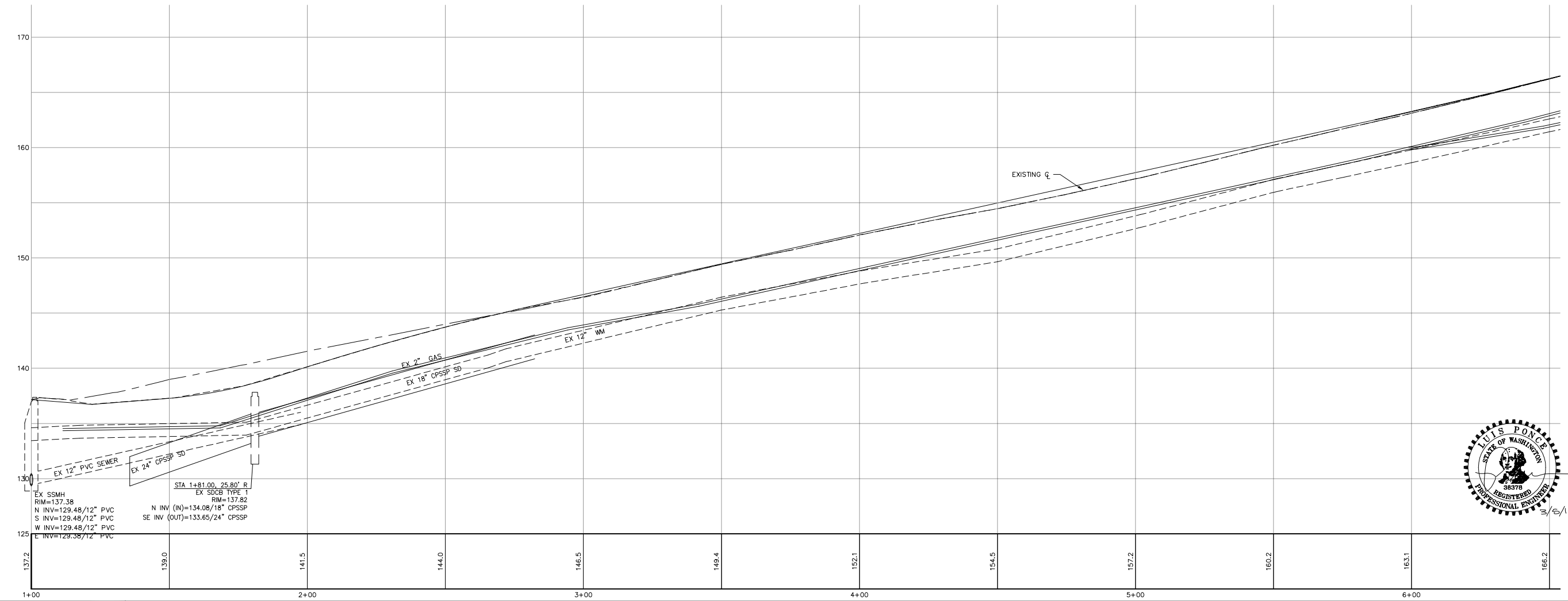
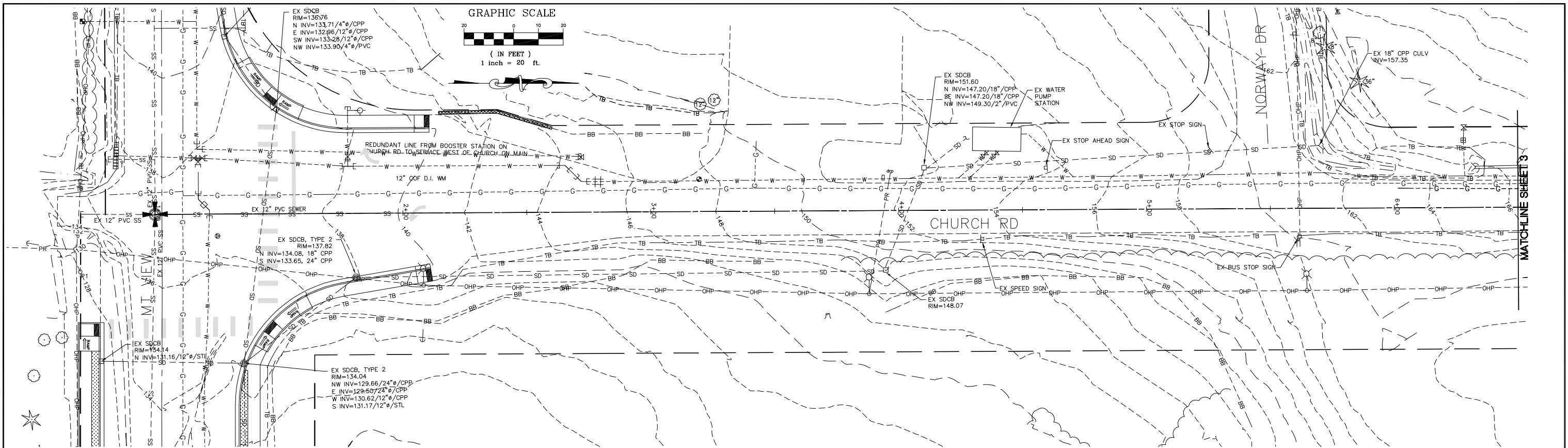


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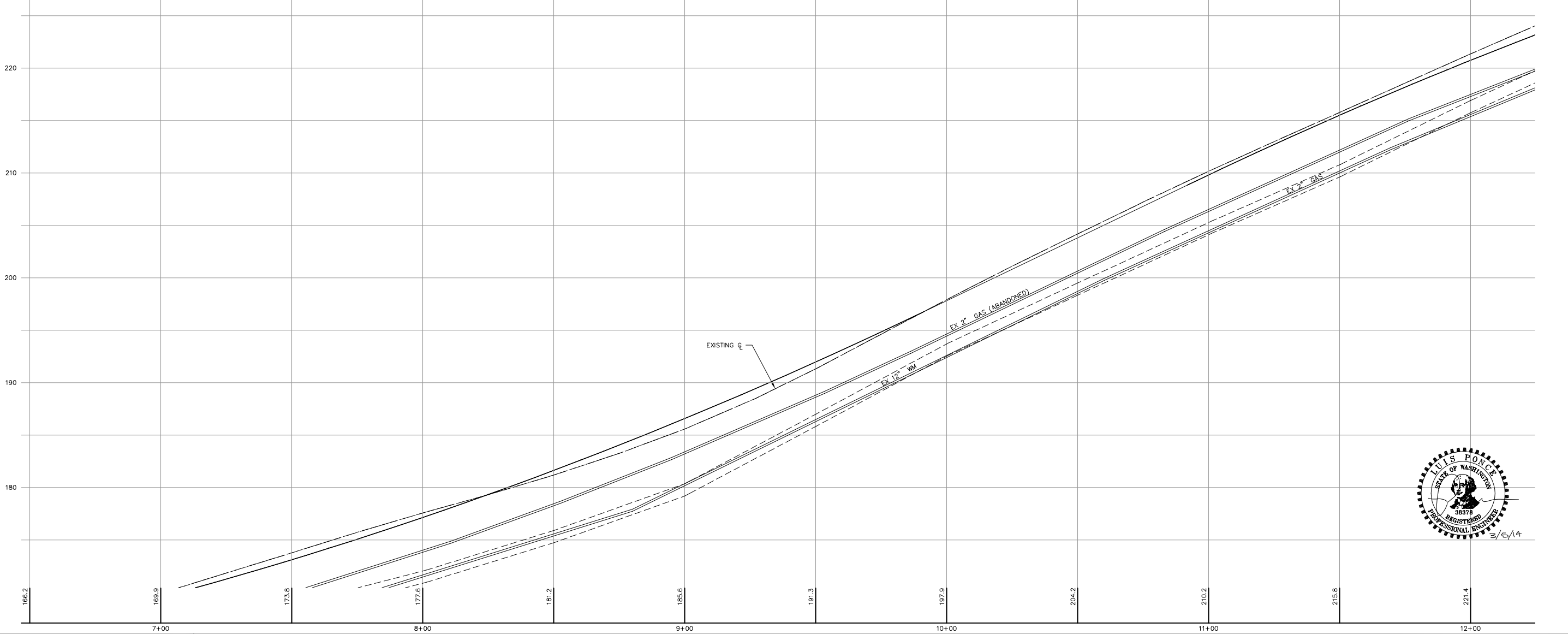
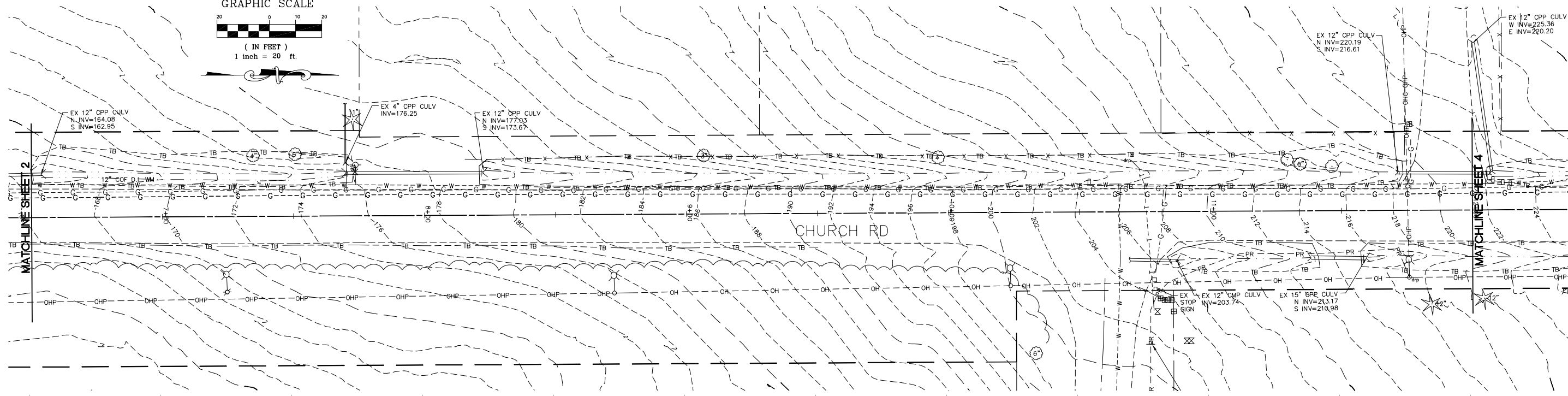
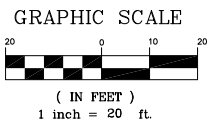
NO.	DATE	REVISION	BY

