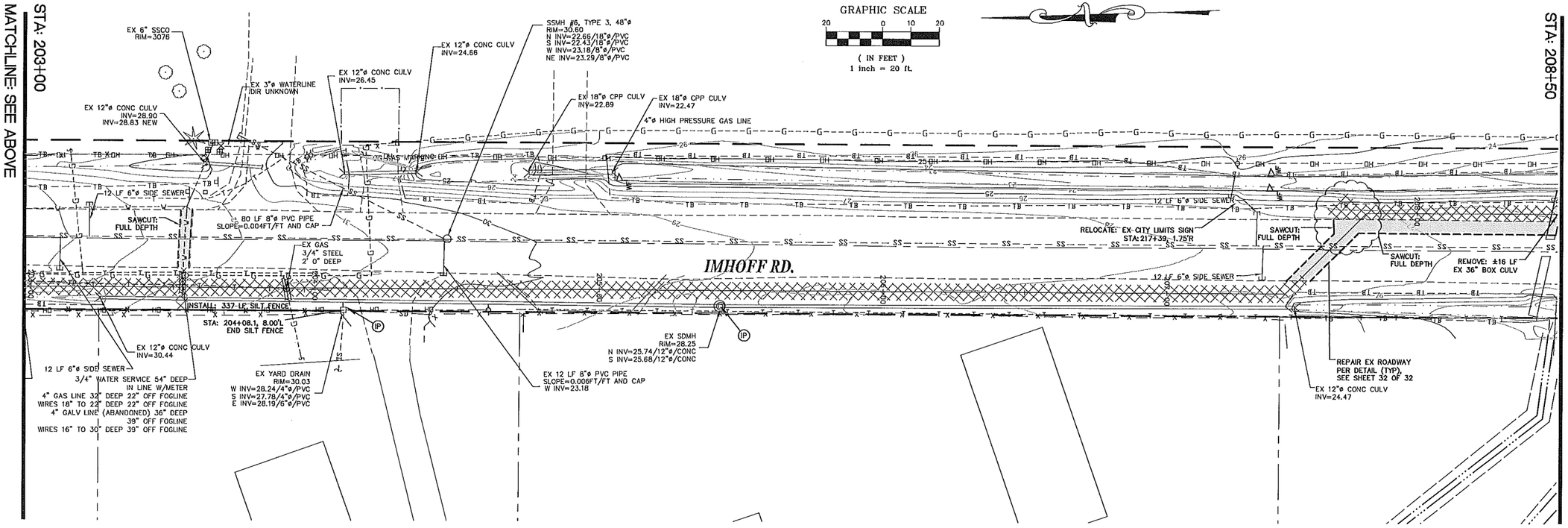
STATE OF WASHINGTON 38378 REGISTERED PROFESSIONAL ENGINEER
5/6/11



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

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		NO.	DATE	REVISION	BY

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PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
IMHOFF RD

JOB# / DWG	DATE
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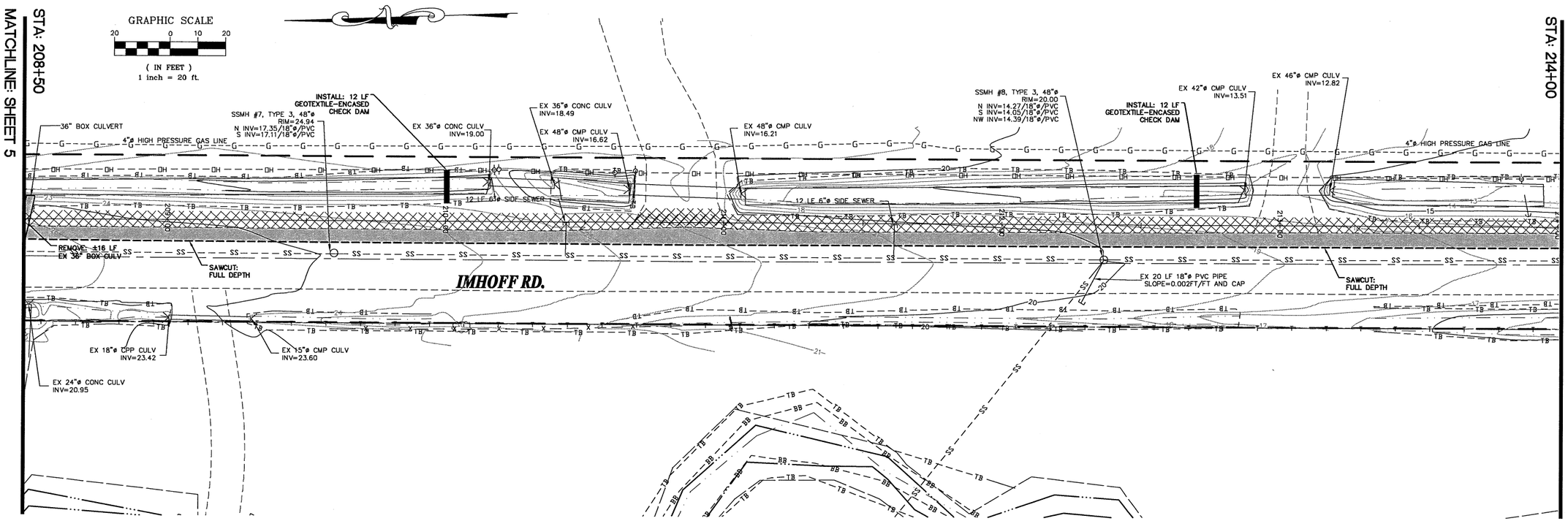
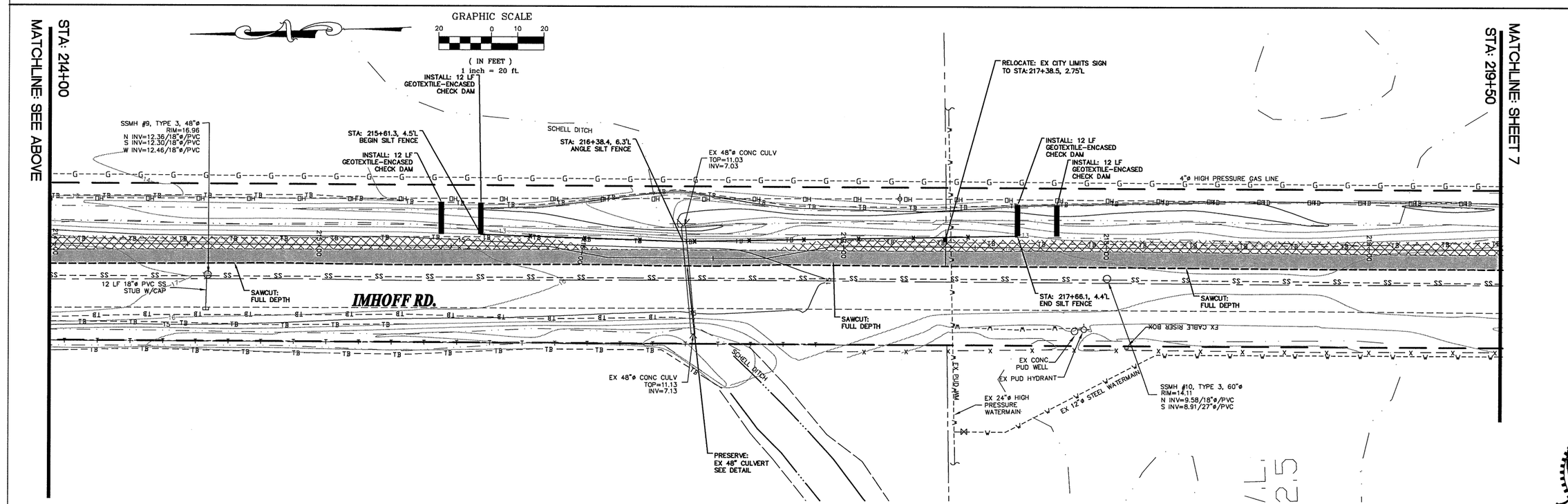
5/6/11





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CHECKED BY LP			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL BEK
			NO.	DATE	REVISION BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
IMHOFF RD

JOB# / DWG	DATE
10020 SP1	4-20-11
SCALE H:1"=20' V:N/A	SHEET 6 of 33

LUIS A. ROMO STATE OF WASHINGTON 37378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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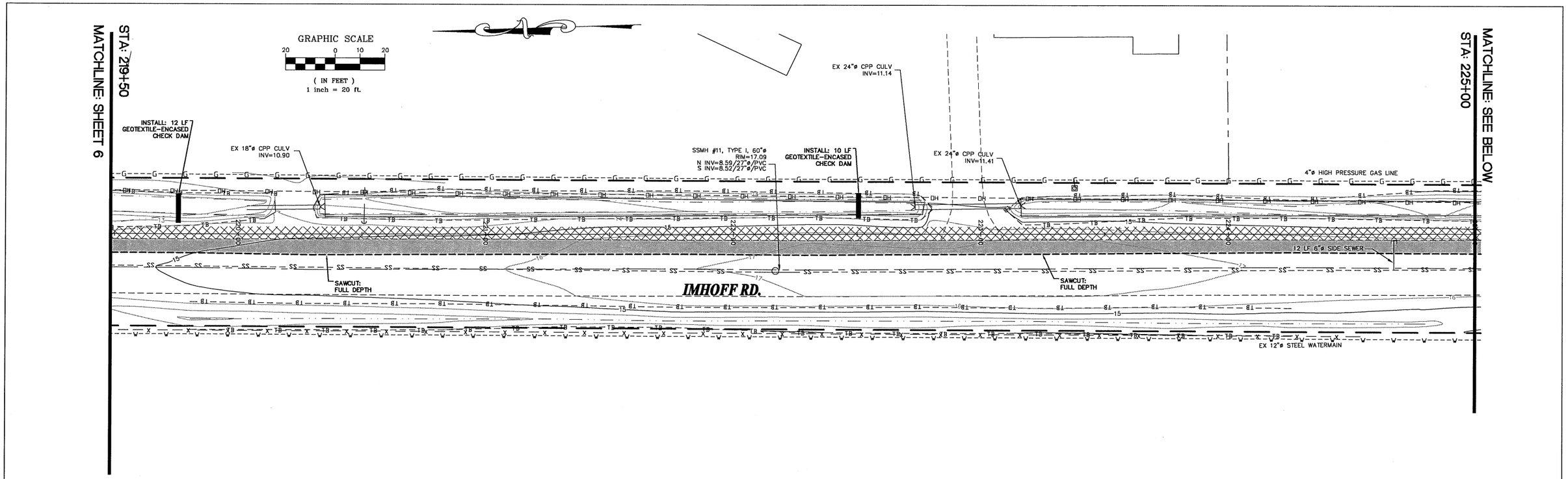

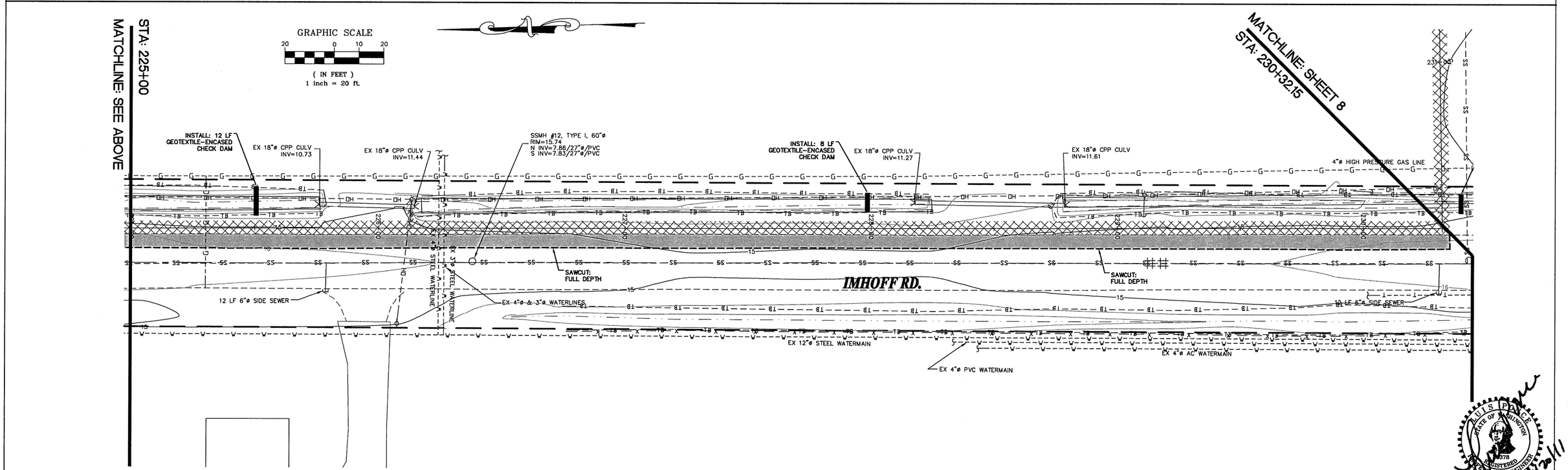

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CHECKED BY LP			NO.	DATE	REVISION	BY	

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
IMHOFF RD

JOB# / DWG		DATE
10020	SP1	4-20-11
SCALE H:1"=20' V:N/A		SHEET 7 of 33

LUIS E. PINCE STATE OF WASHINGTON 37378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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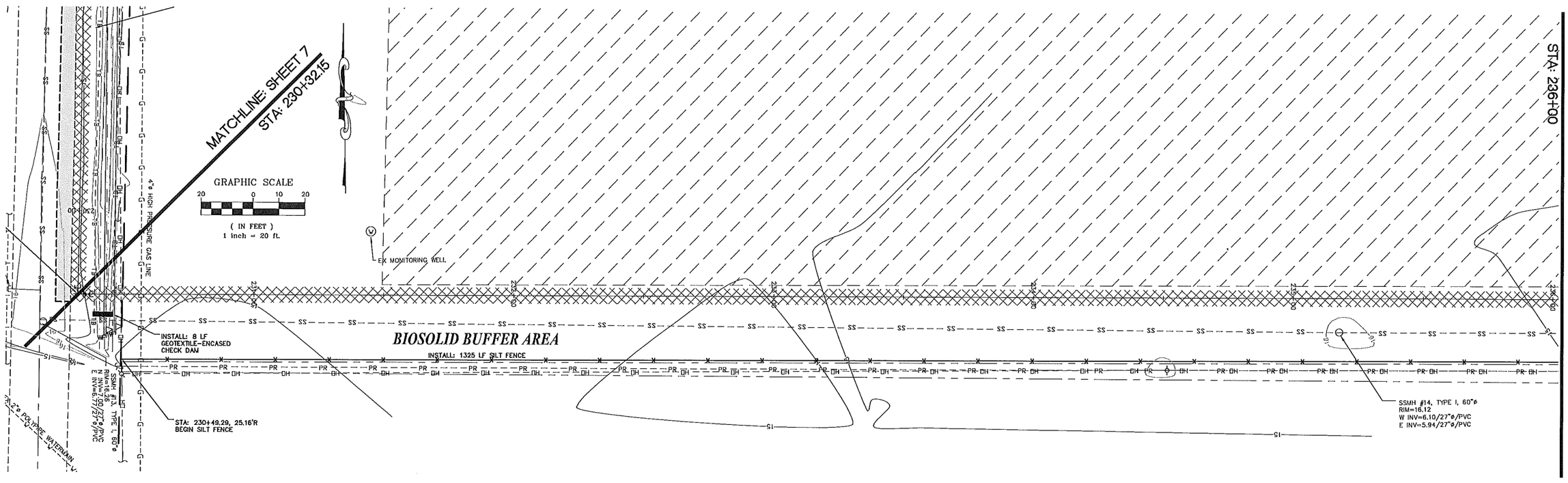

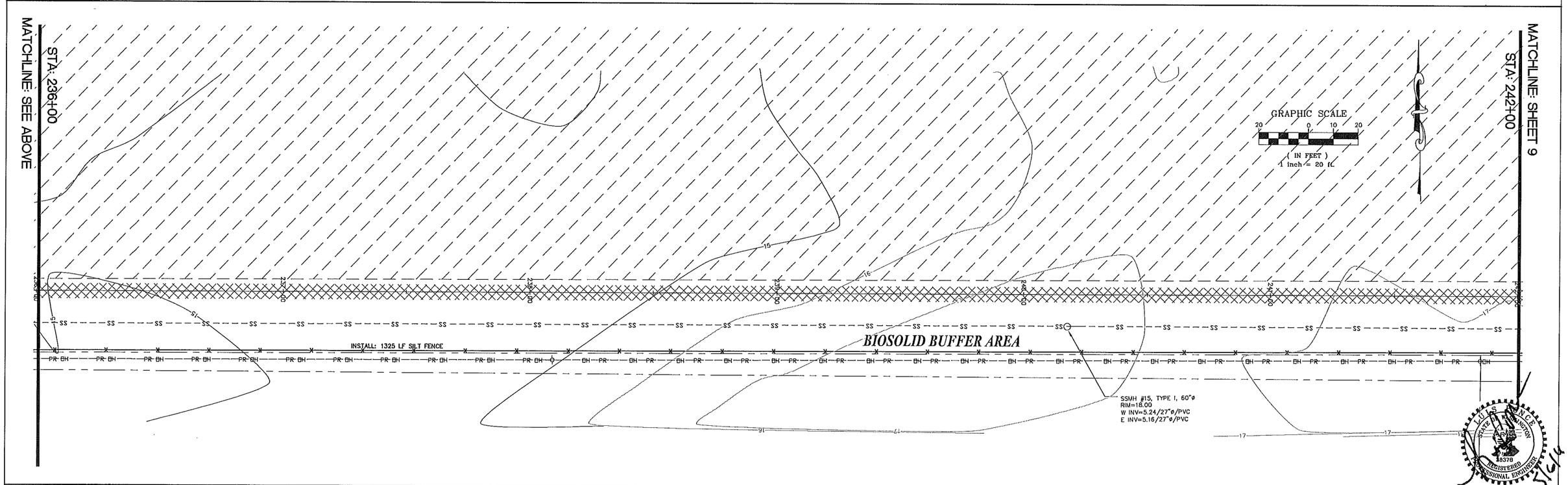

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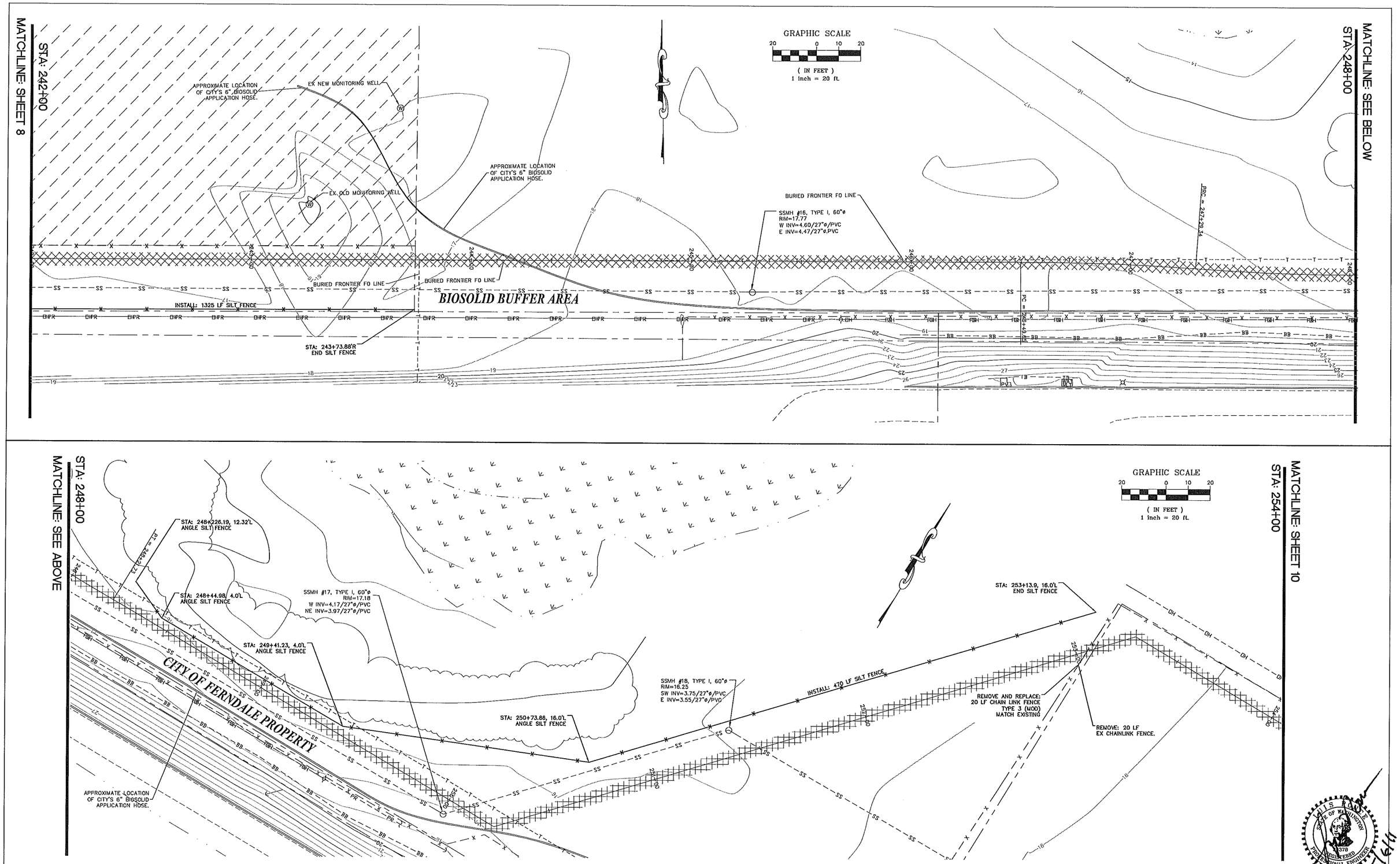
NO.	DATE	REVISION	BY
1	5/5	ADDENDUM 1	BEK

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
BIOSOLID BUFFER AREA

JOB# / DWG	DATE
10020 SP1.1ADD	5/5/11
SCALE H:1"=20' V:N/A	SHEET 8 of 33



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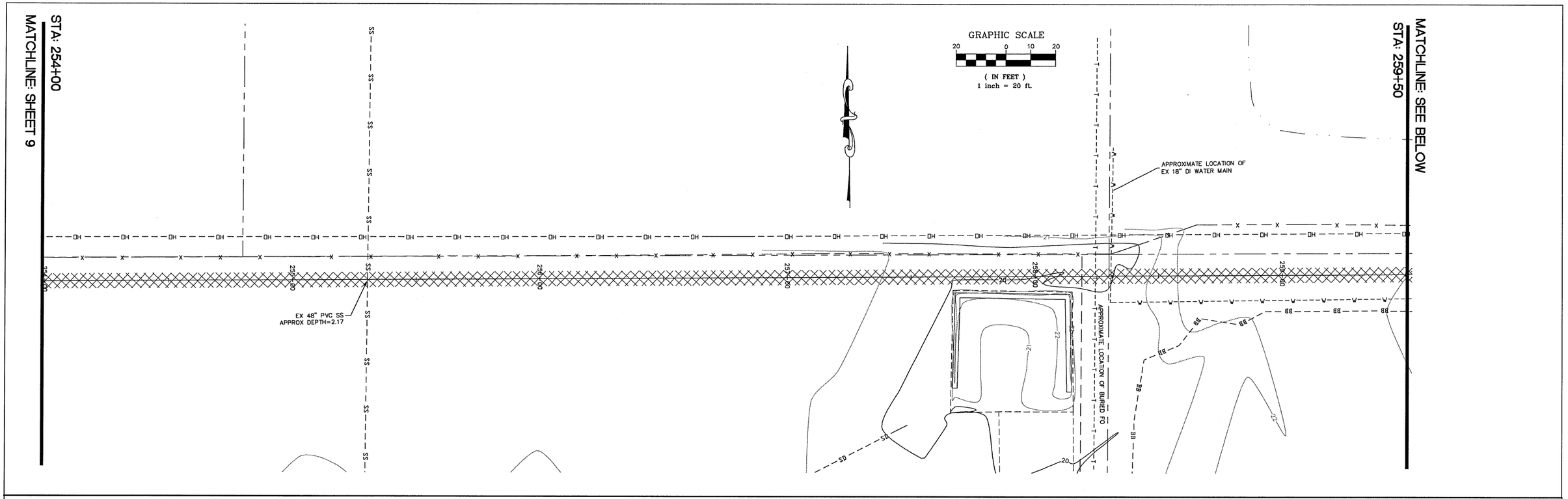
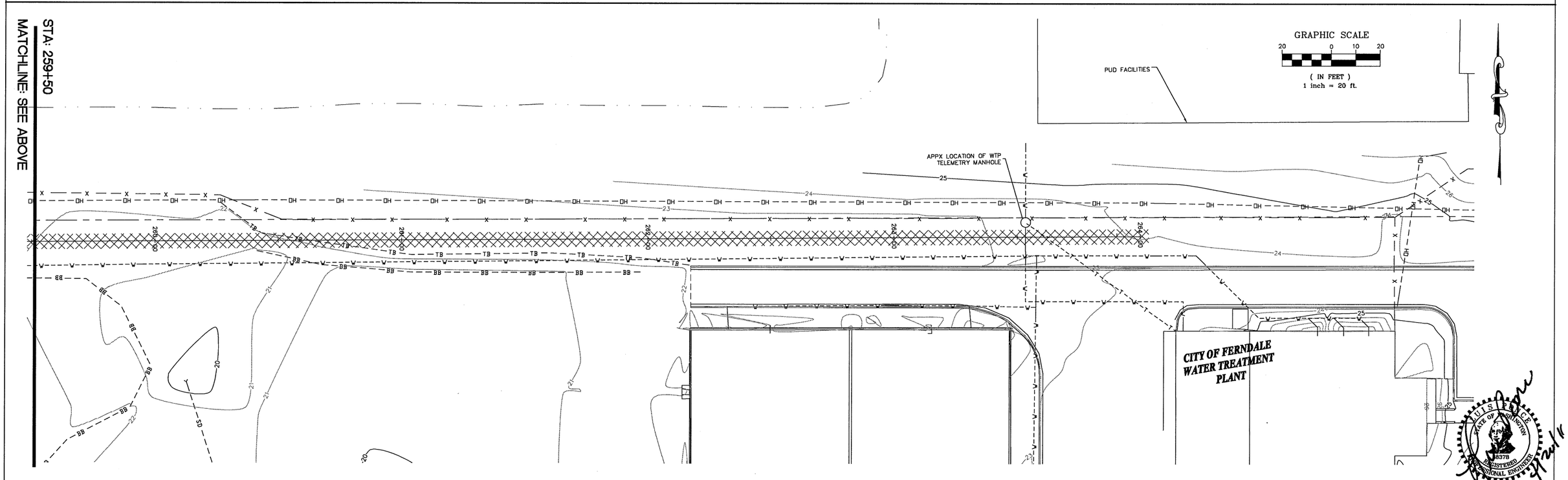
		NO.	DATE	REVISION	BY		

JOB# / DWG		DATE
10020	SP1.1ADD	5/5/11
SCALE H:1"=20' V:N/A		SHEET 9 of 33





DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK
CHECKED BY LP			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DEMOLITION AND ESC PLANS
CITY TREATMENT PLANT PROPERTY

JOB# / DWG 10020 SP1
SCALE H:1"=20' V:N/A
DATE 4-20-11
SHEET 10 of 33

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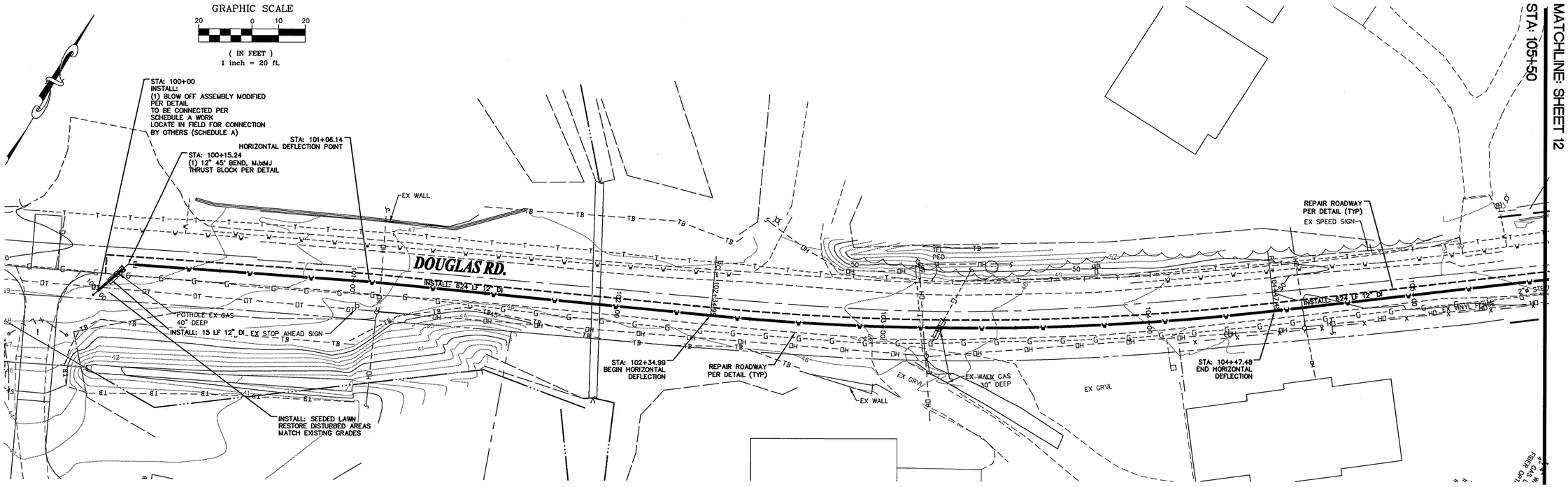

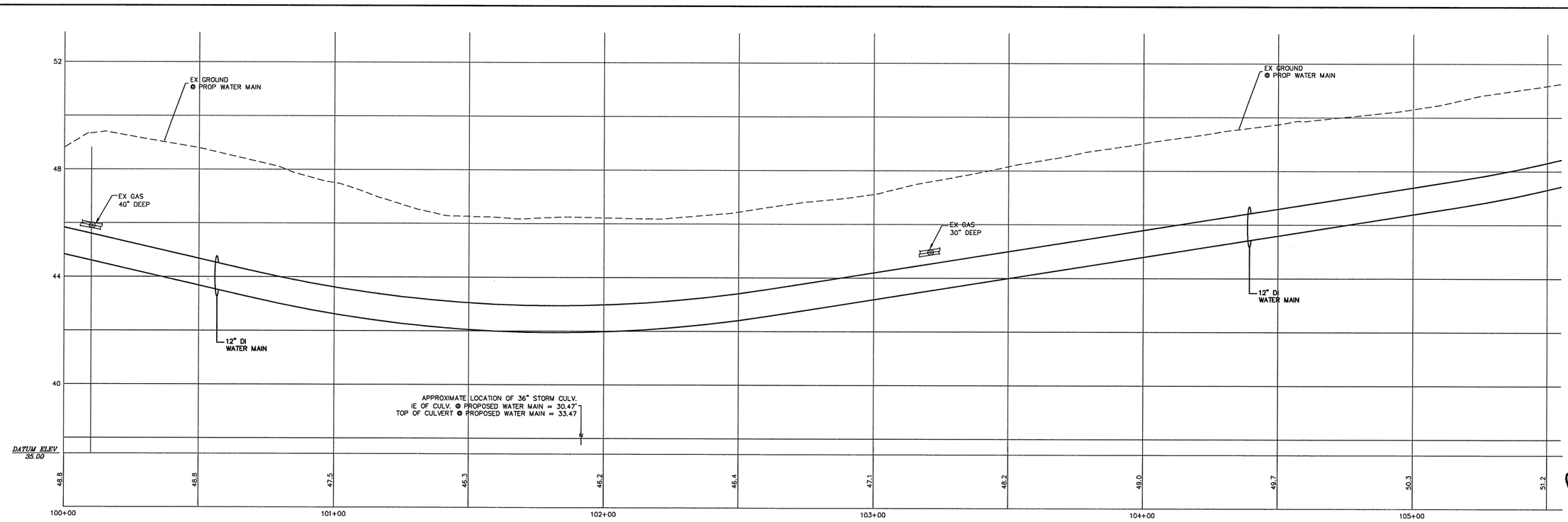

DESIGNED BY BEK	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
DRAWN BY BEK	PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK	
CHECKED BY LP		NO.	DATE	REVISION	BY	

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
DOUGLAS RD

JOB# / DWG	DATE
10020 SP1	4–20–11
SCALE H: 1"=20' V: 1"=2'	SHEET 11 of 33

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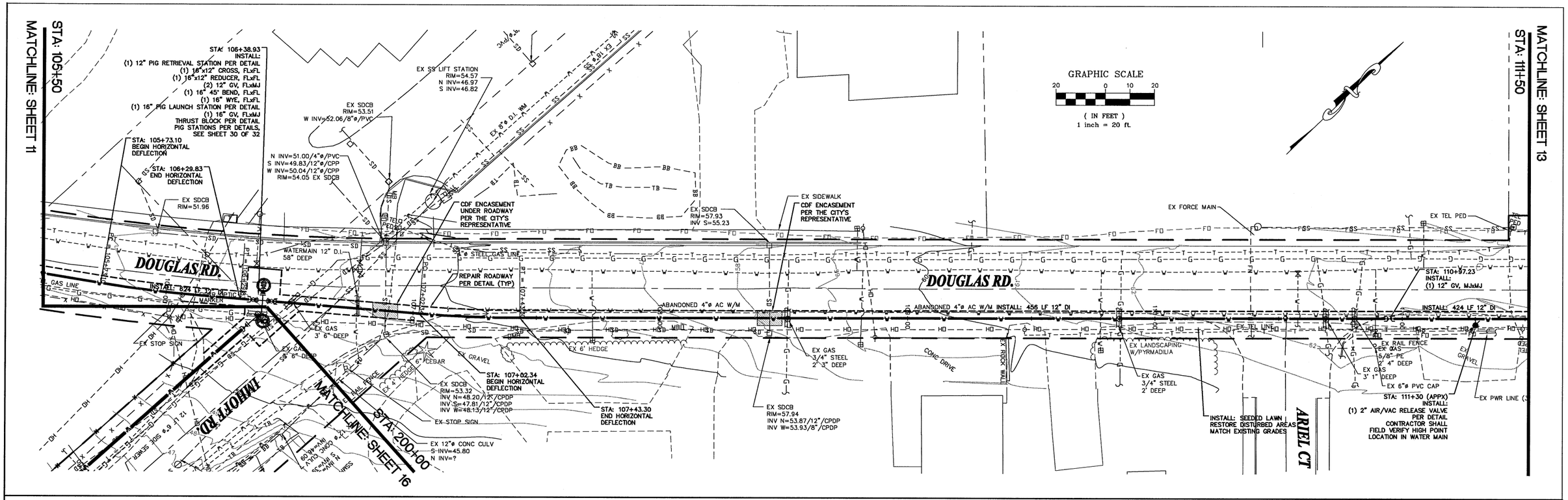

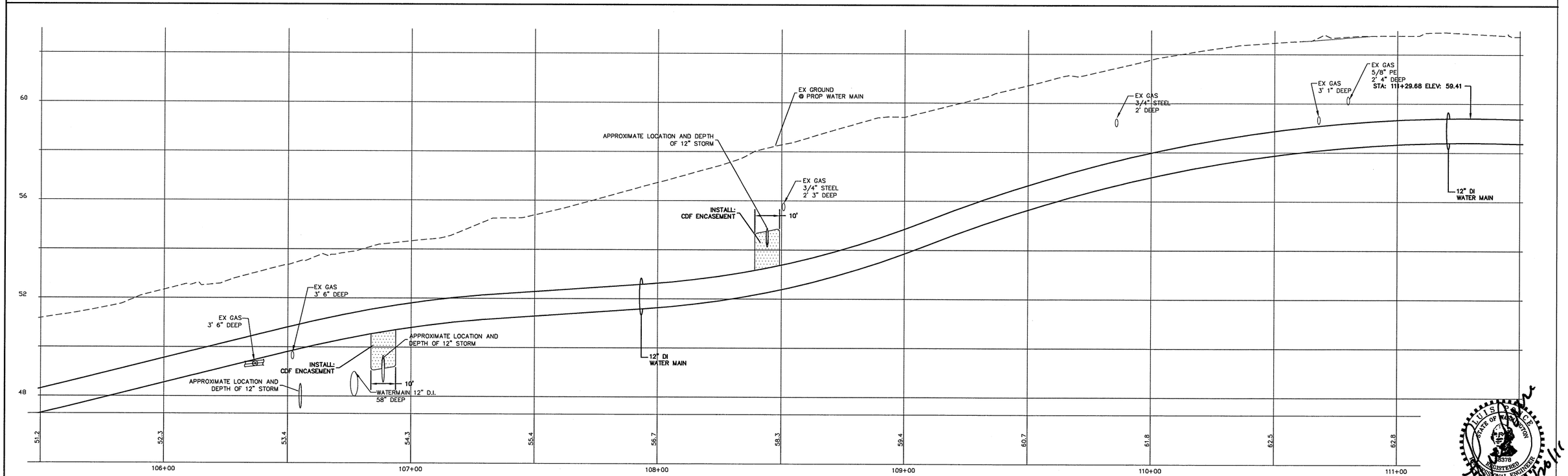

DESIGNED BY BEK					
DRAWN BY BEK					
CHECKED BY LP					

R&E

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

NO.	DATE	REVISION	BY
2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
DOUGLAS RD

JOB# / DWG	DATE
10020 SP1	4-20-11
SCALE H:1"=20' V:1"=2'	SHEET 12 of 33

STATE OF WASHINGTON LUIS PEREZ 38376 REGISTERED PROFESSIONAL ENGINEER
4/20/11

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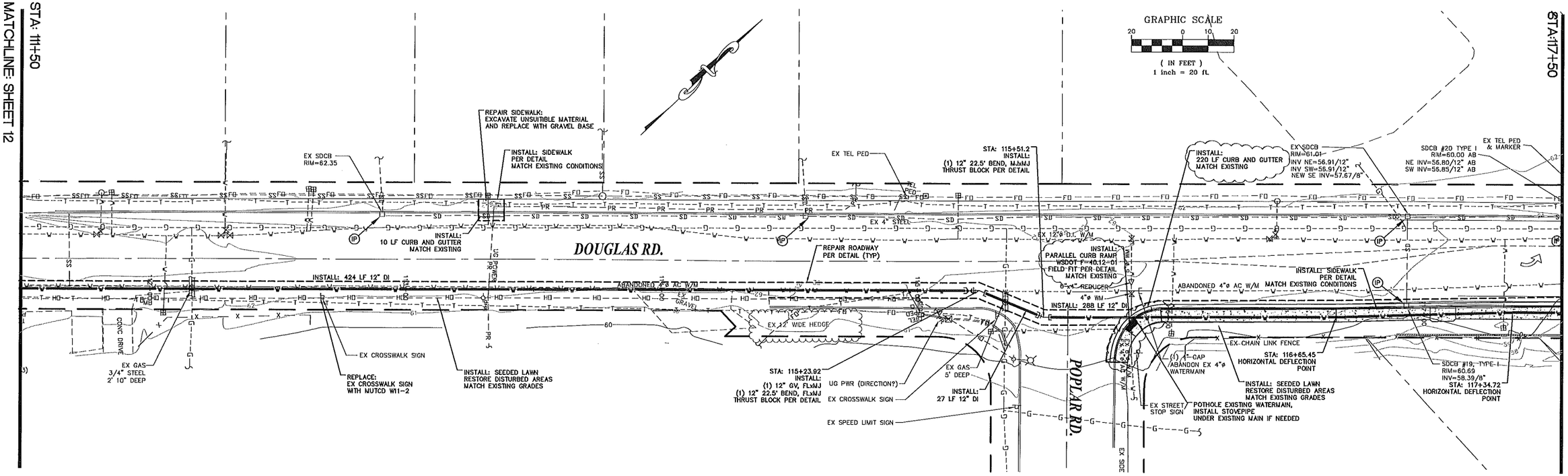
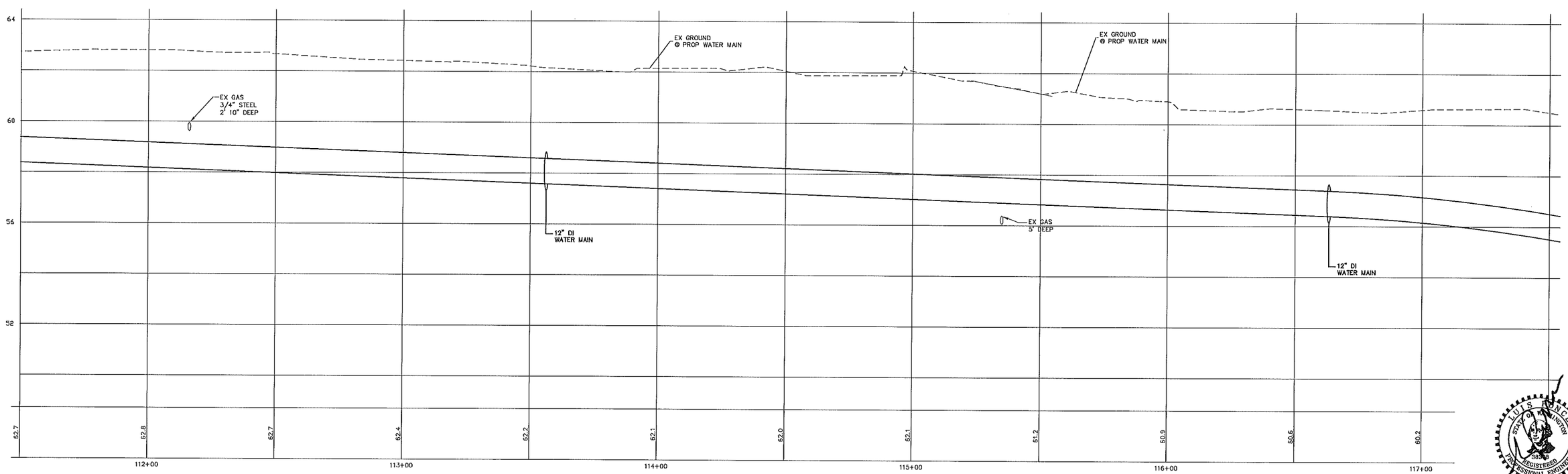
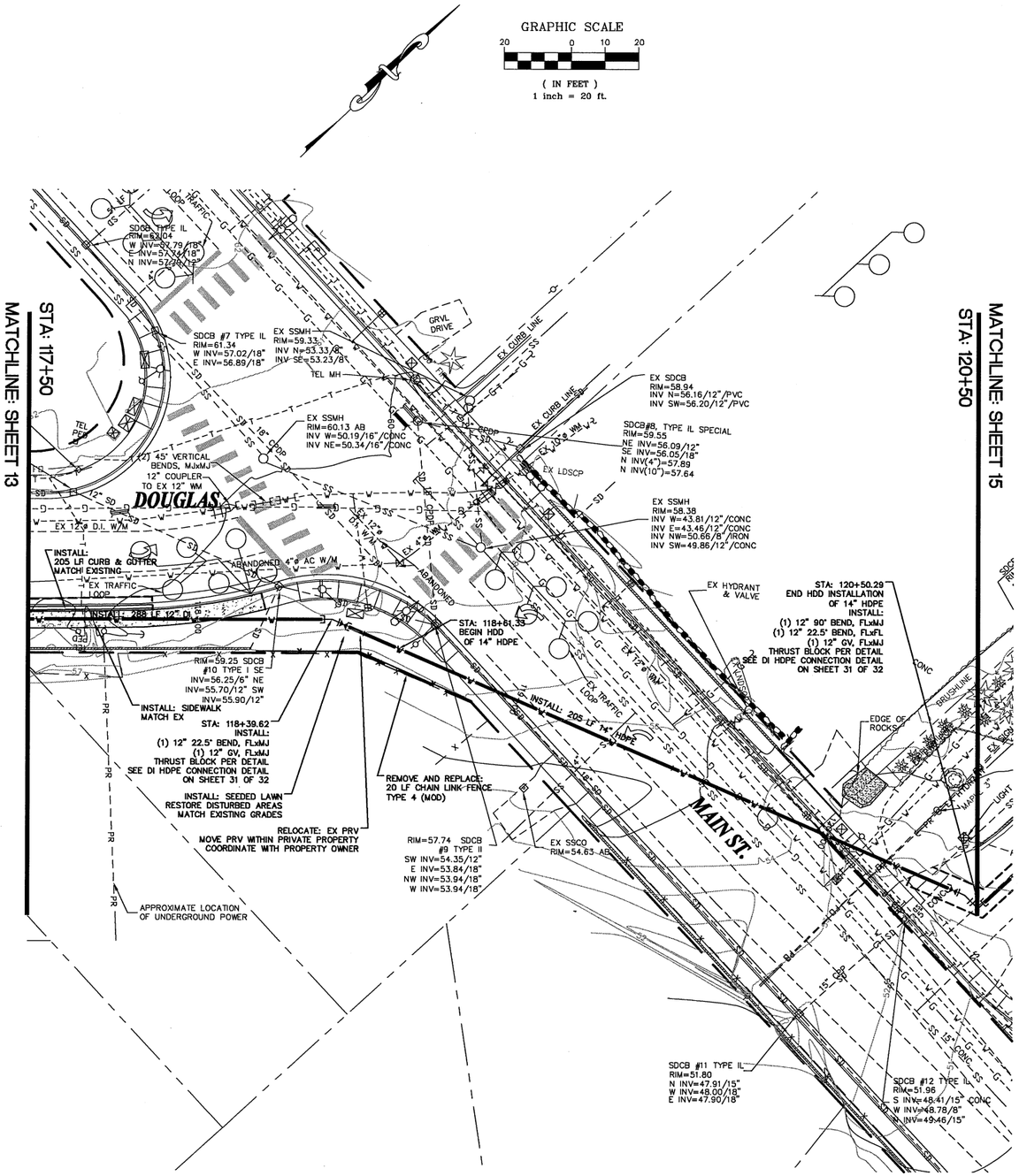
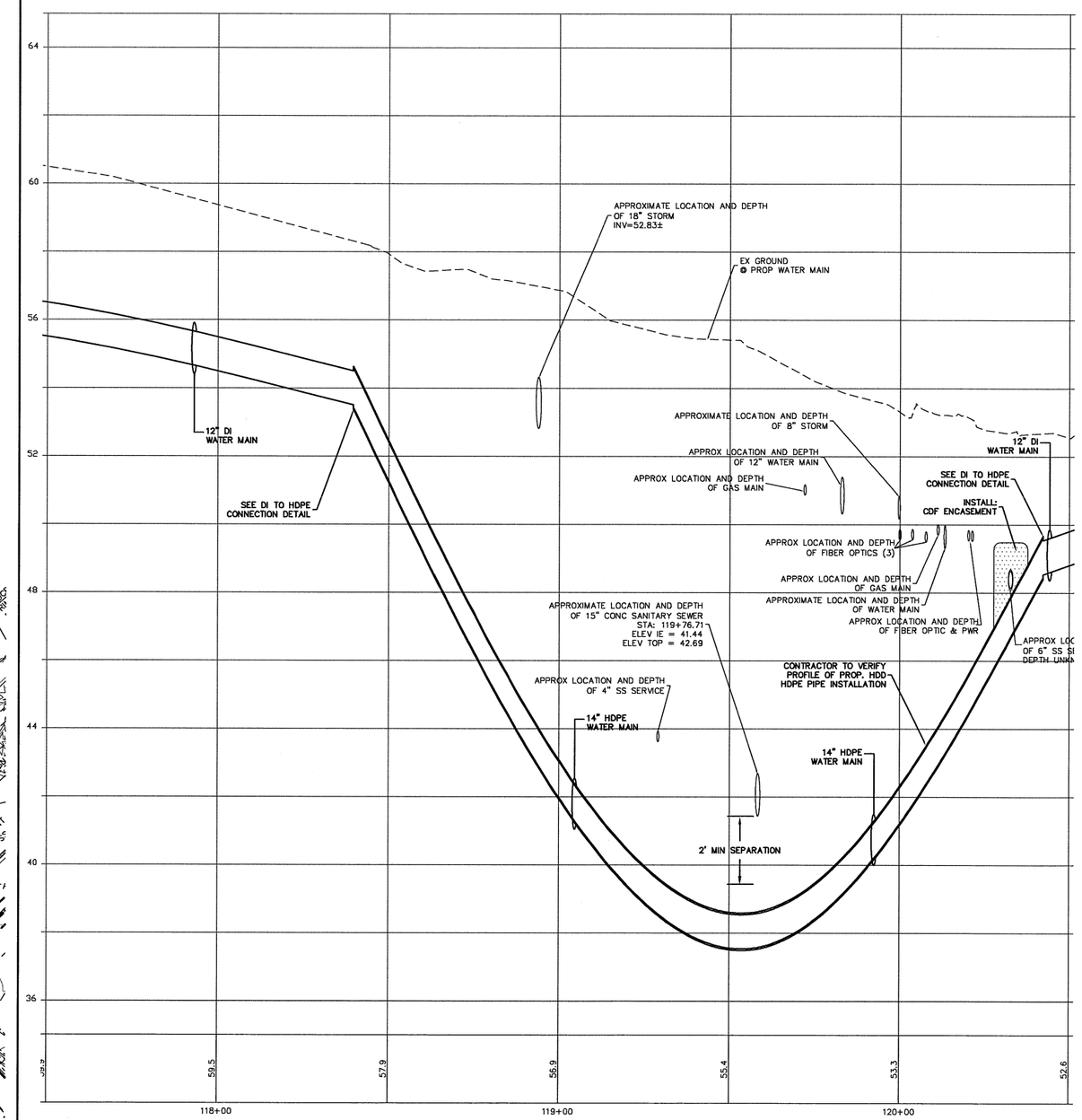




DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS				CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248	WELL WATER SUPPLY PROJECT PLAN AND PROFILE DOUGLAS RD
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264	Ph (360) 354-3687 Fax (360) 354-0407	1	5/5	ADDENDUM 1	BEK
CHECKED BY LP				NO.	DATE	REVISION	BY

JOB# / DWG		DATE
10020	SP1.1ADD	5/5/11
SCALE H:1"=20' V:1"=2'		SHEET 13 of 33





DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407			
DRAWN BY BEK			2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL — BEK
CHECKED BY LP			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL — BEK
			NO.	DATE	REVISION — BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
DOUGLAS RD

JOB# / DWG		DATE
10020	SP1	4-20-11
SCALE H:1"=20' V:1"=2'		SHEET 14 of 33

LUIS E. PINCE — STATE OF WASHINGTON — 38378 — REGISTERED PROFESSIONAL ENGINEER — 4/20/11

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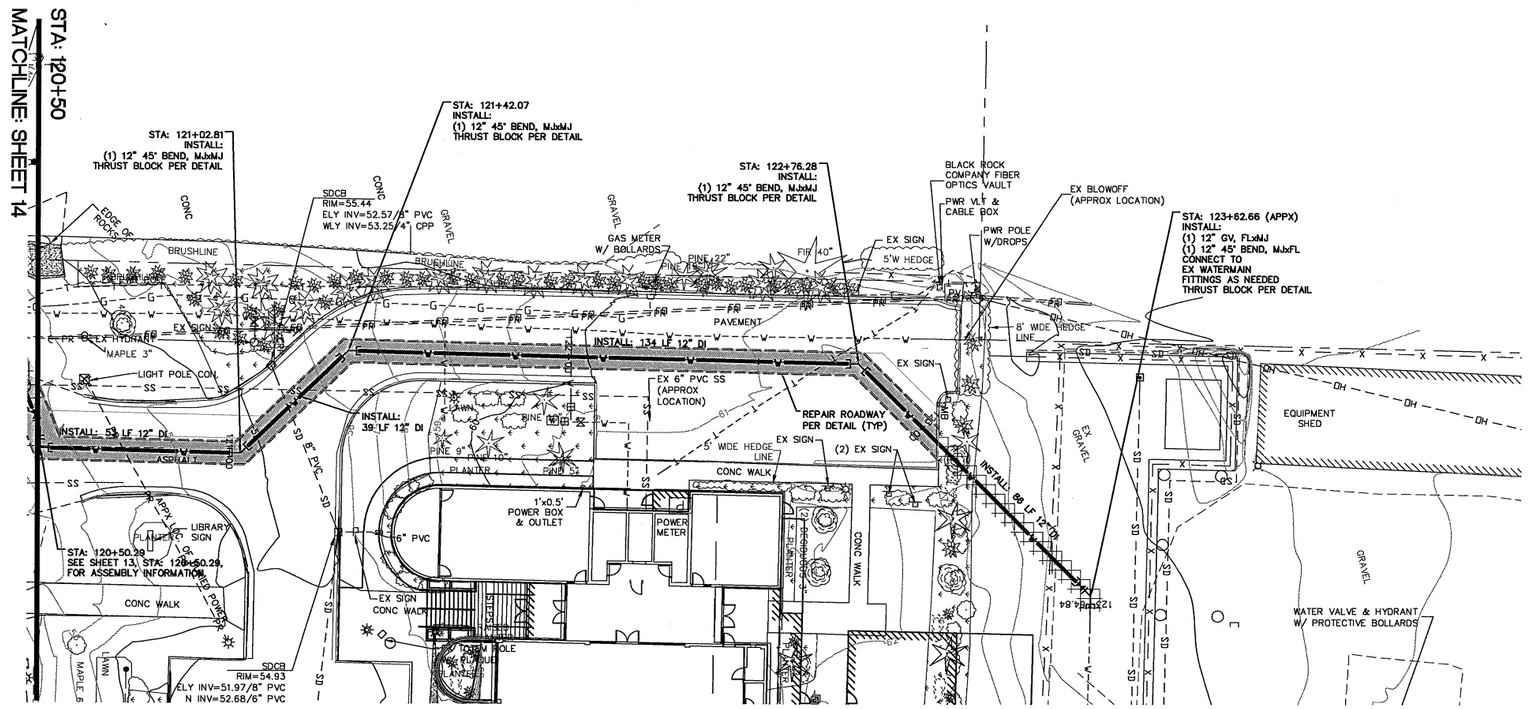
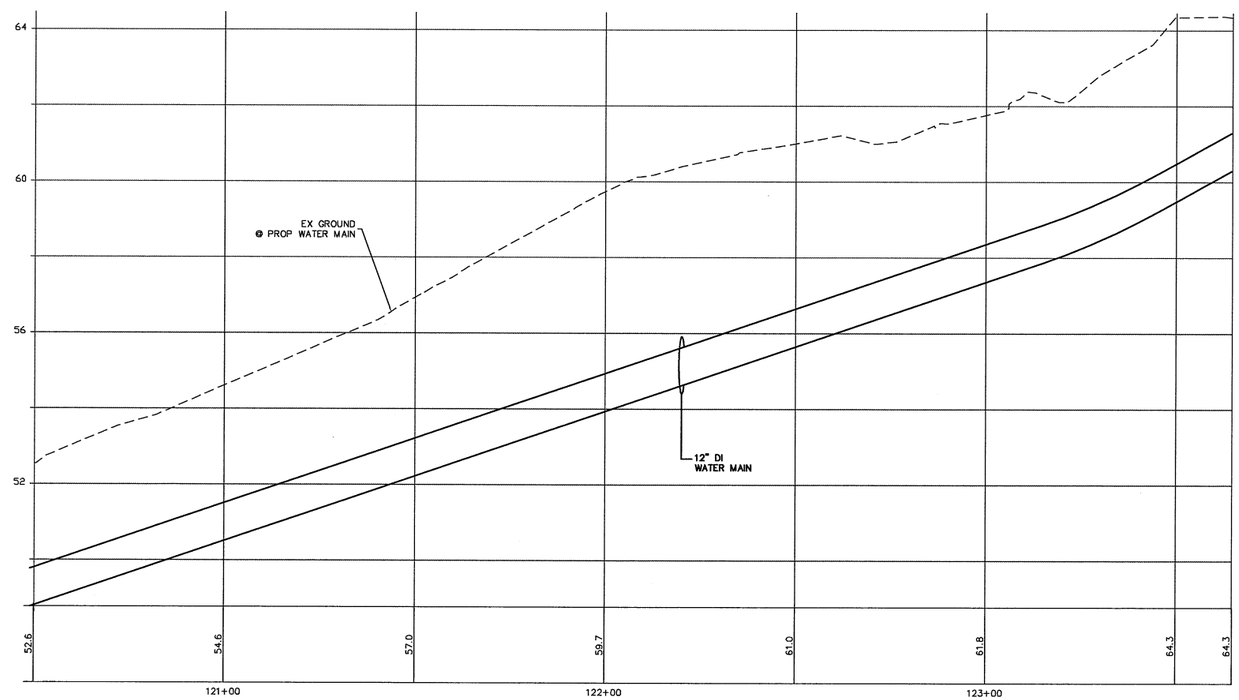
GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.





DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS				
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264	Ph (360) 354-3687 Fax (360) 354-0407			
CHECKED BY LP						
			2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK
			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
CITY SHOP + LIBRARY

JOB# / DWG: 10020 SP1
DATE: 4-20-11
SCALE: H:1"=20' V:1"=2'
SHEET: 15 of 33

LUIS A. PONCE
STATE OF WASHINGTON
38376
REGISTERED
PROFESSIONAL ENGINEER
4/20/11

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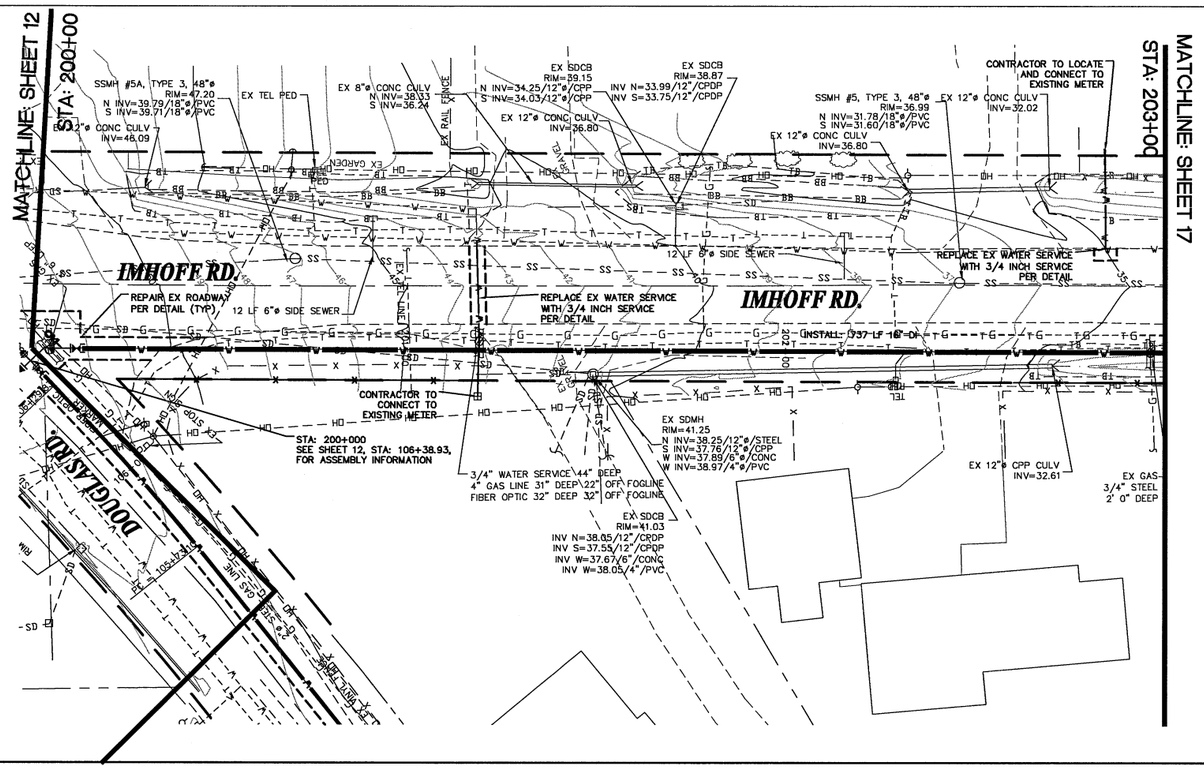
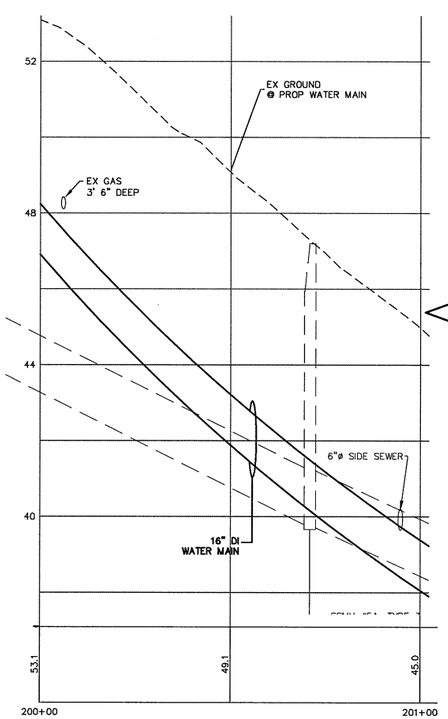
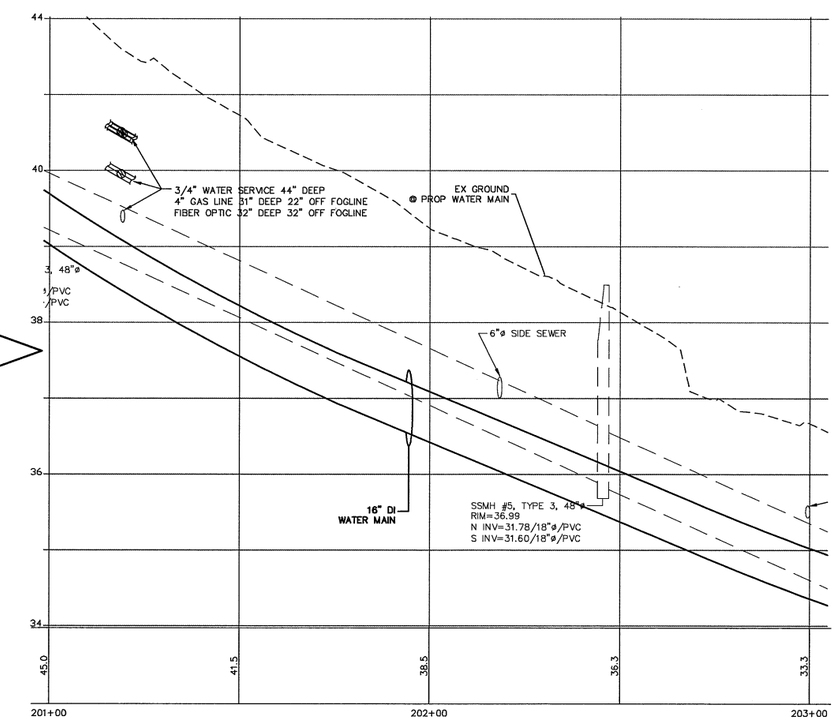


GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.





DESIGNED BY BEK	R&E REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248	WELL WATER SUPPLY PROJECT PLAN AND PROFILE IMHOFF RD
DRAWN BY BEK		1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK		
CHECKED BY LP		NO.	DATE	REVISION	BY		

JOB# / DWG: 10020 SP1
SCALE: H:1"=20' V:1"=2'
DATE: 4-20-11
SHEET: 16 of 33

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MATCHLINE: SHEET 16

STA: 203+00

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

EX 6" SSCO
RIM=3076

EX 12"ø CONC CULV
INV=28.90
INV=28.83 NEW

EX 3"ø WATERLINE
DIR UNKNOWN

EX 12"ø CONC CULV
INV=26.45

EX 12"ø CONC CULV
INV=24.66

SSMH #6, TYPE 3, 48"ø
RIM=30.60
N INV=22.66/18"ø/PVC
S INV=22.43/18"ø/PVC
W INV=23.18/8"ø/PVC
NE INV=23.29/8"ø/PVC

EX 18"ø CPP CULV
INV=22.89

EX 18"ø CPP CULV
INV=22.47

4"ø HIGH PRESSURE GAS LINE

12 LF 6"ø SIDE SEWER

80 LF 8"ø PVC PIPE
SLOPE=0.004FT/FT AND CAP

REPLACE: EX WATER SERVICE
WITH 3/4 INCH SERVICE
PER DETAIL

EX GAS
3/4" STEEL
2' 0" DEEP

INSTALL: 737 LF 16" DI

IMHOFF RD.