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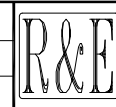
CHURCH ROAD
STREET IMPROVEMENTS
EXISTING CONDITIONS - 1+00 TO 6+50

JOB# / DWG 07037 EX COND	DATE 3-5-14
SCALE H: 1" = 20' V: 1" = 5'	SHEET 2 of 63





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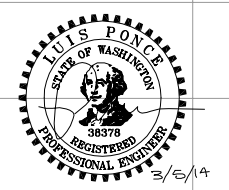
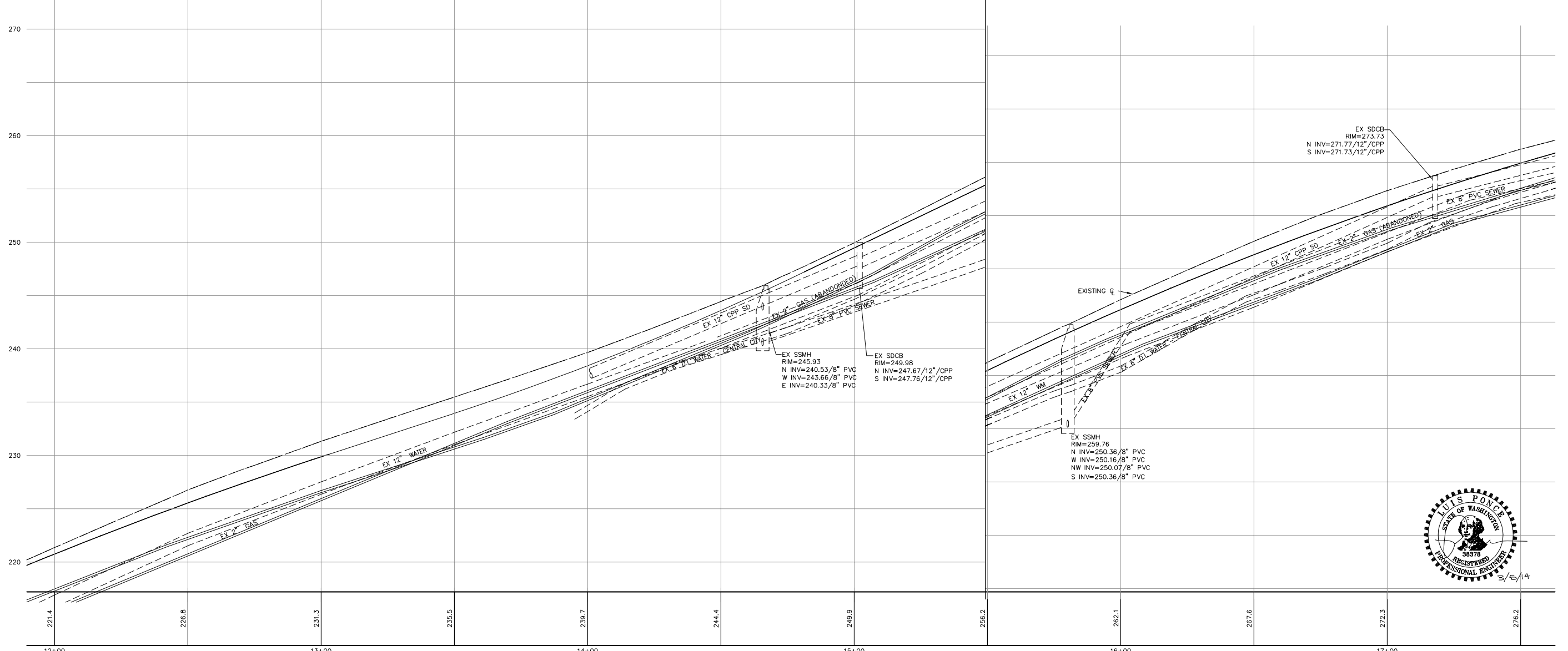
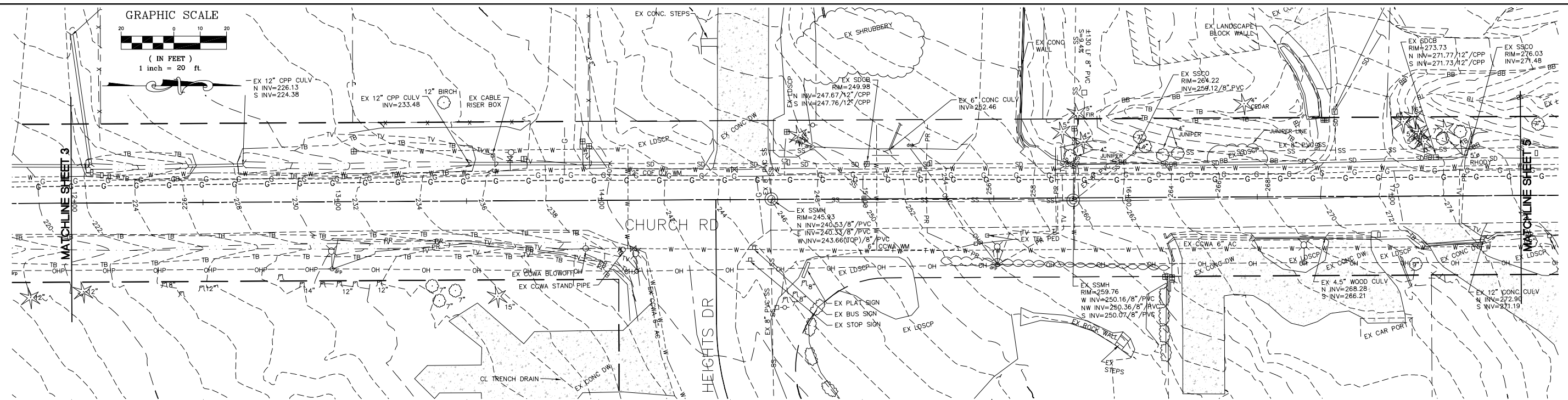
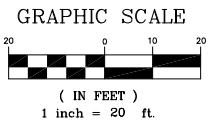
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EXISTING CONDITIONS - 6+50 TO 12+00