12 LF 6"ø SIDE SEWER

RELOCATE: EX CITY LIMITS SIGN
STA: 217+39, 1.75'R

CDF ENCASEMENT
PER THE CITY'S
REPRESENTATIVE

12 LF 6"ø SIDE SEWER

INSTALL: 805 LF 18" PVC

INSTALL: 41 LF, 16" DI

STA: 207+82.08
INSTALL:
(1) 16" GV, MJxFL
(1) 16"x18" REDUCER, FLxFL
(1) 18"x18" TEE, FLxFL
(1) 18" PIG STATION PER DETAIL
(1) 18" 45° BEND, FLxFL
(1) 18" GV, FLxMJ
WITH BEVEL GEAR
TIE BACK THRUST BLOCK
PER DETAIL

EX 12"ø CONC CULV
INV=30.44

CONTRACTOR TO LOCATE
AND CONNECT TO
EXISTING METER

12 LF 6"ø SIDE SEWER
3/4" WATER SERVICE 54" DEEP
IN LINE W/METER
4" GAS LINE 32" DEEP 22" OFF FOGLINE
WIRES 18" TO 22" DEEP 22" OFF FOGLINE
4" GALV LINE (ABANDONED) 36" DEEP
39" OFF FOGLINE
WIRES 16" TO 30" DEEP 39" OFF FOGLINE

EX YARD DRAIN
RIM=30.03
W INV=28.24/4"ø/PVC
S INV=27.78/4"ø/PVC
E INV=28.19/6"ø/PVC

EX SDMH
RIM=28.25
N INV=25.74/12"ø/CONC
S INV=25.68/12"ø/CONC

EX 12 LF 8"ø PVC PIPE
SLOPE=0.006FT/FT AND CAP
W INV=23.18

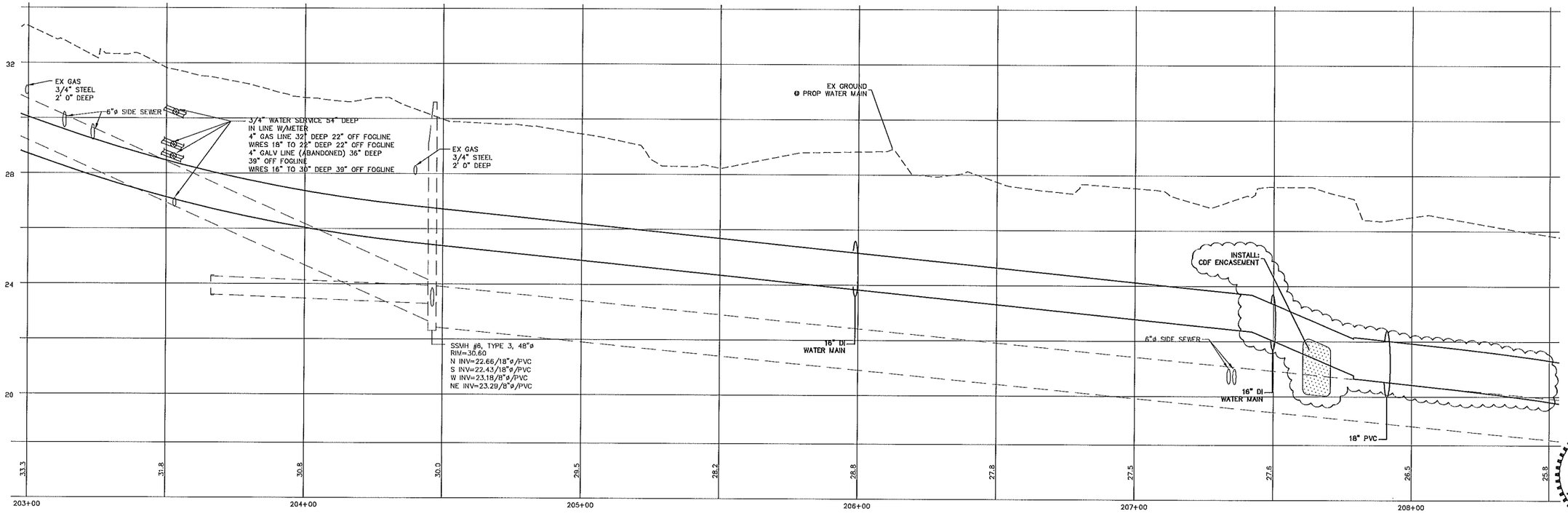
STA: 207+41.53
INSTALL:
(1) 16" 45° BEND, MJxMJ
TIE BACK THRUST BLOCK
PER DETAIL

REPAIR EX ROADWAY
PER DETAIL (TYP).
SEE SHEET 32 OF 32

EX 12"ø CONC CULV
INV=24.47

MATCHLINE: SHEET 18

STA: 208+50

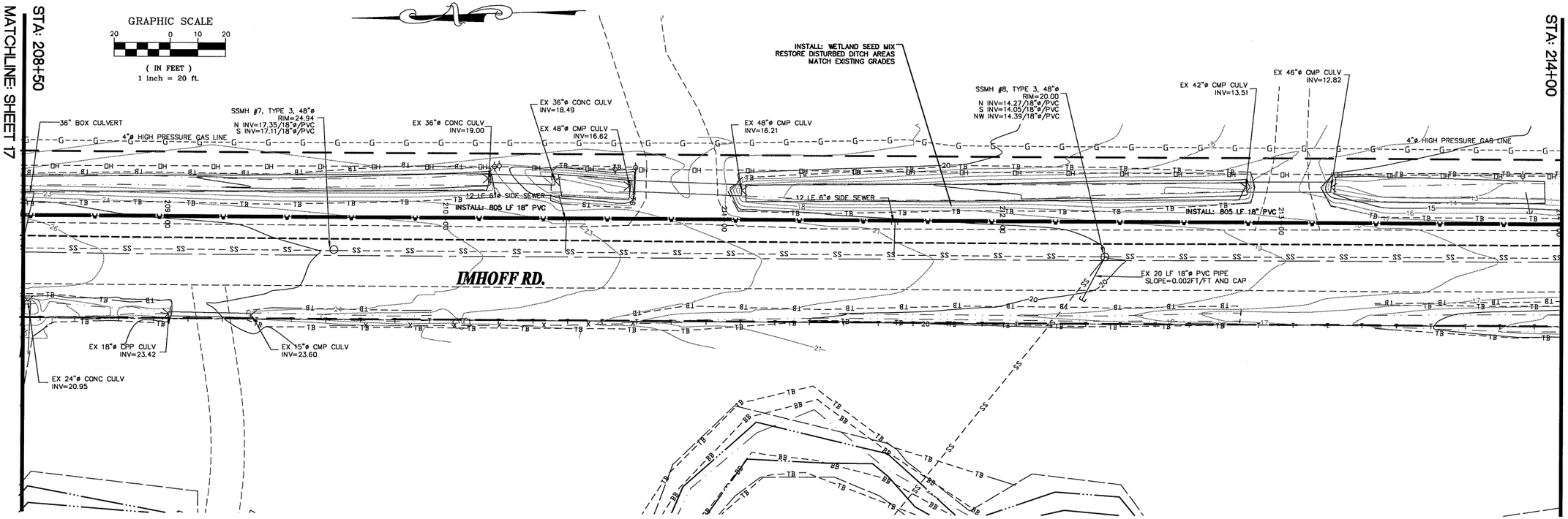


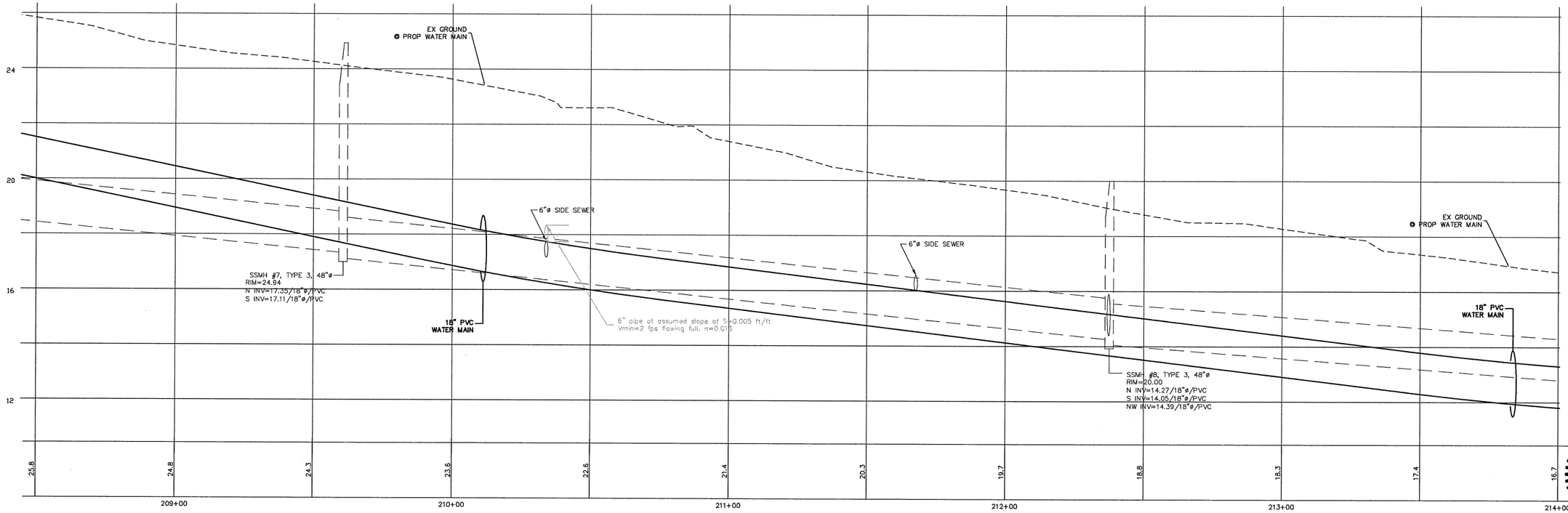
DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407				CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
DRAWN BY BEK			1	5/5	ADDENDUM 1	BEK
CHECKED BY LP			NO.	DATE	REVISION	BY

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
IMHOFF RD

JOB# / DWG	DATE
10020 SP1.1ADD	5/5/11
SCALE H: 1"=20' V: 1"=2'	SHEET 17 of 33

LUIS PACHECO
STATE OF WASHINGTON
38178
REGISTERED PROFESSIONAL ENGINEER
5/5/11





DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK
CHECKED BY LP			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
IMHOFF RD

JOB# / DWG		DATE
10020	SP1	4-20-11
SCALE H:1"=20' V:1"=2'		SHEET 18 of 33

STATE OF WASHINGTON 38378 REGISTERED PROFESSIONAL ENGINEER
4/20/11

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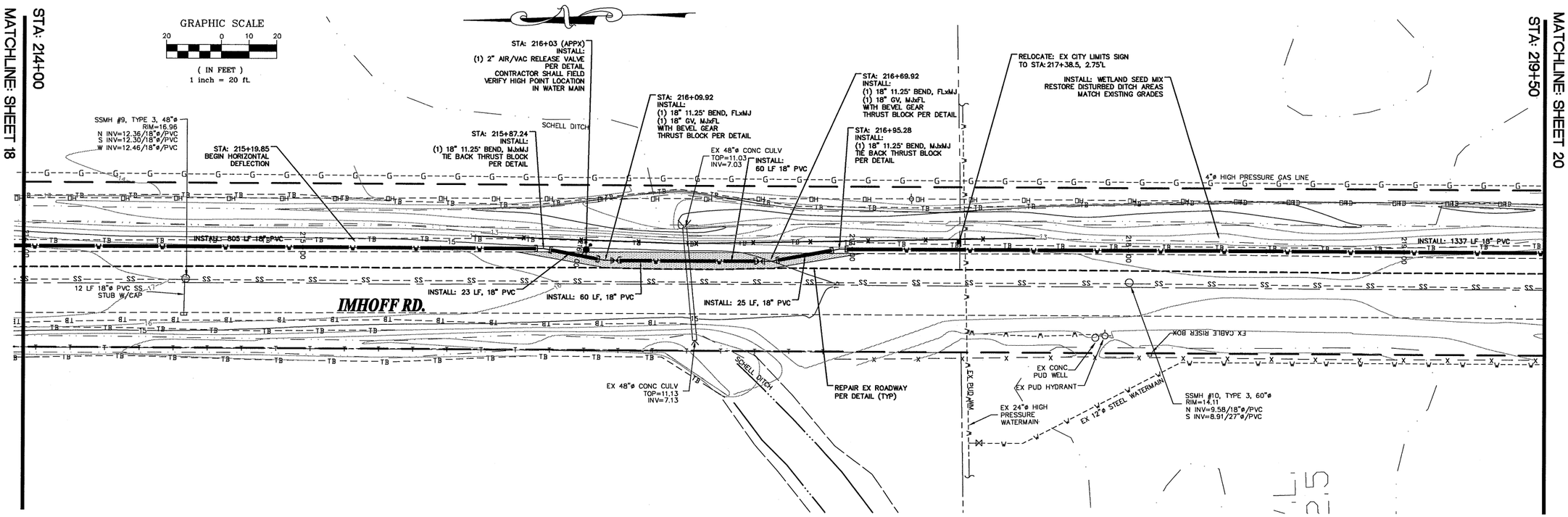

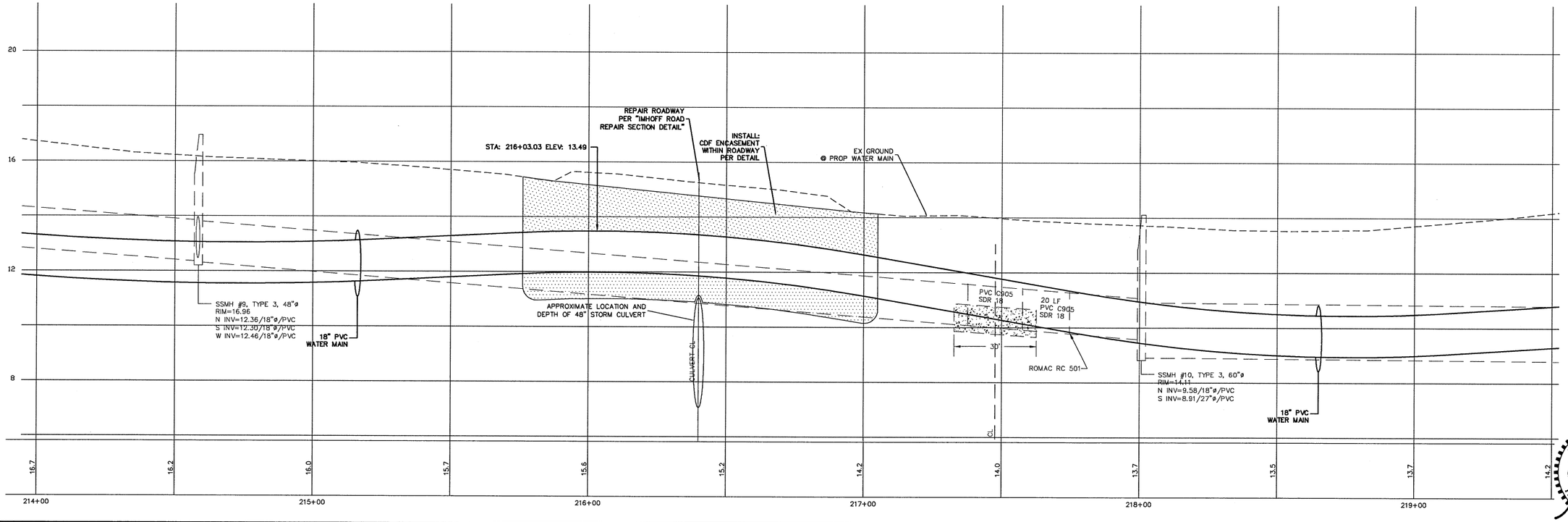

DESIGNED BY BEK	R&E REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS				CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
DRAWN BY BEK	PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264	Ph (360) 354-3687 Fax (360) 354-0407			WELL WATER SUPPLY PROJECT PLAN AND PROFILE IMHOFF RD
CHECKED BY LP					

NO.	DATE	REVISION	BY
2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK

JOB# / DWG		DATE
10020	SP1	4-20-11
SCALE H: 1"=20' V: 1"=2'		SHEET 19 of 33

LUIS PACE STATE OF WASHINGTON 38378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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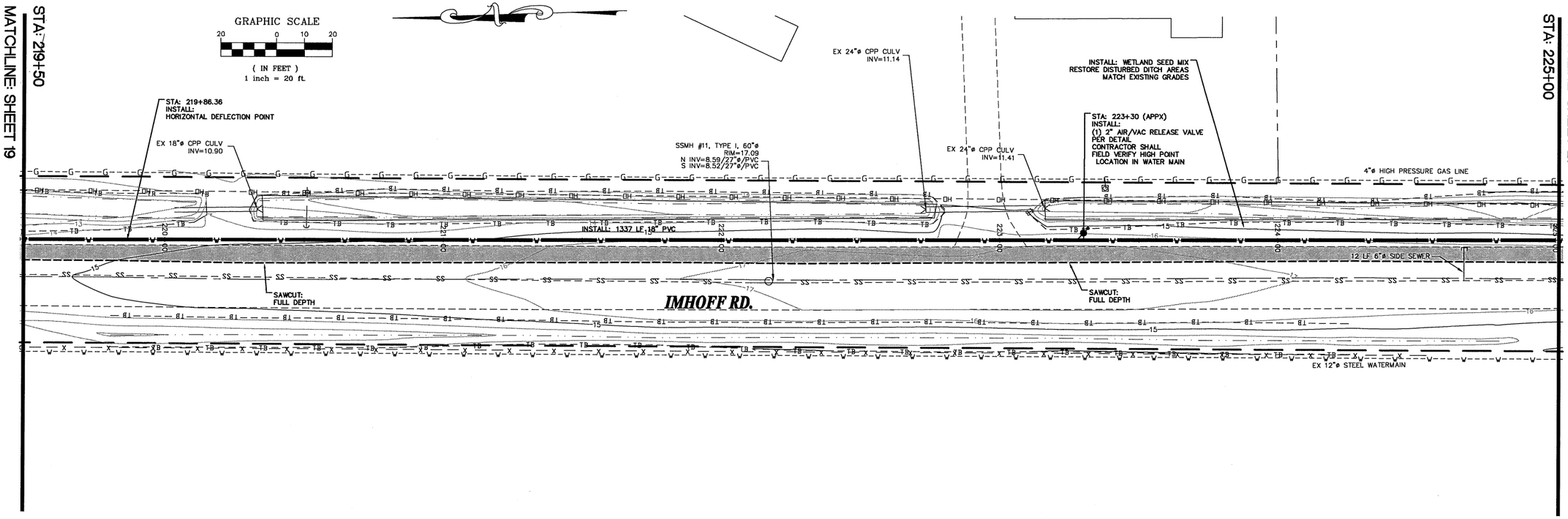

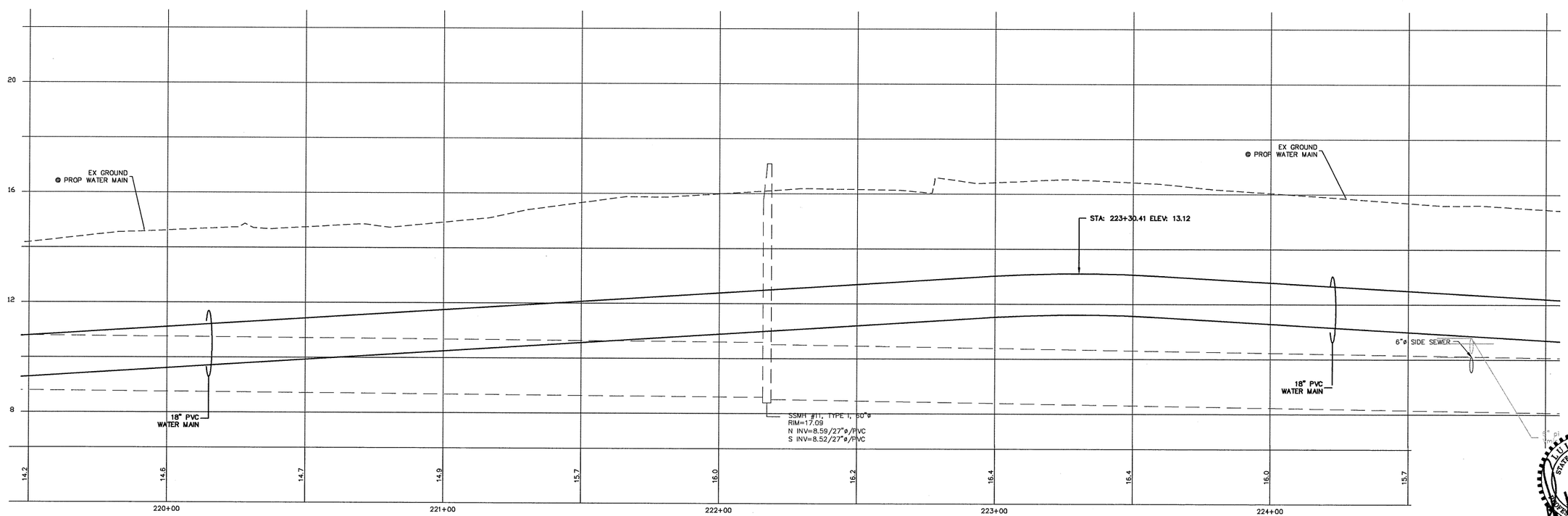

DESIGNED BY BEK DRAWN BY BEK CHECKED BY LP	R&E REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
		1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK	
		NO.	DATE	REVISION	BY	

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
IMHOFF RD

JOB# / DWG	DATE
10020 SP1	4-20-11
SCALE H:1"=20' V:1"=2'	SHEET 20 of 33

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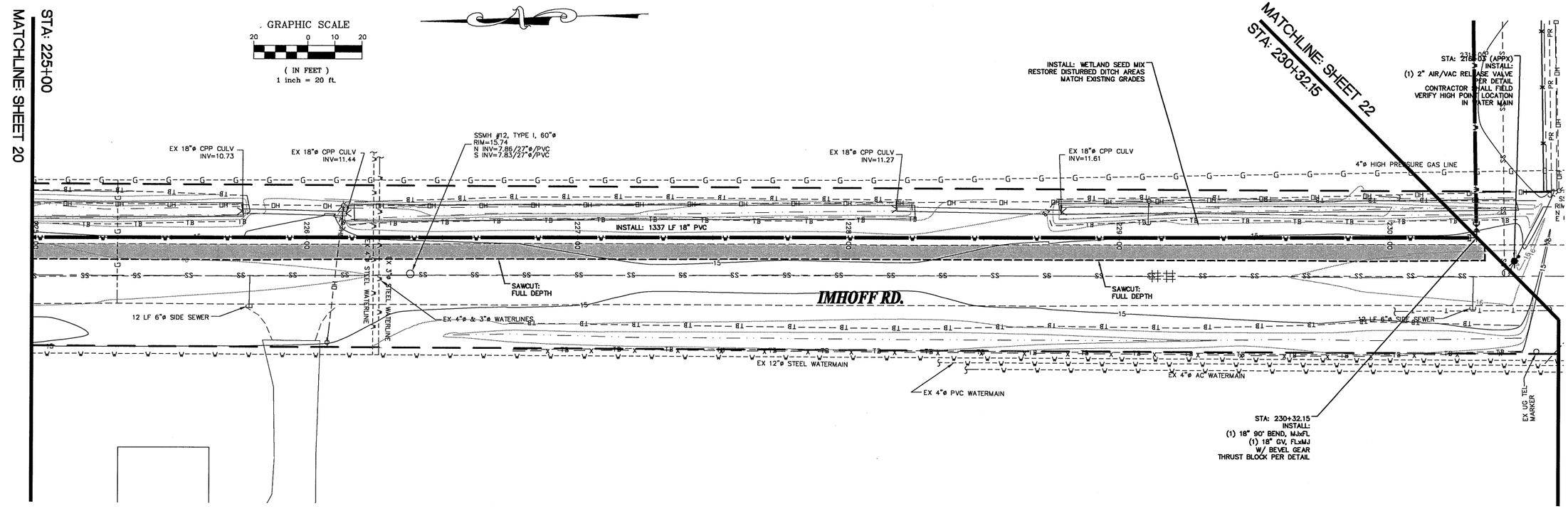

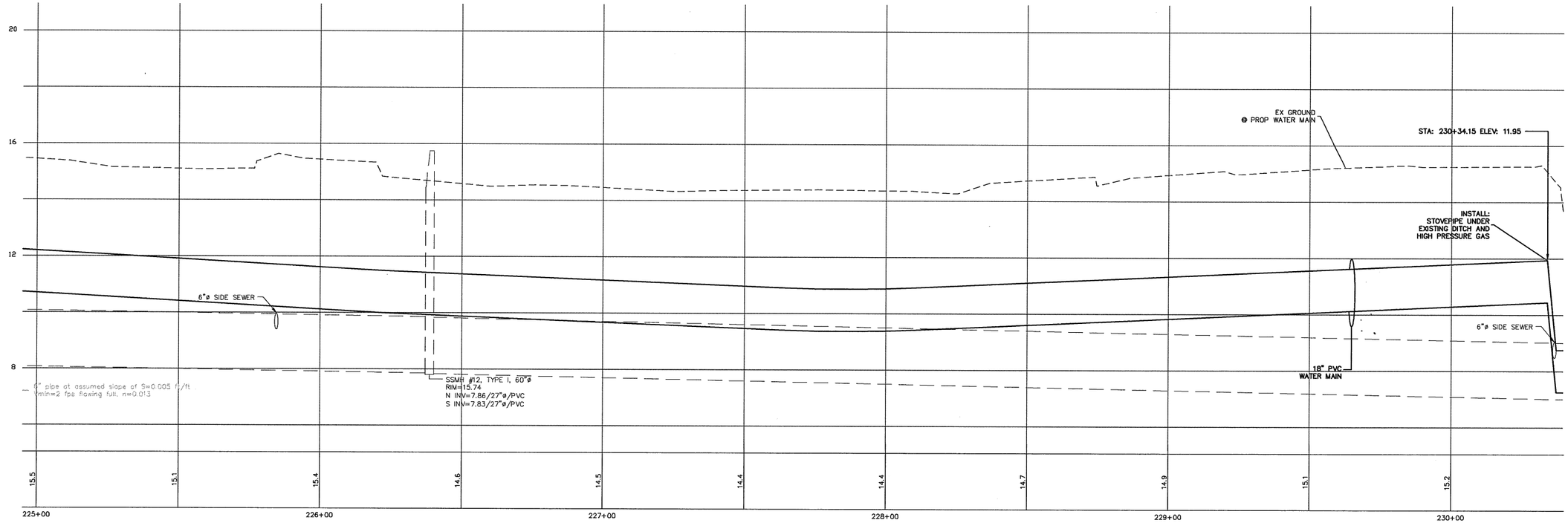

DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK
CHECKED BY LP			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
IMHOFF RD

JOB# / DWG: 10020 SP1
SCALE: H: 1"=20' V: 1"=2'
DATE: 4-20-11
SHEET: 21 of 33

LUIS R. RIVERA STATE OF WASHINGTON 34378 REGISTERED PROFESSIONAL ENGINEER 4/28/11

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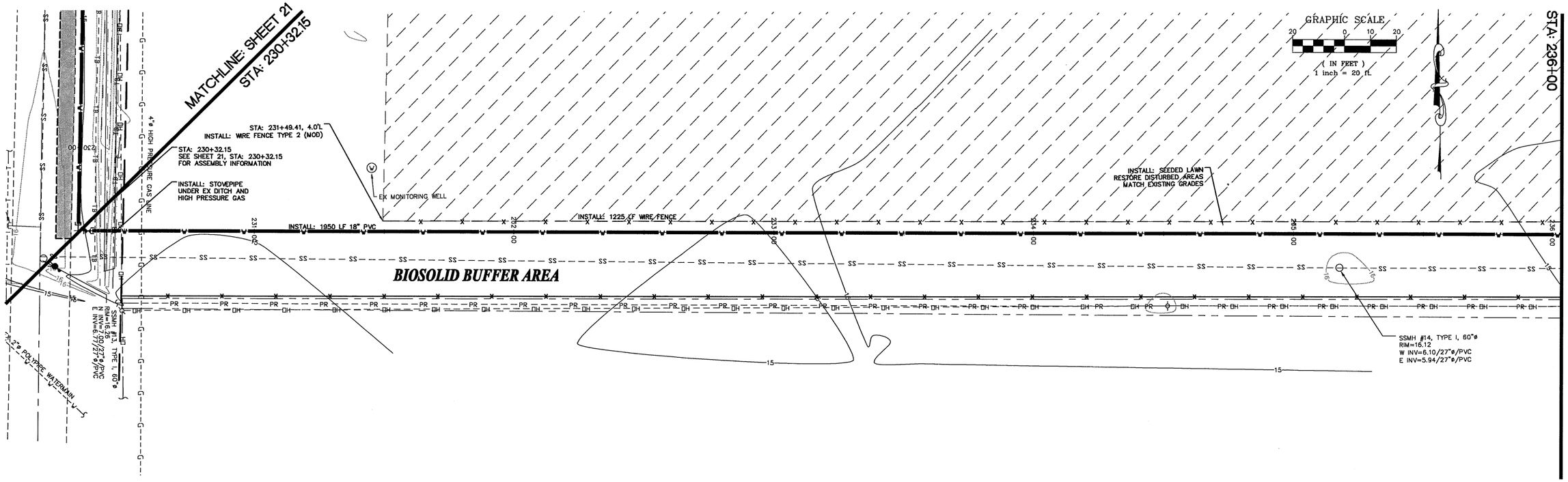

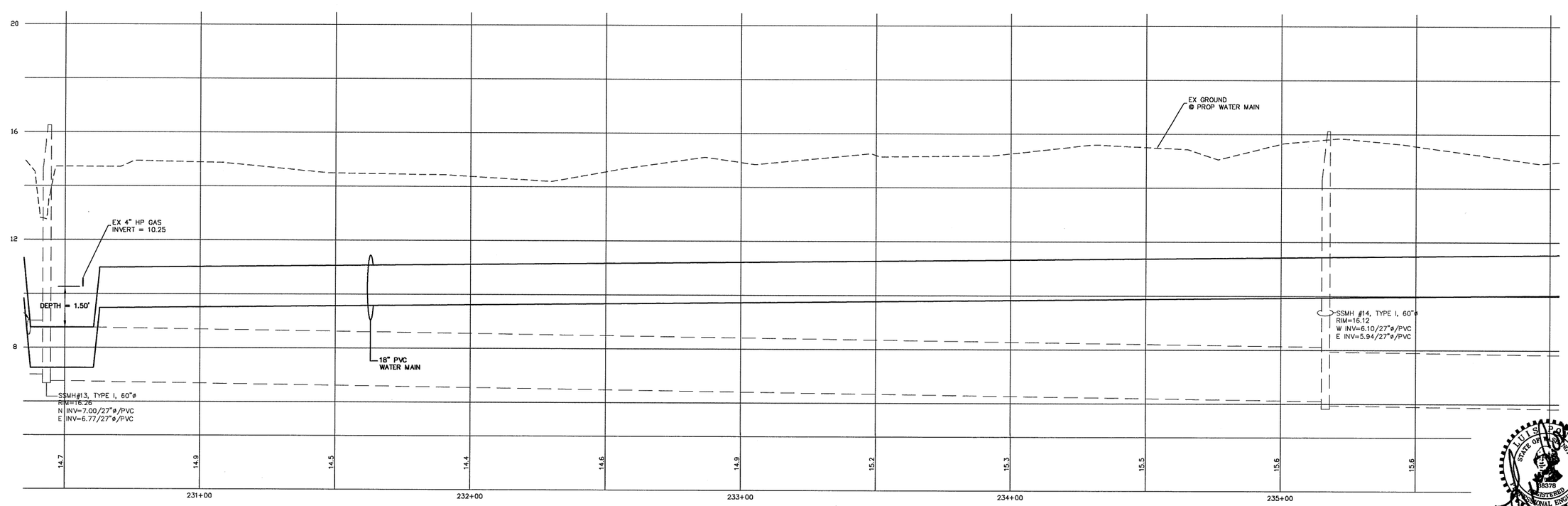

DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL BEK
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL BEK
CHECKED BY LP			NO.	DATE	REVISION BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
BIOSOLID BUFFER AREA

JOB# / DWG		DATE
10020	SP1	4–20–11
SCALE H: 1"=20' V: 1"=2'		SHEET 22 of 33

LUKE PEARCY STATE OF WASHINGTON 38378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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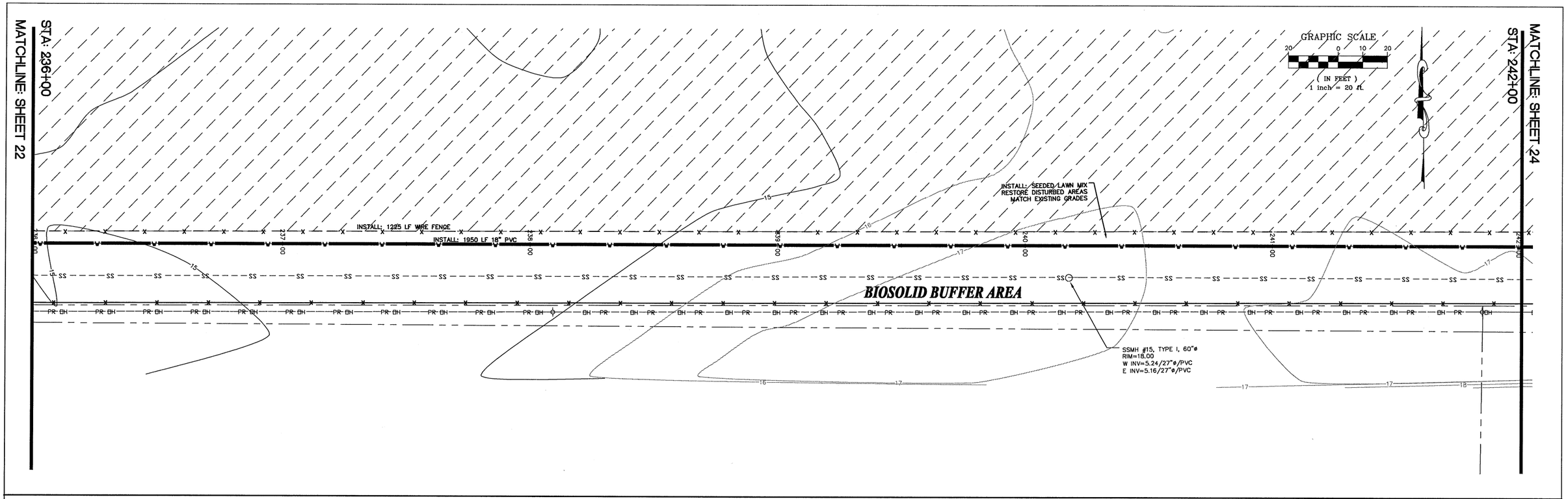

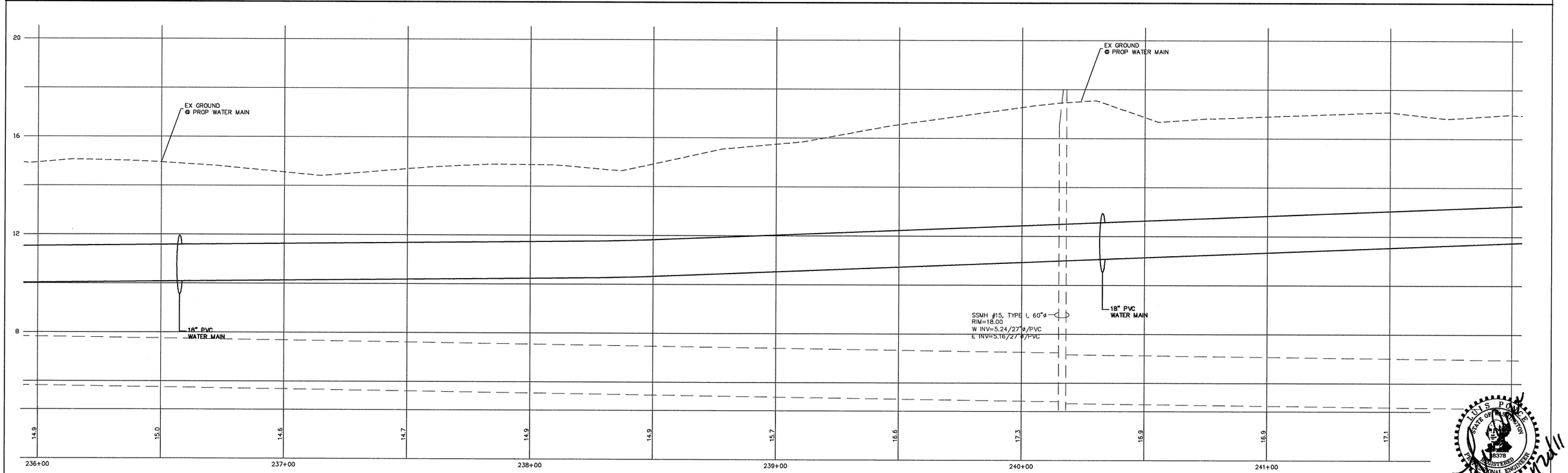

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DESIGNED BY	BEK
DRAWN BY	BEK
CHECKED BY	LP

R&E

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

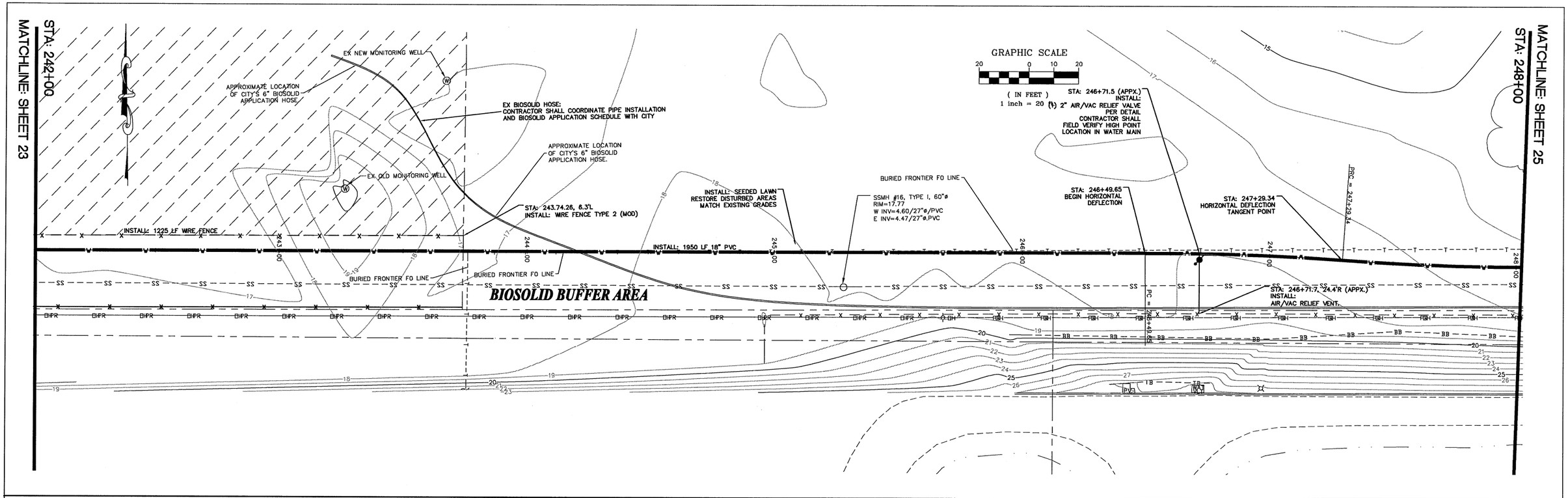
NO.	DATE	REVISION	BY
2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK

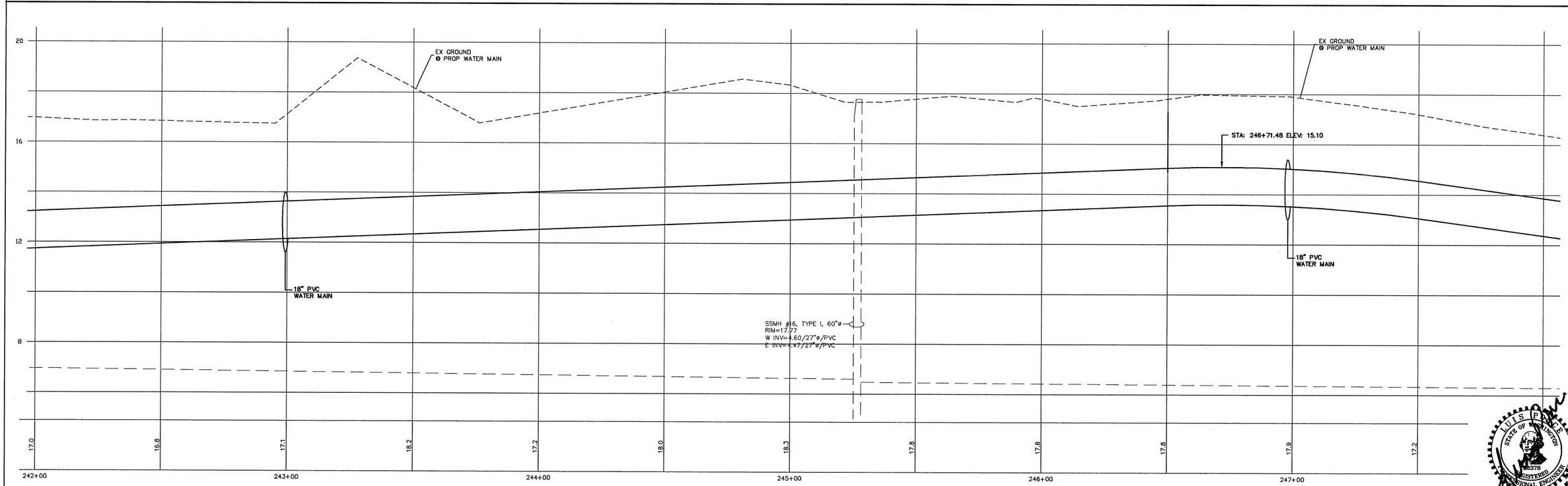
CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
BIOSOILID BUFFER AREA

JOB# / DWG: 10020 SP1
SCALE: H:1"=20' V:1"=2'
DATE: 4-20-11
SHEET: 23 of 33

LUIS POLICE
STATE OF WASHINGTON
18376
REGISTERED
PROFESSIONAL ENGINEER
4-20-11





DESIGNED BY BEK DRAWN BY BEK CHECKED BY LP	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK	
			NO.	DATE	REVISION	BY	

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
BIOSOLID BUFFER AREA

JOB# / DWG	DATE
10020 SP1	4-20-11
SCALE H: 1"=20' V: 1"=2'	SHEET 24 of 33

LUIS PRICE
STATE OF WASHINGTON
36378
REGISTERED PROFESSIONAL ENGINEER
4/20/11

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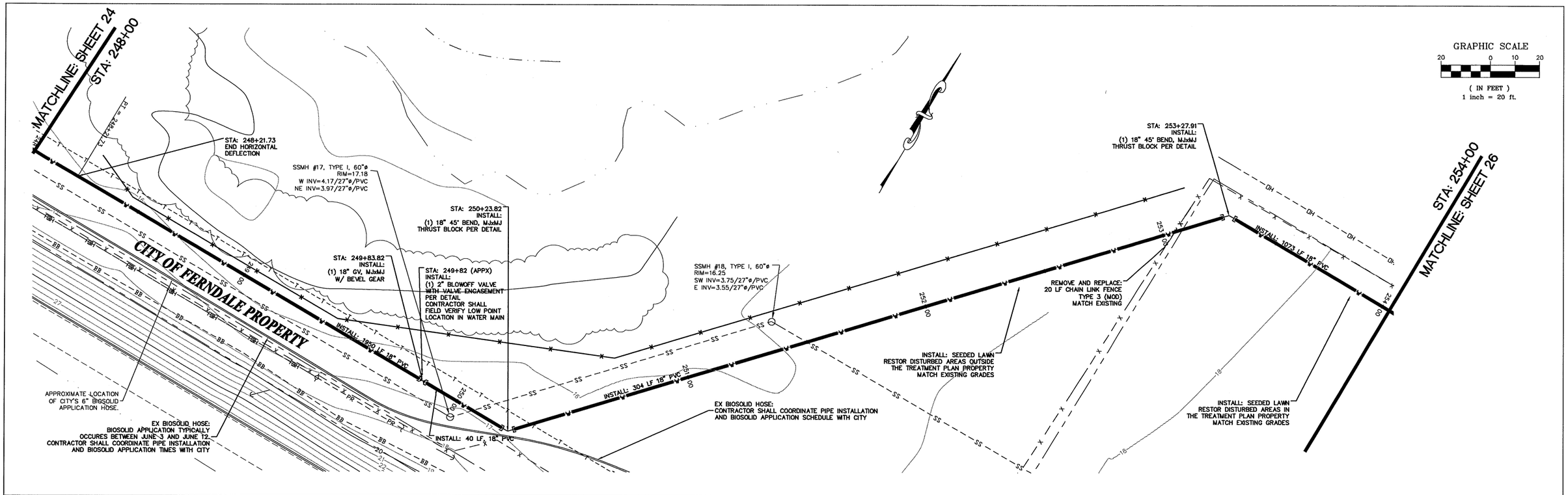

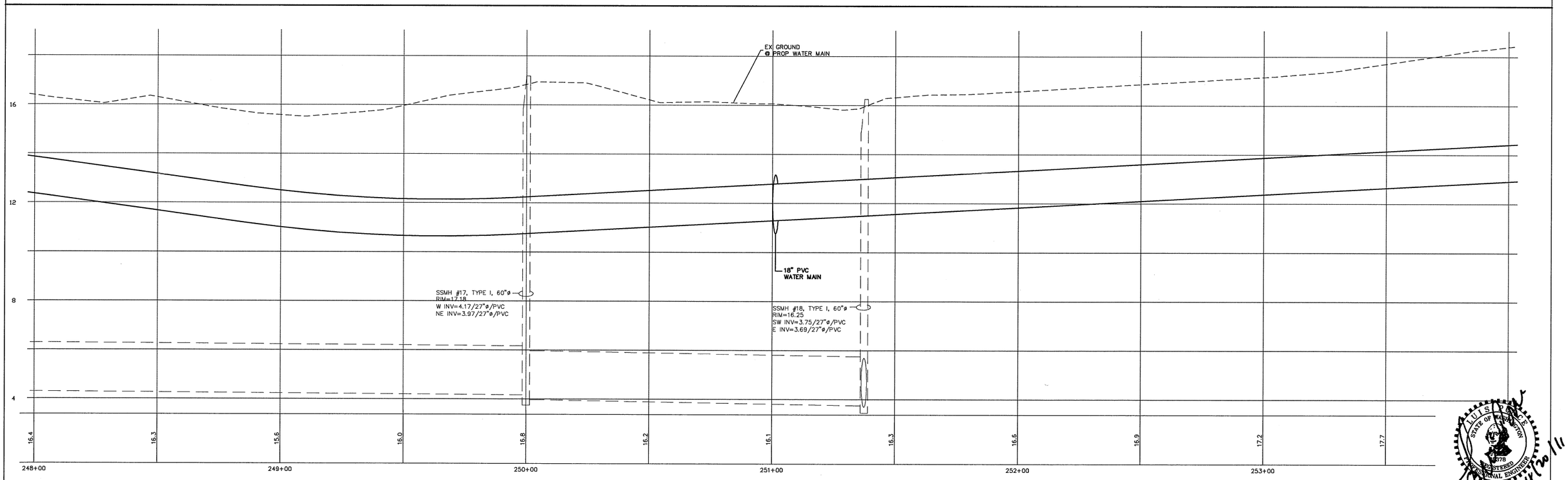

DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS	2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
DRAWN BY BEK		PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK	
CHECKED BY LP			NO.	DATE	REVISION	BY	