JOB# / DWG
07037 EX COND
SCALE
H: 1" = 20' V: 1" = 5'

DATE
3-5-14
SHEET
3 of 63

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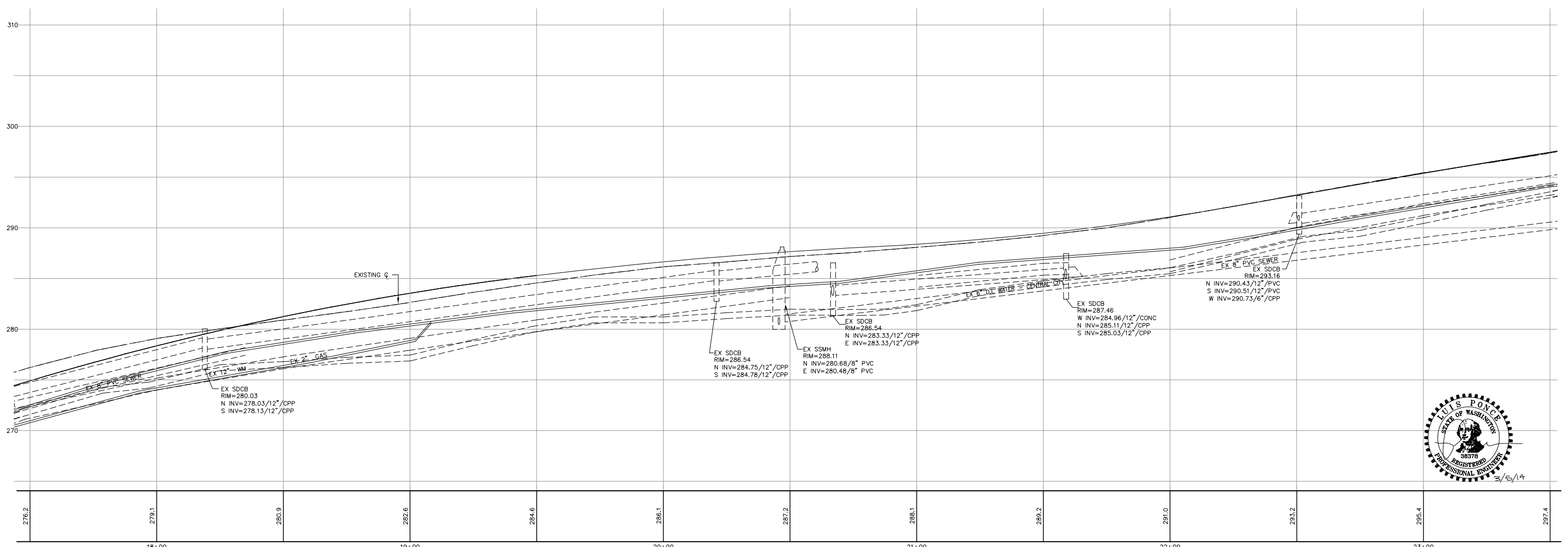
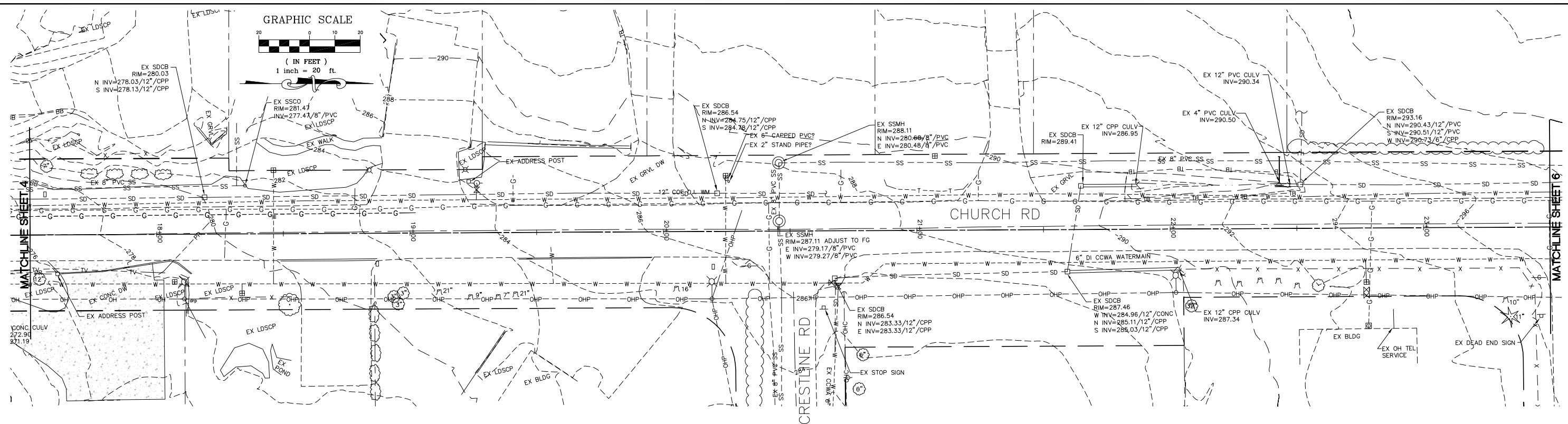
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CHURCH ROAD