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
CITY PROPERTY

JOB# / DWG: 10020 SP1
SCALE: H:1"=20' V:1"=2'
DATE: 4-20-11
SHEET: 25 of 33

LUIS PONCE STATE OF WASHINGTON 38378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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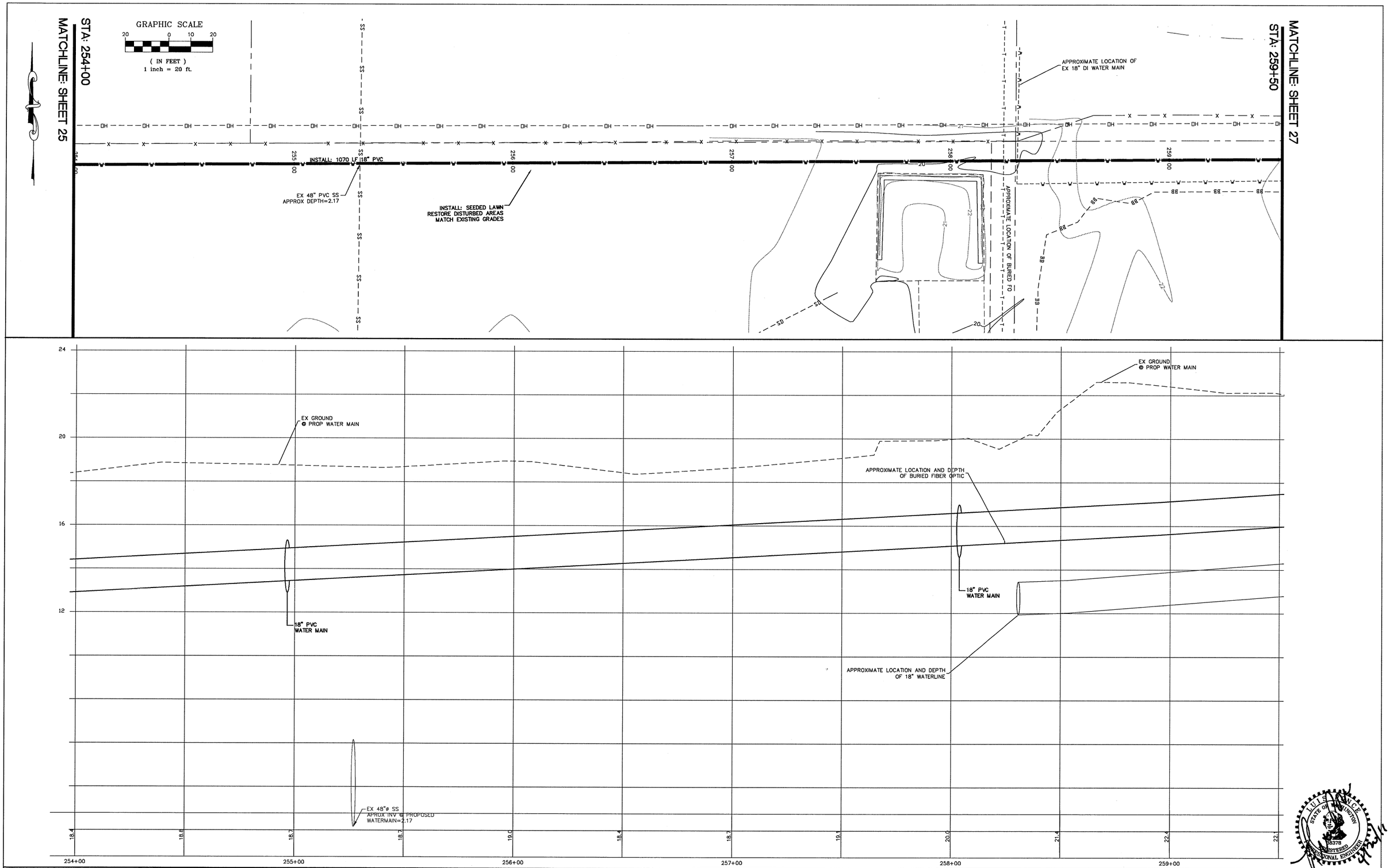

DESIGNED BY	BEK
DRAWN BY	BEK
CHECKED BY	LP

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

NO.	DATE	REVISION	BY
2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK
1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
WATER TREATEMENT PLANT PROPERTY

JOB# / DWG: 10020 SP1
SCALE: H: 1"=20' V: 1"=2'
DATE: 4–20–11
SHEET: 26 of 33

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STA: 259+50

MATCHLINE: SHEET 26

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

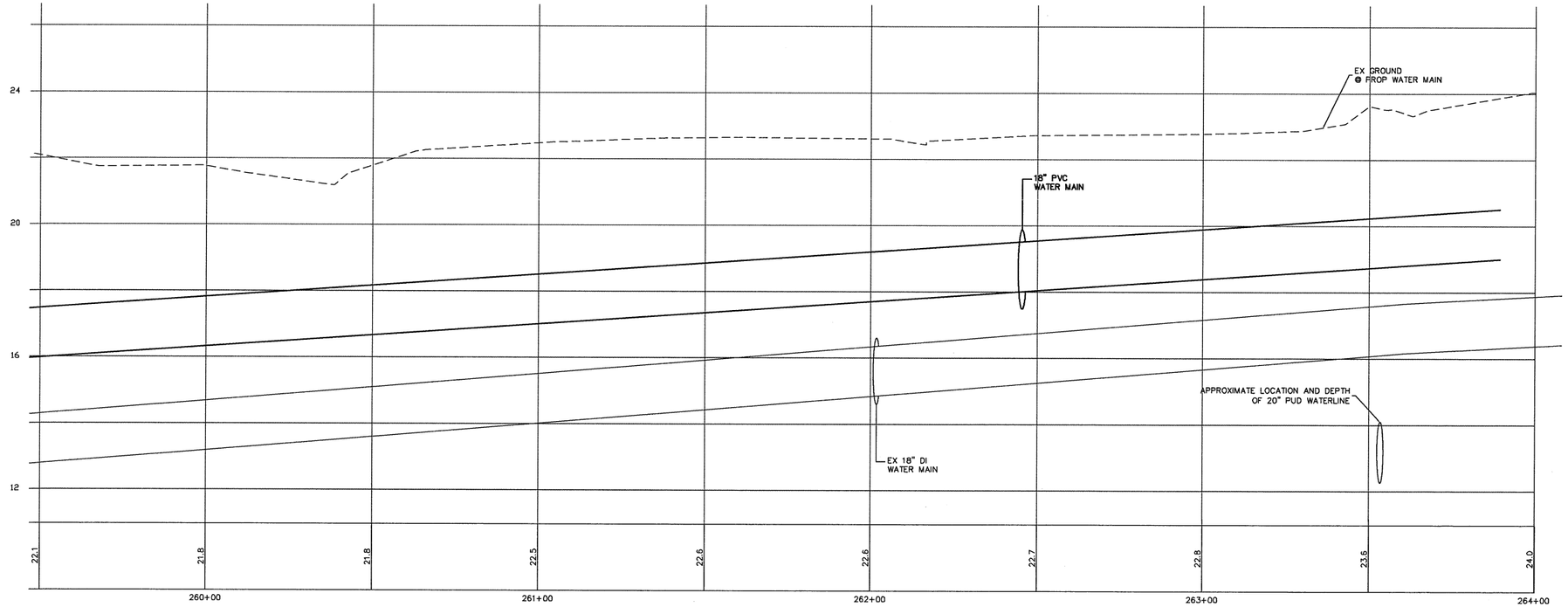
PUD FACILITIES

STA: 263+90
INSTALL:
(1) BLOW OFF ASSEMBLY MODIFIED PER DETAIL
TO BE CONNECTED BY OTHERS PER SCHEDULE A WORK
THRUST BLOCK PER DETAIL
APPX LOCATION OF WTP TELEMETRY MANHOLE

INSTALL: 1073 LF 18" PVC

INSTALL: SEEDED LAWN
RESTORE DISTURBED AREAS
MATCH EXISTING GRADES

CITY OF FERNDALE
WATER TREATMENT
PLANT



DESIGNED BY BEK DRAWN BY BEK CHECKED BY LP	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	2	01/18	RH2- 95% SUBMITTAL- DAN BURWELL	BEK
			1	11/17	RH2- 60% SUBMITTAL- DAN BURWELL	BEK
			NO.	DATE	REVISION	BY

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
PLAN AND PROFILE
WATER TREATEMENT PLANT PROPERTY

JOB# / DWG		DATE
10020	SP1	4-20-11
SCALE H:1"=20' V:1"=2'		SHEET 27 of 33

LULL & HOYCE STATE OF WASHINGTON 9378 REGISTERED PROFESSIONAL ENGINEER 4/20/11

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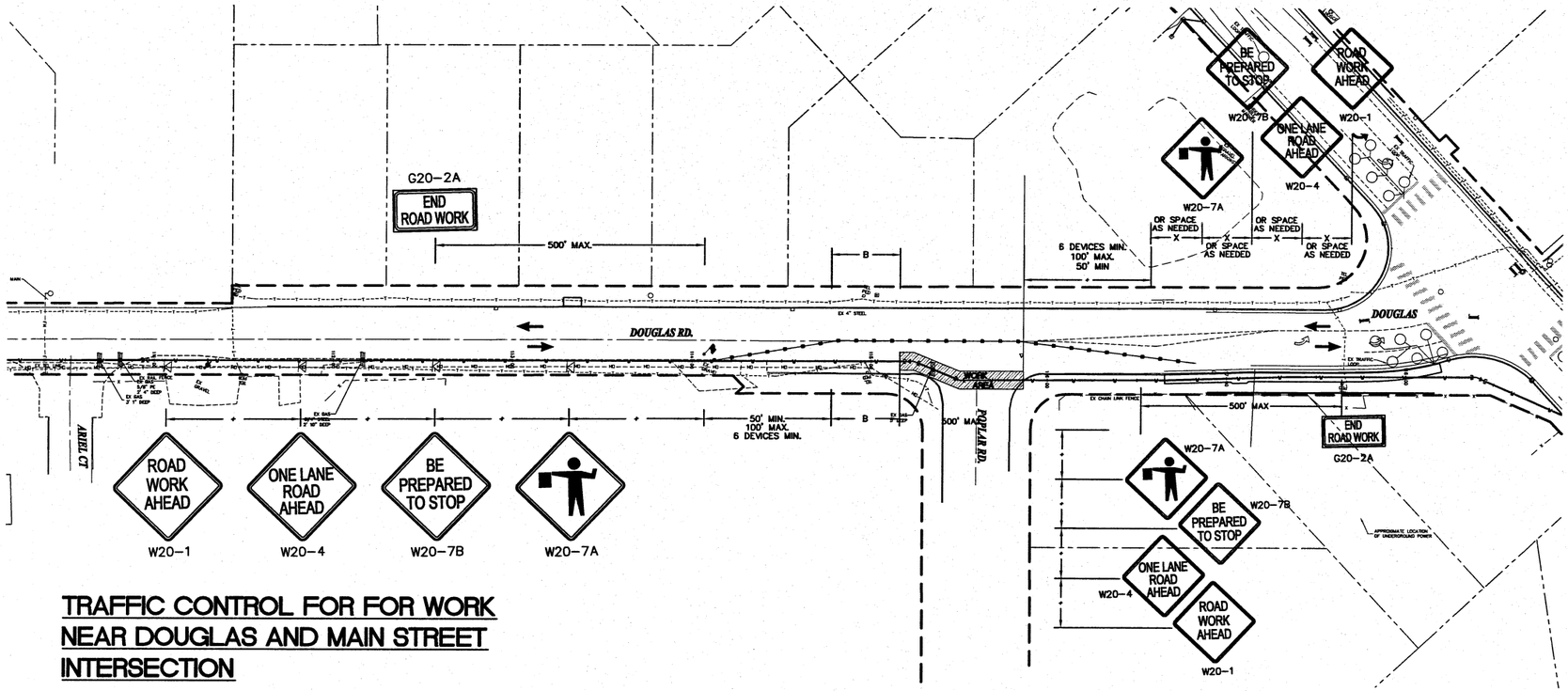
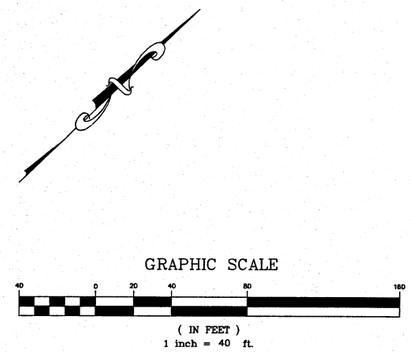
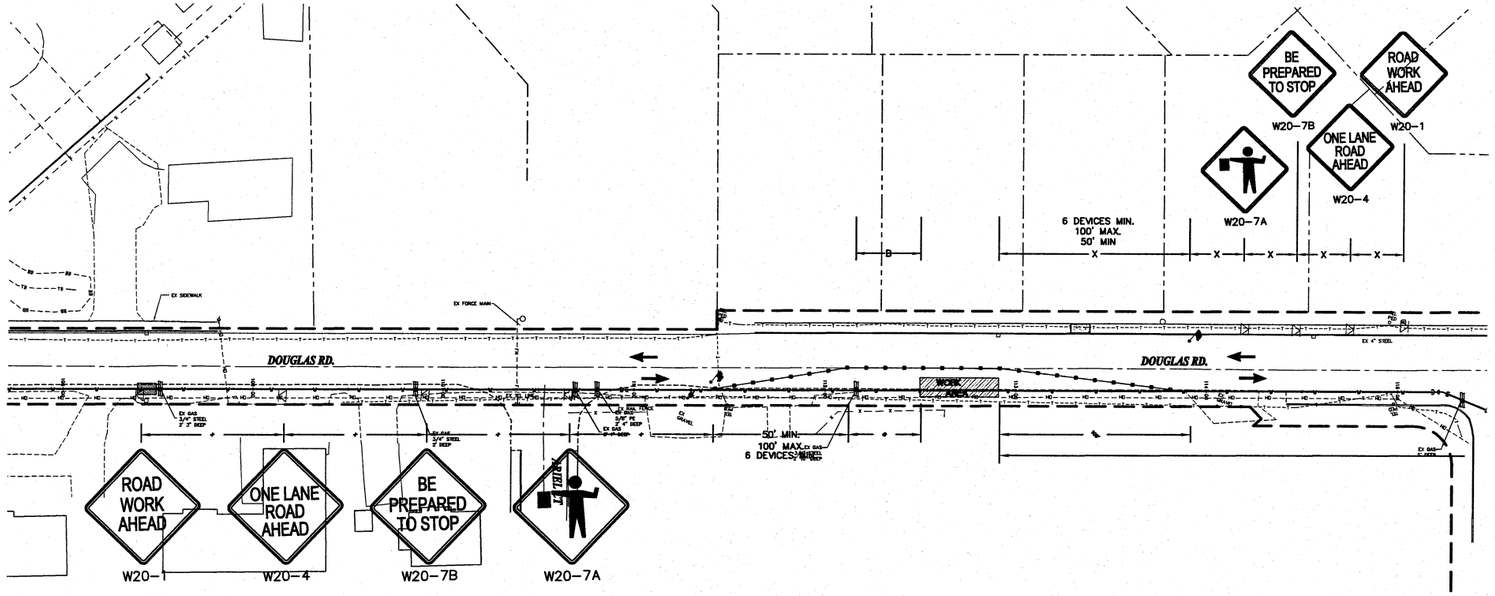


TRAFFIC CONTROL FOR FOR WORK NEAR DOUGLAS AND MAIN STREET INTERSECTION





TYPICAL LANE CLOSER ON DOUGLAS

BUFFER DATA					
BUFFER SPACE = B					
SPEED (MPH)	25	30	35	40	45
LENGTH (feet)	55	85	120	170	220

CHANNELIZING DEVICE SPACING (FEET) (EXCEPT FOR FLAGGING REQUIREMENTS)		
MPH	TAPER	TANGENT
50/65	40	80
35/45	30	60
25/30	20	40

SIGN SPACING = X (FEET)		
RURAL ROADS	45 MPH	500'±
URBAN ARTERIALS	35/40 MPH	350'±
URBAND STREETS RESIDENTIAL AREAS & BUSINESS DISTRICTS	25/30 MPH	200'±*
URBAN ARTERIALS	25 MPH OR LESS	100'±*

*NOTE: THIS SPACING MAY BE REDUCED TO MEET ROADWAY CONDITIONS.

GENERAL NOTES

SIGN SEQUENCE IS THE SAME FOR BOTH DIRECTIONS OF TRAVEL ON THE HIGHWAY.

SIGNING SHOWN IS THE MINIMUM REQUIRED, ADDITIONAL SIGNS MAY BE REQUIRED TO MEET FIELD CONDITIONS.

FLAGGER STATIONS SHALL BE ILLUMINATED DURING HOURS OF DARKNESS

EXTEND DEVICES' TAPER ACROSS SHOULDER

ALL SIGNS ARE 48"x48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

LEGEND

- SIGN LOCATION–TRIPOD MOUNTED
- TRAFFIC CONES SPACED AT 15' ON CENTER
- FLAGGING STATION
- WORK AREA

NOTE:
CONTRACTOR SHALL APPROVE THE PROVIDED PLAN OR SUBMIT A REVISE TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL.

STATE OF WASHINGTON
LOUIS PORCE
23378
REGISTERED PROFESSIONAL ENGINEER
4/20/11

DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	NO.	DATE	REVISION	BY
DRAWN BY BEK						
CHECKED BY LP						

CITY OF FERNDALE
PO BOX 936
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
TRAFFIC CONTROL PLAN
DOUGLAS ROAD CLOSURE

JOB# / DWG		DATE
10020	TC	4-20-11
SCALE H: n/a	V: n/a	SHEET 28 of 33

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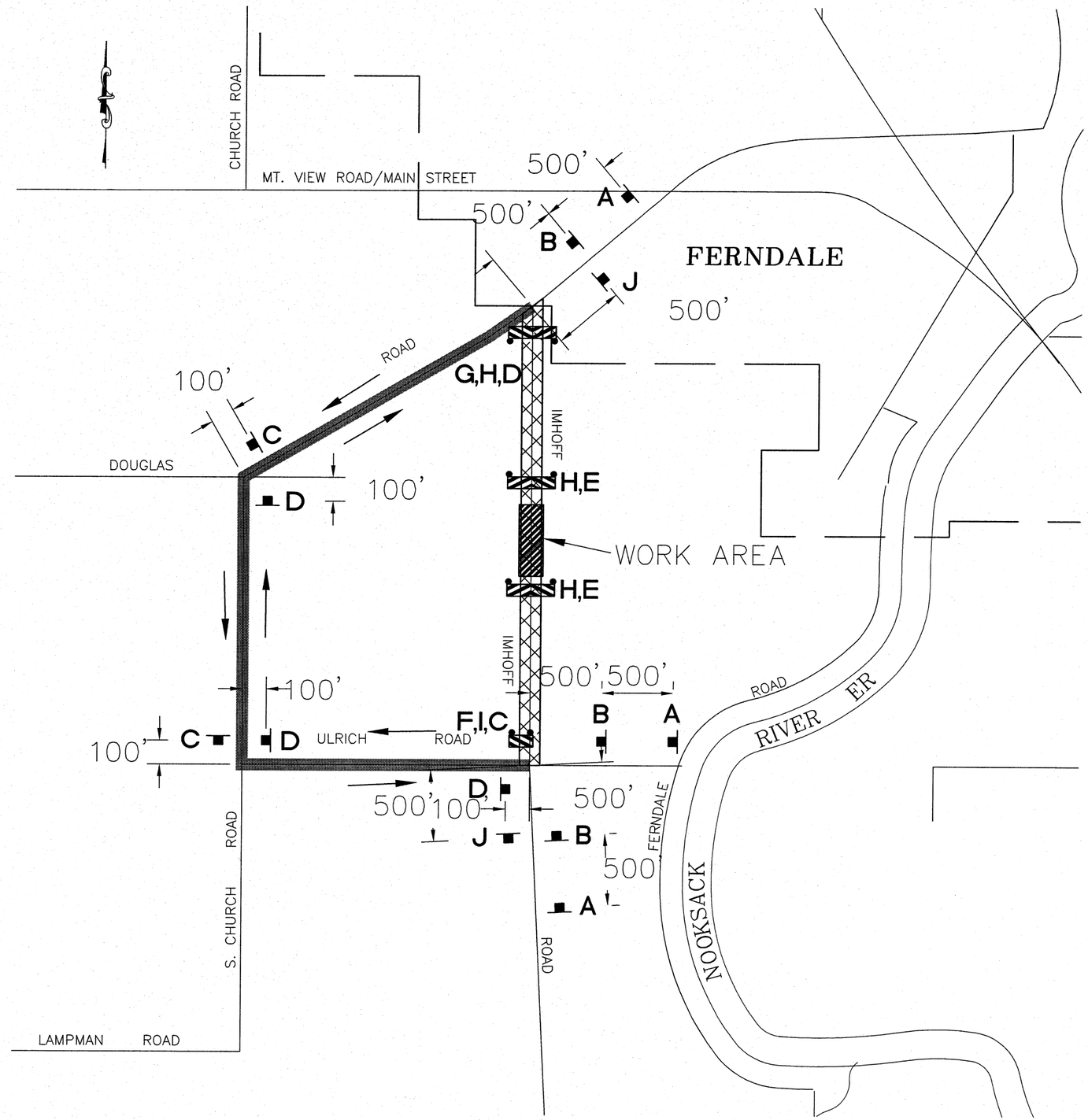
LEGEND

A	ROAD CLOSED AHEAD	W 20–3
B	DETOUR AHEAD	W 20–2
C	DETOUR	M 4–10 L
D	DETOUR	M 4–10 R
E	ROAD CLOSED	R 11–2
F	ROAD CLOSED 1/2 MILES AHEAD LOCAL TRAFFIC ONLY	R 11–3
G	ROAD CLOSED TO THRU TRAFFIC	R 11–4
H		TYPE III R AND TYPE III L, BARRICADE WITH 2 TYPE A FLASHING WARNING LIGHTS– INSTALL ONE BARRICADE IN EACH LANE OF IMHOF.
I		TYPE III R BARRICADE WITH 2 TYPE A FLASHING WARNING LIGHTS.
J	END DETOUR	M 4–8 A

IMHOFF WILL BE CLOSED FOR A CONSECUTIVE 20 WORKING DAYS (4 WEEKS) BETWEEN JULY 03 AND SEPTEMBER 18 2011
NO FLAGGERS OR SPOTTERS



DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	NO.	DATE	REVISION	BY	CITY OF FERNDALE PO BOX 936 FERNDALE, WA 98248
DRAWN BY BEK							
CHECKED BY LP							

WELL WATER SUPPLY PROJECT
TRAFFIC CONTROL PLAN
IMHOFF ROAD CLOSURE

JOB# / DWG		DATE
10020	TC	4–20–11
SCALE H: n/a	V: n/a	SHEET 29 of 33

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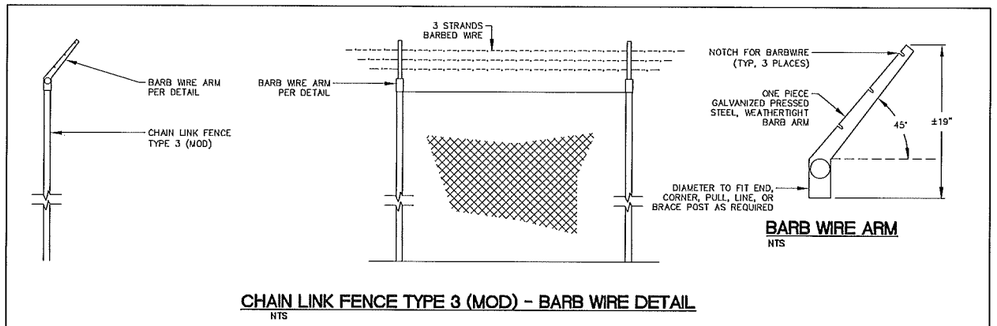
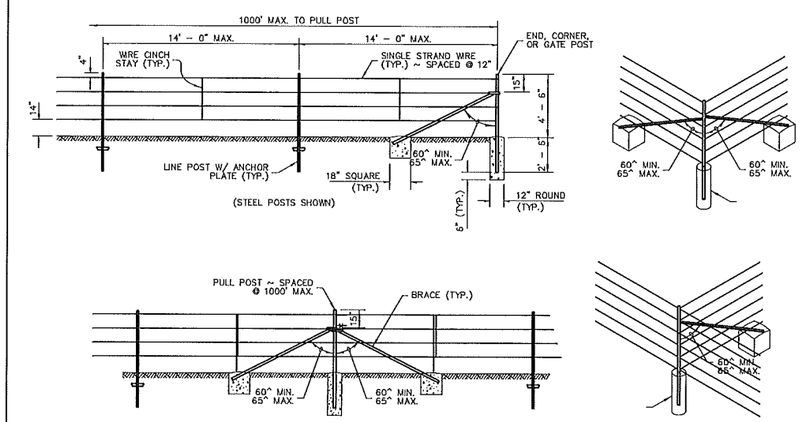


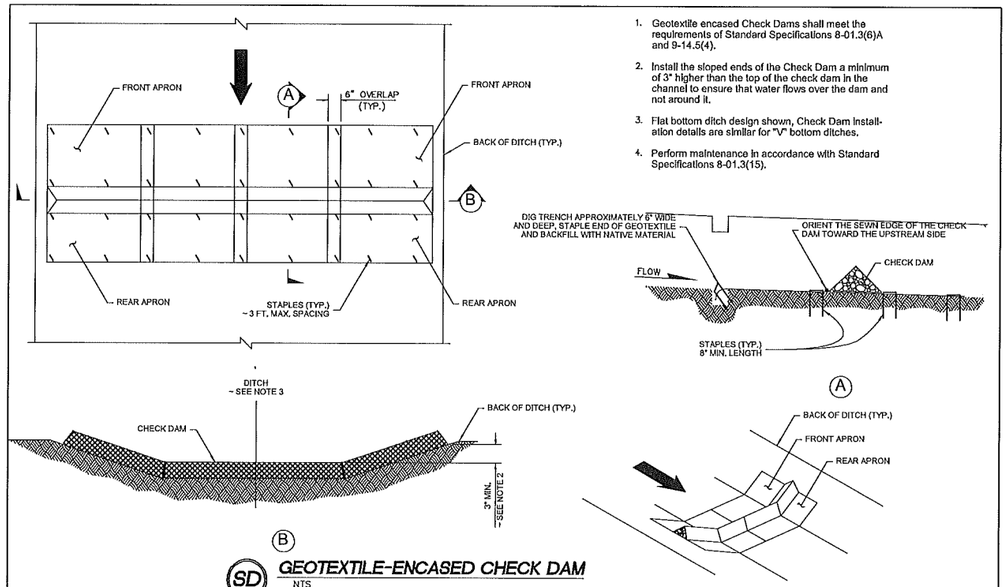
BARB WIRE ARM
NTS

CHAIN LINK FENCE TYPE 3 (MOD) - BARB WIRE DETAIL
NTS

Attach the wire mesh to the posts using four fasteners. Three additional fasteners per post are required within and at the limits of sag conditions. Use additional fasteners on posts which mark the angle point of any sudden change in topography.



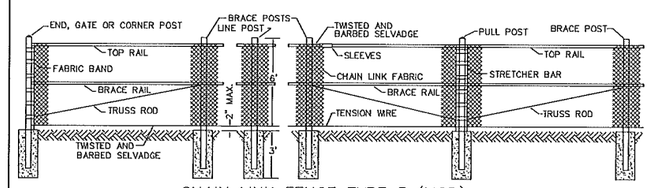
WIRE FENCE TYPE 2 (MOD)
NTS



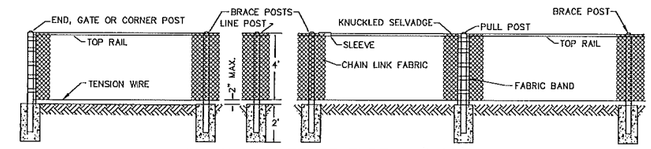
1. Geotextile encased Check Dams shall meet the requirements of Standard Specifications 8-01.3(6)A and 9-14.5(4).
2. Install the sloped ends of the Check Dam a minimum of 3" higher than the top of the check dam in the channel to ensure that water flows over the dam and not around it.
3. Flat bottom ditch design shown, Check Dam installation details are similar for "V" bottom ditches.
4. Perform maintenance in accordance with Standard Specifications 8-01.3(15).

SD GEOTEXTILE-ENCASED CHECK DAM
NTS

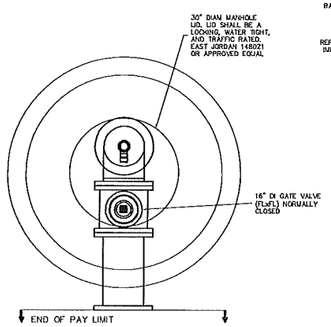
TYPE	MEMBER																		
	BRACE RAIL & TOP RAIL						LINE & BRACE POST						END, CORNER & PULL POST				GATE POST		ALL POSTS
	ROUND		H-COLUMN		ROLL FORMED		ROUND		H-COLUMN		ROLL FORMED		ROUND		ROLL FORMED		ROUND		
	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	LENGTH
3	1 1/4	2.27	1 1/4 x 1 5/8	1.35	1 5/8 x 1 1/4	1.35	2	3.65	2 1/4	4.0	1 5/8 x 1 7/8	2.34	2 1/2	5.79	3 1/2 x 3 1/2	5.14	3 1/2	9.1	8'-8"
4	1 1/4	2.27	1 1/4 x 1 5/8	1.35	1 5/8 x 1 1/4	1.35	2	3.65	2 1/4	4.0	1 5/8 x 1 7/8	2.34	2 1/2	5.79	3 1/2 x 3 1/2	5.14	3 1/2	9.1	5'-6"



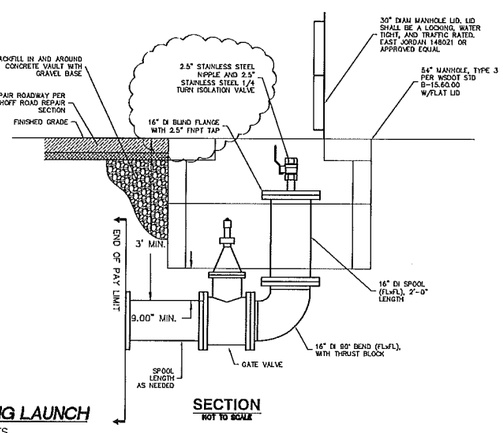
CHAIN LINK FENCE TYPE 3 (MOD)
NTS



CHAIN LINK FENCE TYPE 4 (MOD)
NTS

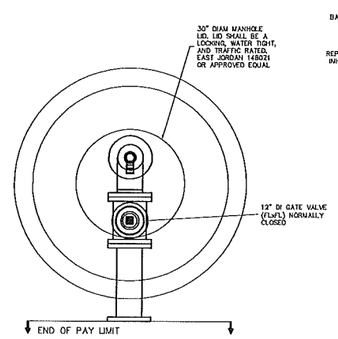


POLYPIG LAUNCH STATION PLAN
NOT TO SCALE

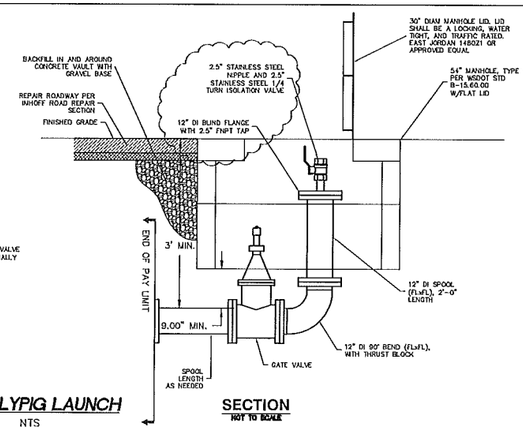


16" POLYPIG LAUNCH
NTS

SECTION
NOT TO SCALE



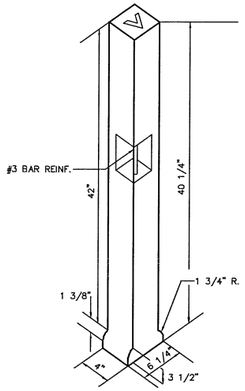
POLYPIG LAUNCH STATION PLAN
NOT TO SCALE



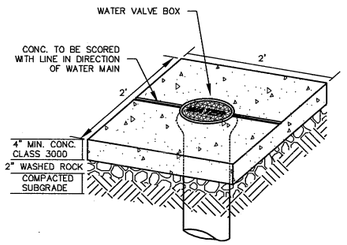
12" POLYPIG LAUNCH
NTS

SECTION
NOT TO SCALE

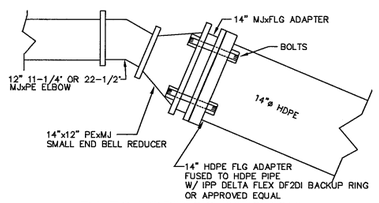
DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407				CITY OF FERNDALE 2095 MAIN STREET FERNDALE, WA 98248	WELL WATER SUPPLY PROJECT DETAIL SHEET
DRAWN BY BEK			1	5/5	ADDENDUM 1 BEK		JOB# / DWG 10020 DET.1ADD
CHECKED BY LP			NO.	DATE	REVISION BY		SCALE H:N/A V:N/A
							DATE 5/5/11
							SHEET 30 of 33



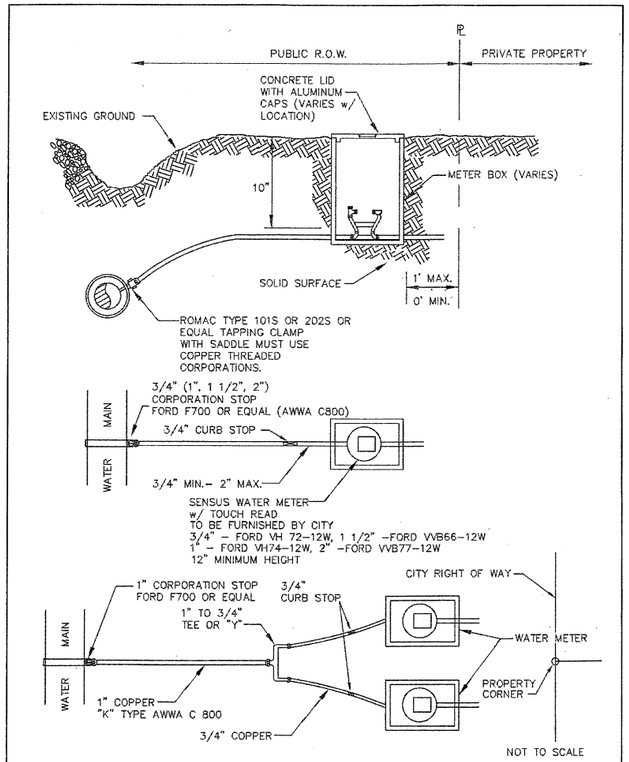
VALVE MARKER POST
NTS



VALVE BOX ENCASEMENT DETAIL
NTS

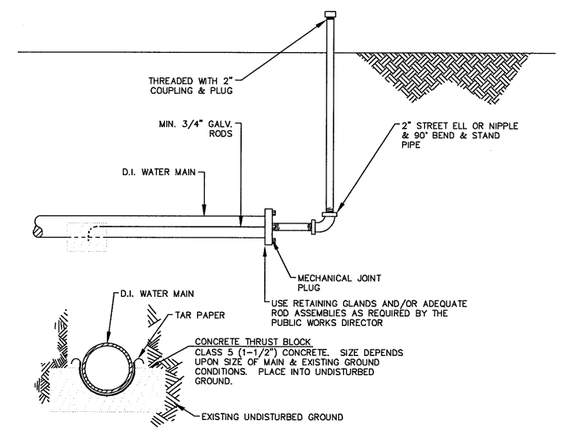


D.I. TO HDPE CONNECTION
NTS

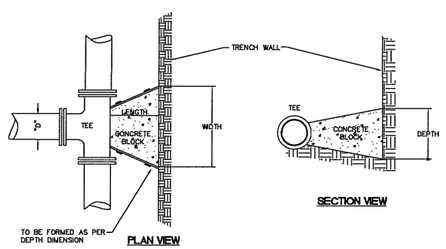


APPROVED	CITY OF FERNDALE	DRAWING
Public Works Director Date	TYPICAL WATER SERVICE (3/4" TO 2")	W–5

JUNE 1995



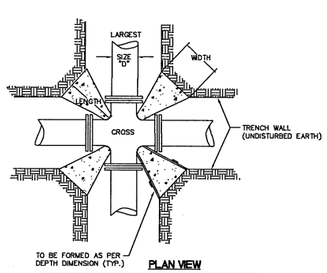
BLOWOFF ASSEMBLY MODIFIED
NTS



"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"	18"	14.0
16"	4'–6"	3'–6"	24"	32.0

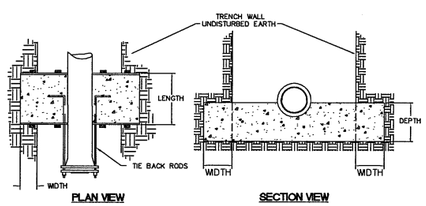
VOL. = Approx. Volume of Blocking Material Required in cu. ft.

SOIL BEARING CAPACITY 1500 PSF MINIMUM
100 P.S.I. OPERATING PRESSURE



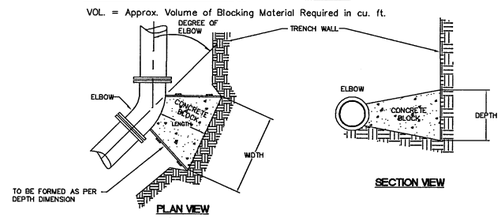
"D"	WIDTH	DEPTH	LENGTH	VOL.	X4 blocks/joint
6"	1'–0"	1'–0"	12"	0.63	2.50 cu ft
8"	1'–3"	1'–3"	12"	1.00	4.01 cu ft
10"	1'–6"	1'–6"	12"	1.63	6.50 cu ft
12"	1'–9"	1'–9"	18"	3.05	12.19 cu ft
16"	2'–3"	2'–6"	24"	11.50	46.00 cu ft

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"
16"	3'–0"	3'–0"	24"	54.0	4	3/4"

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

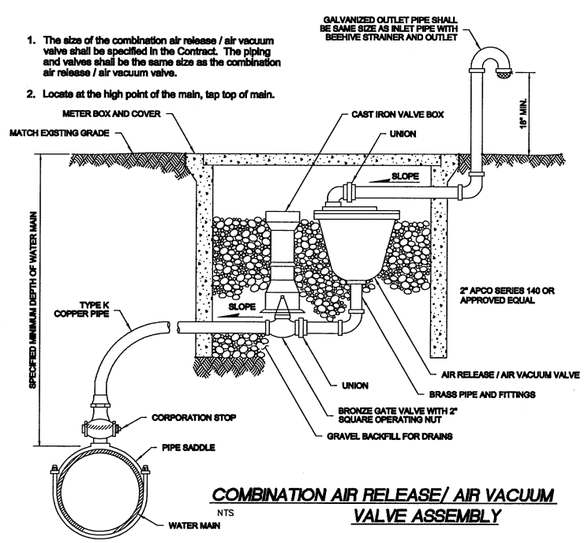


"D"	LENGTH	11 1/4°			22 1/2°			45°			90°		
		WIDTH	DEPTH	VOL.	WIDTH	DEPTH	VOL.	WIDTH	DEPTH	VOL	WIDTH	DEPTH	VOL.
6"	12"	1'–0"	1'–0"	0.63	1'–0"	1'–0"	0.63	1'–6"	1'–6"	1.25	2'–3"	1'–6"	1.88
8"	12"	1'–3"	1'–3"	1.00	1'–3"	1'–3"	1.00	1'–9"	1'–9"	1.75	3'–0"	2'–0"	3.33
10"	12"	1'–9"	1'–6"	1.72	1'–9"	1'–6"	1.72	2'–3"	2'–3"	2.88	3'–6"	2'–6"	4.861
12"	18"	2'–0"	1'–9"	3.48	2'–0"	1'–9"	3.48	2'–9"	2'–6"	5.98	4'–0"	3'–0"	10.00
16	24"	2'–9"	2'–3"	6.20	2'–9"	2'–3"	6.20	4'–0"	3'–0"	12.00	6'–3"	3'–6"	21.90

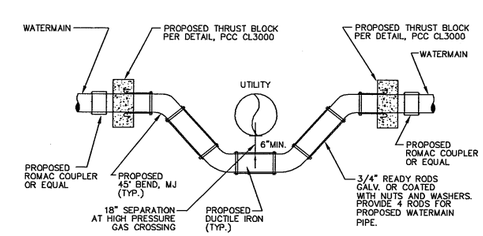
VOL. = Approx. Volume of Blocking Material Required in cu. ft.

THRUST BLOCKING NTS

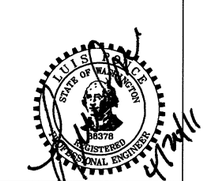
1. The size of the combination air release / air vacuum valve shall be specified in the Contract. The piping and valves shall be the same size as the combination air release / air vacuum valve.
2. Locate at the high point of the main, tap top of main.