STREET IMPROVEMENTS
EXISTING CONDITIONS - 12+00 TO 17+50

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07037 EX COND
SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
SHEET
4 of 63

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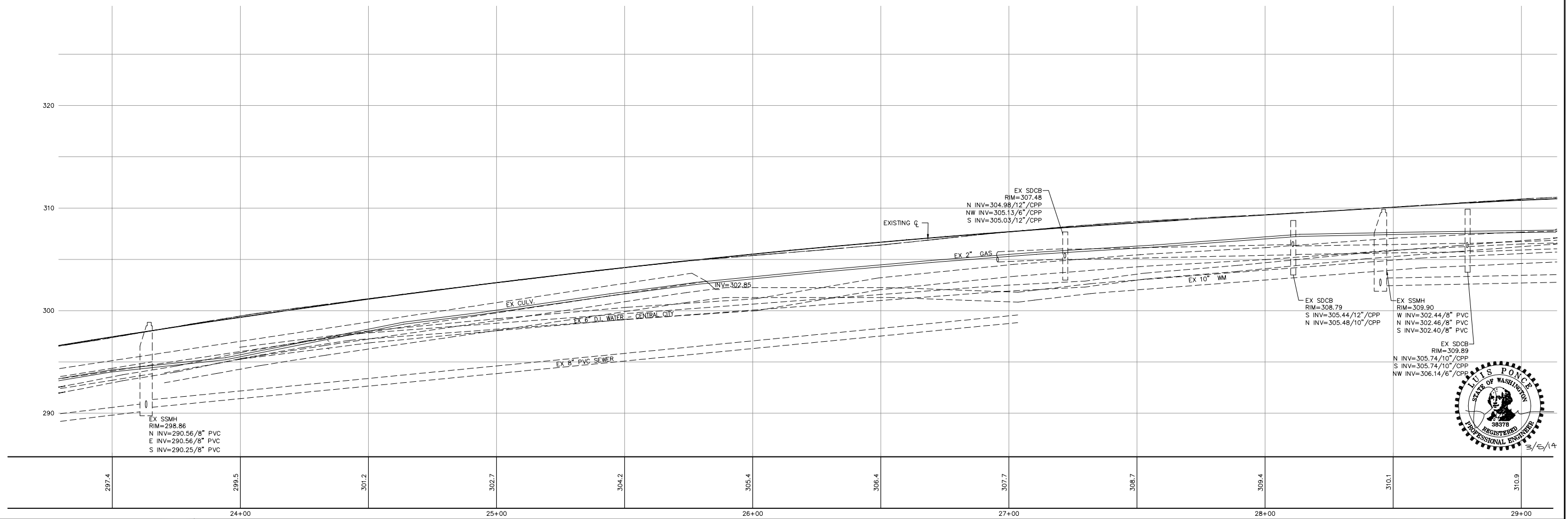
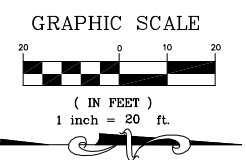
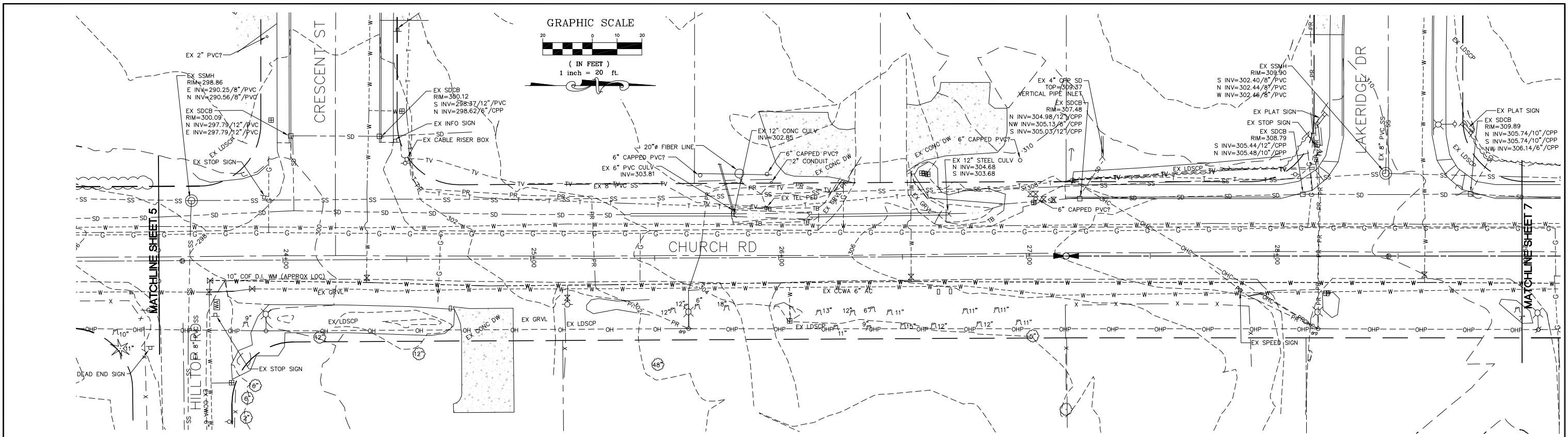
NO.	DATE	REVISION	BY

CITY OF FERDALE
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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