COMBINATION AIR RELEASE/ AIR VACUUM VALVE ASSEMBLY
NTS



WATERMAIN STOVEPIPE
NTS



DESIGNED BY	DRAWN BY	CHECKED BY
BEK	BEK	LP

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

NO.	DATE	REVISION	BY
2	01/18	RH2– 95% SUBMITTAL– DAN BURWELL	BEK
1	11/17	RH2– 60% SUBMITTAL– DAN BURWELL	BEK

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DETAIL SHEET

JOB# / DWG		DATE
10020	DET	4–20–11
SCALE H:N/A	V:N/A	SHEET 31 of 33

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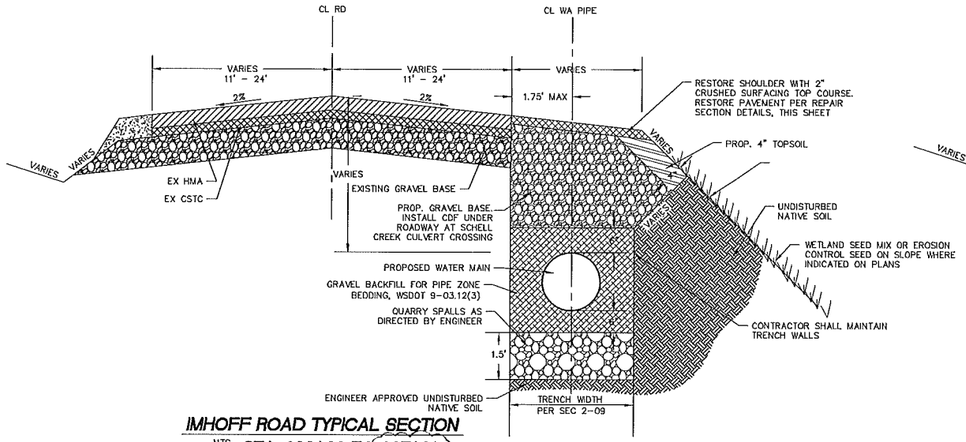
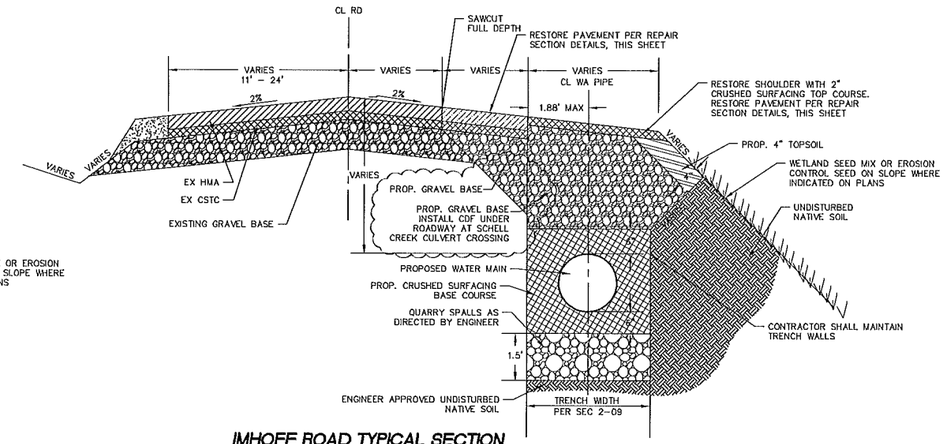


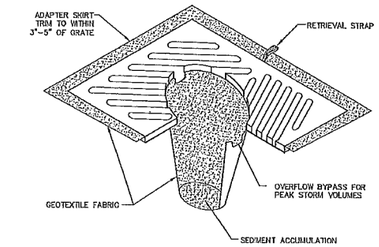
IMHOFF ROAD TYPICAL SECTION

NTS STA: 200+00 TO 207+82



IMHOFF ROAD TYPICAL SECTION

NTS STA: 207+82 TO 230+32

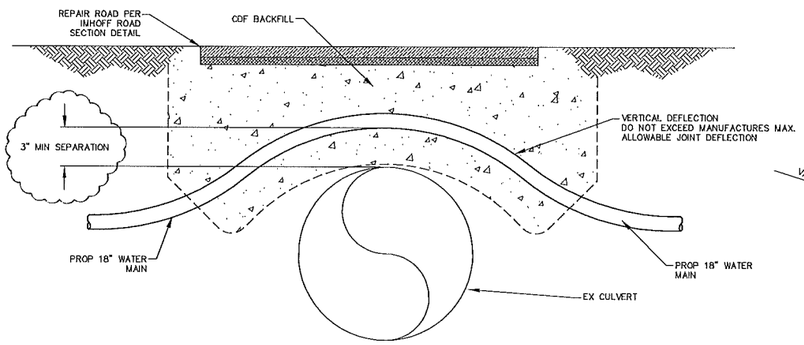


NOTES:

1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

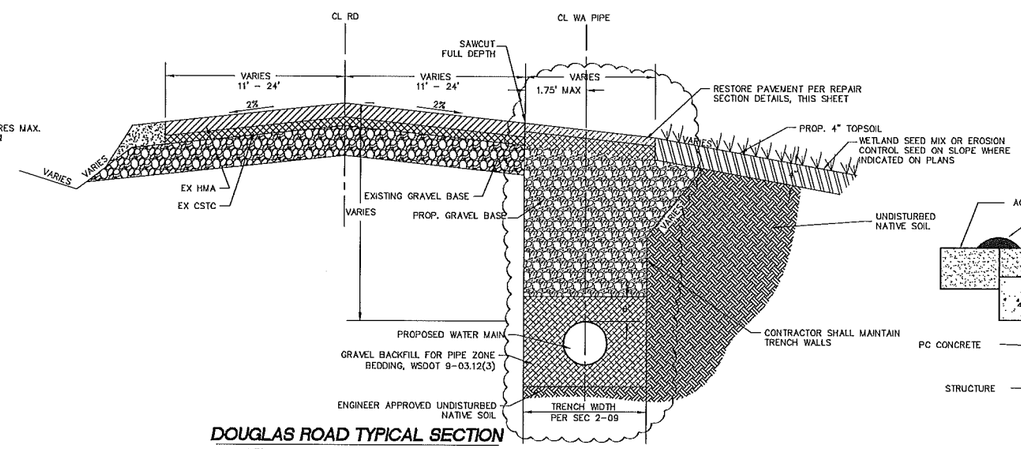
INLET PROTECTION

NTS



CULVERT CROSSING

NTS STA 216+40



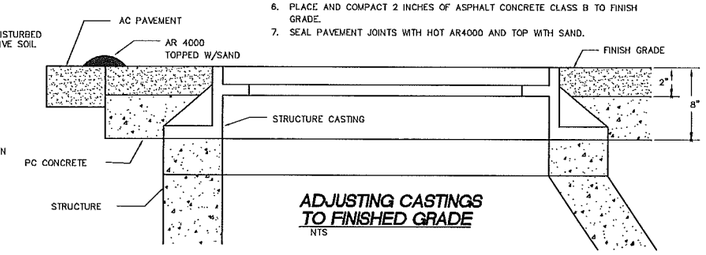
DOUGLAS ROAD TYPICAL SECTION

NTS

NOTES:

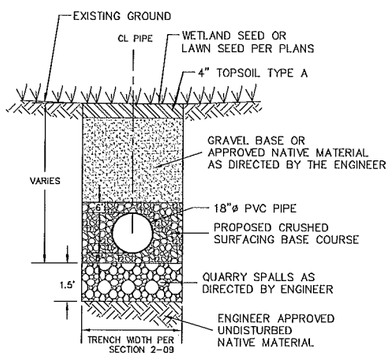
ALL FRAMES, COVERS AND VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE AFTER THE FINAL LIFT OF PAVING HAS BEEN COMPLETED. THE FOLLOWING PROCEDURE SHALL BE USED:

1. CUT THE ASPHALT IN AN EVEN CIRCLE AROUND THE STRUCTURE CASTING TO BE ADJUSTED.
2. REMOVE THE FILL MATERIAL WITHIN THE CUT PAVEMENT AREA TO 8 INCHES MIN. BELOW FINISH GRADE.
3. PLACE THE CASTING AT FINISH GRADE.
4. PLACE PORTLAND CEMENT CONCRETE TO WITHIN THE TOP 2 INCHES OF FINISH GRADE.
5. APPLY TACK TO THE STRUCTURE CASTING, CUT PAVEMENT, AND PC CONCRETE.
6. PLACE AND COMPACT 2 INCHES OF ASPHALT CONCRETE CLASS B TO FINISH GRADE.
7. SEAL PAVEMENT JOINTS WITH HOT AR4000 AND TOP WITH SAND.



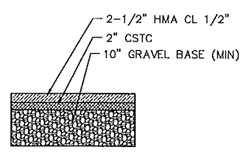
ADJUSTING CASTINGS TO FINISHED GRADE

NTS



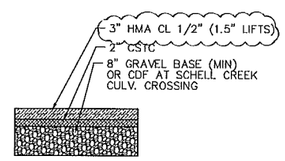
TYPICAL TRENCH SECTION OUTSIDE OF ROADWAY

NTS



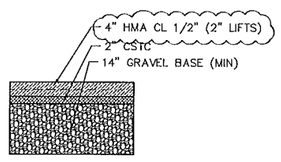
DRIVEWAY PAVEMENT SECTION DETAIL

NTS



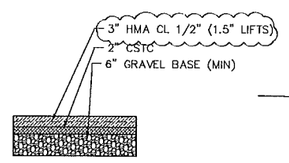
IMHOFF ROAD REPAIR SECTION DETAIL

NTS



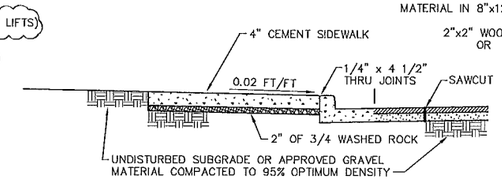
DOUGLAS ROAD REPAIR SECTION DETAIL

NTS



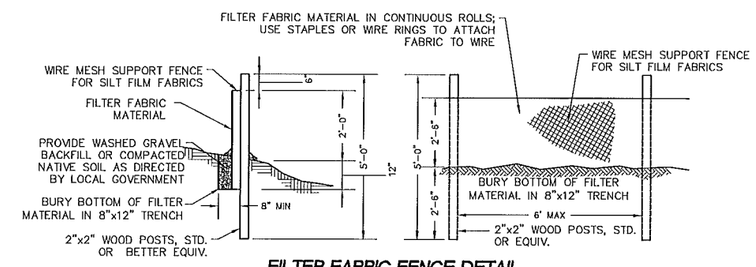
LIBRARY ASPHALT REPAIR SECTION DETAIL

NTS



SIDEWALK DETAIL

NTS



FILTER FABRIC FENCE DETAIL

NTS

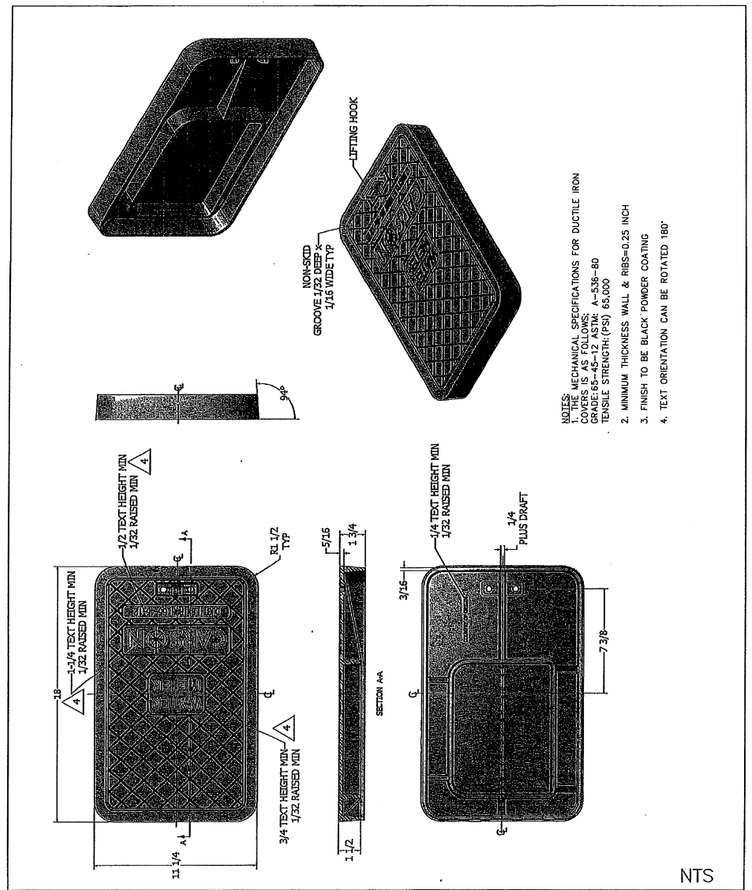
DESIGNED BY BEK	R&E	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407			
DRAWN BY BEK					
CHECKED BY LP					
			1	5/5	ADDENDUM 1 — BEK
			NO.	DATE	REVISION — BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DETAIL SHEET

JOB# / DWG 10020	DET.1ADD	DATE 5/5/11
SCALE H:N/A	V:N/A	SHEET 32 of 33

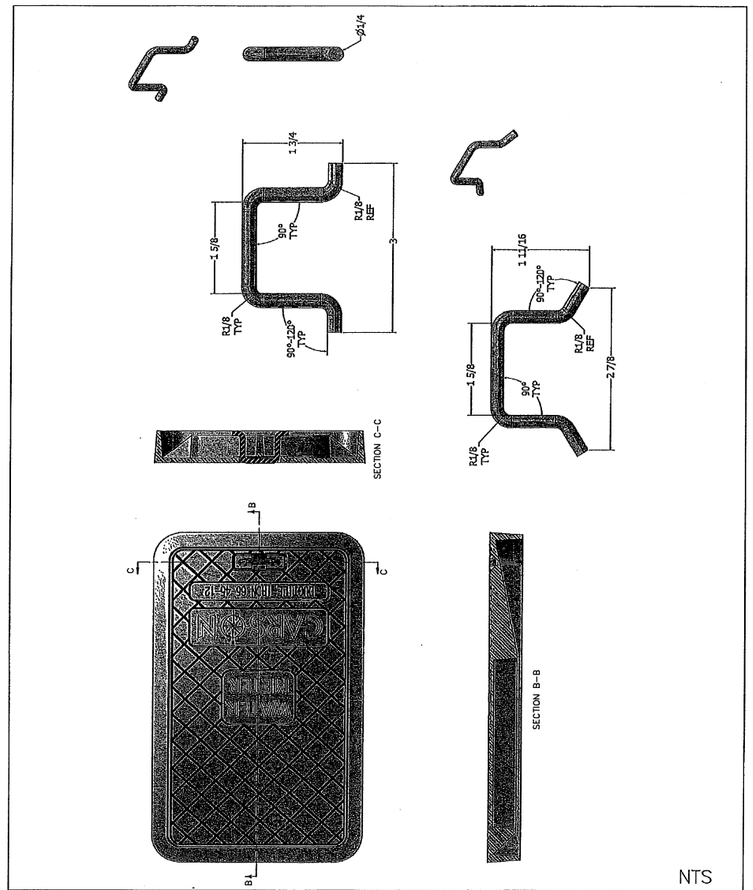
LUKE PONCE — STATE OF WASHINGTON — 46178 — REGISTERED PROFESSIONAL ENGINEER — 5/5/11



NOTES:
1. THE MECHANICAL SPECIFICATIONS FOR DUCTILE IRON CASTINGS AS FOLLOWS:
GRADE:65-45-12 ASTM: A-536-80
TENSILE STRENGTH:(PSI) 65,000
2. MINIMUM THICKNESS WALL & RIBS=0.25 INCH
3. FINISH TO BE BLACK POWDER COATING
4. TEXT ORIENTATION CAN BE ROTATED 180°

NTS

APPROVED	CITY OF FERNDALE 3/4" WATER METER LOCATED IN SIDEWALK	DRAWING W-6.1.1
Public Works Director Date		



NTS

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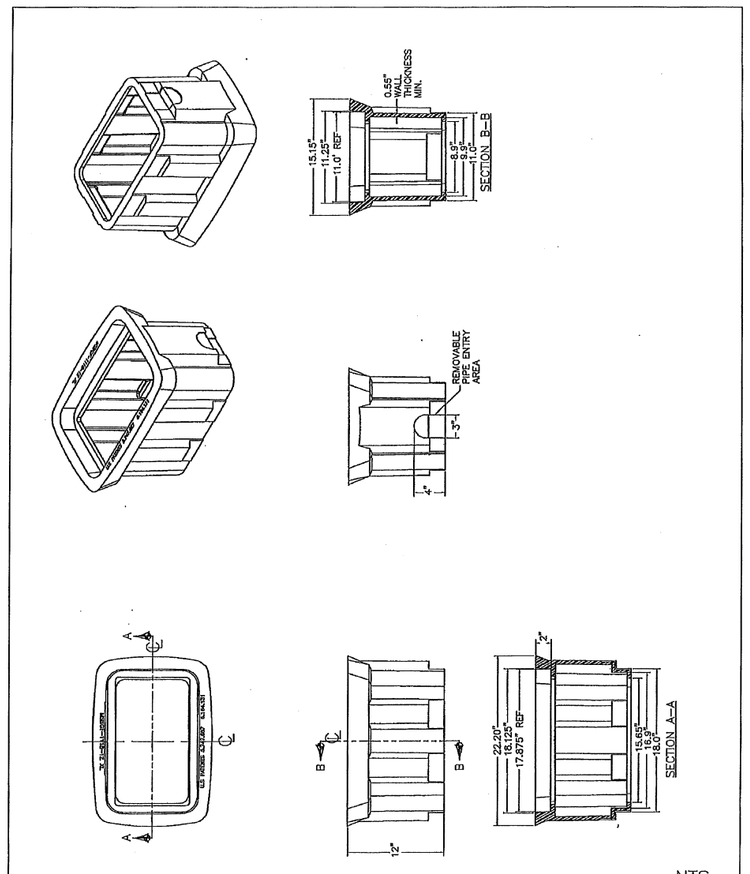
Public Works Director Date		



NTS

APPROVED	CITY OF FERNDALE 3/4" WATER METER LOCATED IN SIDEWALK	DRAWING W-6.1.3
Public Works Director Date		

DESIGNED BY	BEK
DRAWN BY	BEK
CHECKED BY	LP

R&E

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

NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DETAIL SHEET

JOB# / DWG	10020 DET	DATE	4-20-11
SCALE	H:N/A V:N/A	SHEET	33 of 33

LUCIS PONCE
STATE OF WASHINGTON
13378
REGISTERED PROFESSIONAL ENGINEER
4/20/11

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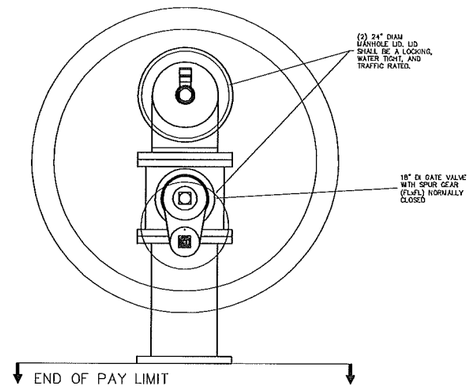
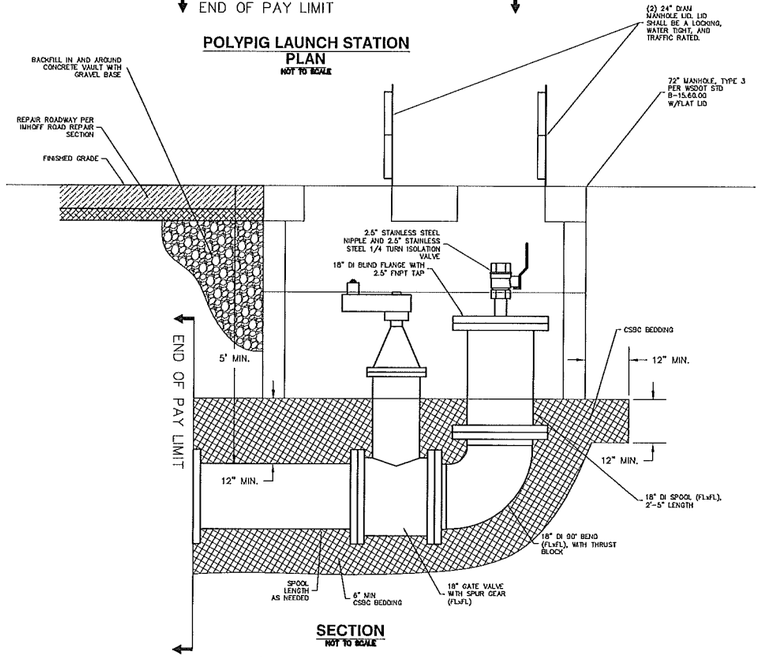


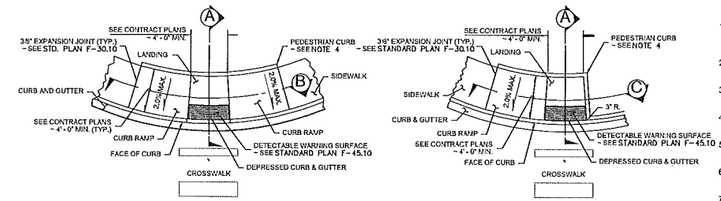
POLYPIG LAUNCH STATION PLAN
NOT TO SCALE

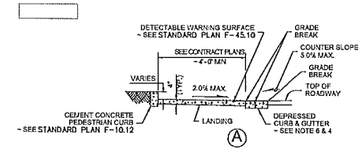


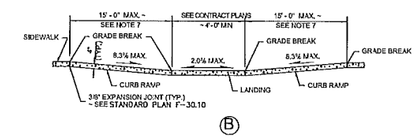
SECTION
NOT TO SCALE

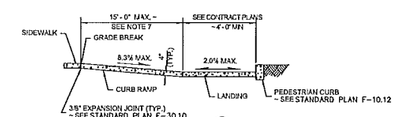
18" POLYPIG LAUNCH

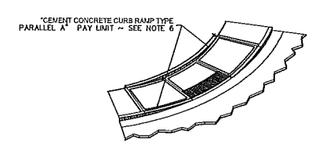
NTS

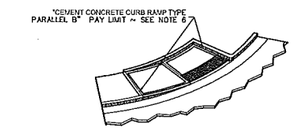






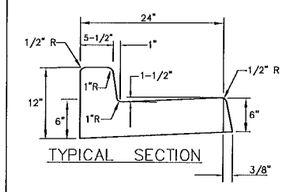




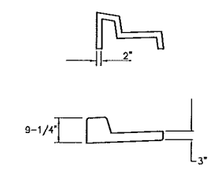


1. Provide a separate curb ramp for each marked or unmarked crosswalk. Curb ramp location shall be placed within the width of the associated crosswalk, or as shown in the Contract Plans.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place gratings, junction boxes, access covers, or other appurtenances in front of thre curb ramp or on any part of the curb ramp or landing.
4. See Contract Plans for the curb design specified. See Standard Plan F-10.12 for Curb, Curb and Gutter, and Pedestrian Curb Details.
5. See Standard Plan F-30.10 for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type ___" does not include the adacent Curb, Curb and Gutter, Pedestrian Curb or Sidewalks.
7. The curb ramp maximum running slope shall not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15 foot max. length, the running slope of the curb ramp shall be as flat as feasable.
8. Curb ramp, landing, & flares shall receive broom finish. See Standard Specifications 8-14.

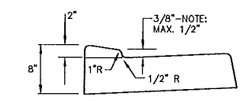
SLOPE IN EITHER DIRECTION



TYPICAL SECTION



CONTRACT JOINTS



CURB RAMP/DRIVEWAY SECTION

GENERAL NOTES

CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10'C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MIN. 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.

2" WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION & A MAX. 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY PUBLIC WORKS DIRECTOR.

3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS, & COLD JOINTS OR A MAX. OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.

CONCRETE SHALL BE CEMENT CONCRETE "CLASS 3000".

FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH A 10' STRAIGHT EDGE.

EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER HAIR BRUSH.

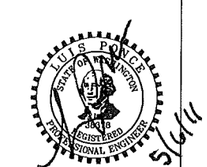
WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.

FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

NOT TO SCALE

APPROVED	CITY OF FERNDALE	DRAWING
Public Works Director / Date	CURB AND GUTTER	R-9

JULY 2001



DESIGNED BY	BEK
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REICHHARDT & EBE ENGINEERING, INC.
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NO.	DATE	REVISION	BY
1	5/5	ADDENDUM 1	BEK

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

WELL WATER SUPPLY PROJECT
DETAIL SHEET

JOB# / DWG		DATE
10020	DET.1ADD	5/5/11
SCALE H:N/A	V:N/A	SHEET 33.1of 33