EXISTING CONDITIONS - 17+50 TO 23+50

JOB# / DWG 07037 EX COND	DATE 3-5-14
SCALE H:1"=20' V:1"=5'	SHEET 5 of 63

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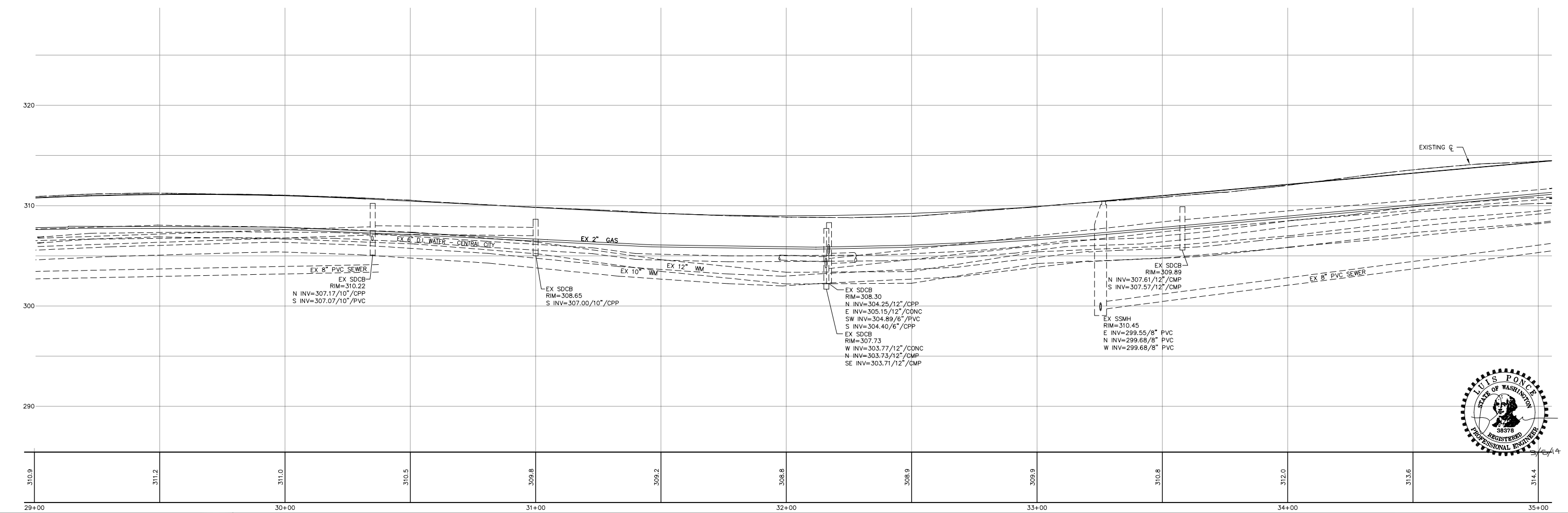
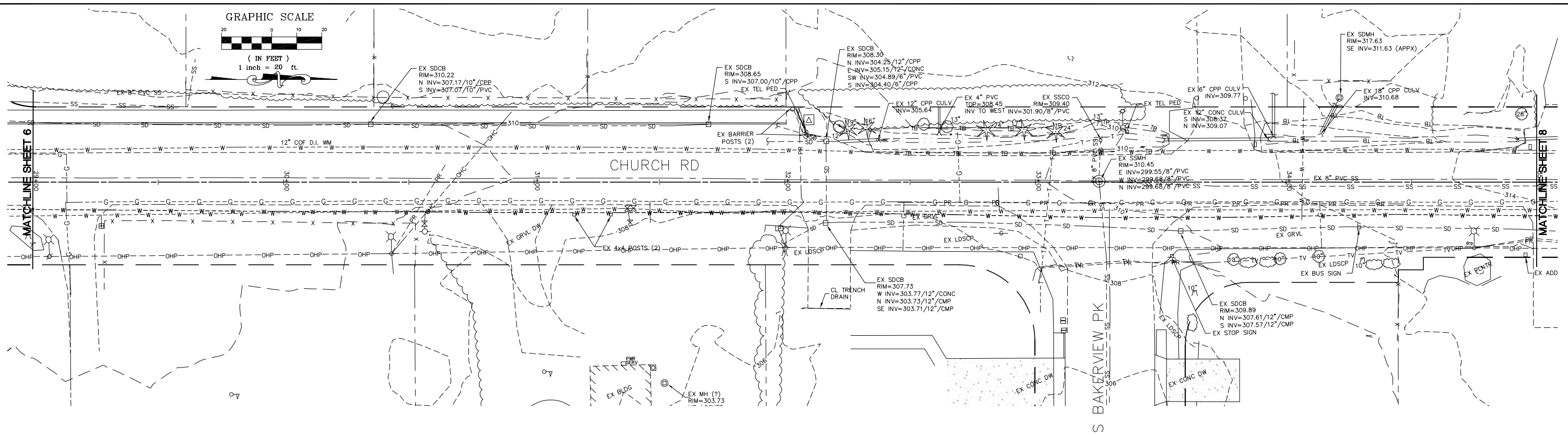
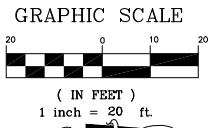
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CHURCH ROAD
STREET IMPROVEMENTS
EXISTING CONDITIONS - 23+50 TO 29+00

JOB# / DWG 07037 EX COND DATE 3-5-14
SCALE H:1"=20' V:1"=5' SHEET 6 of 63



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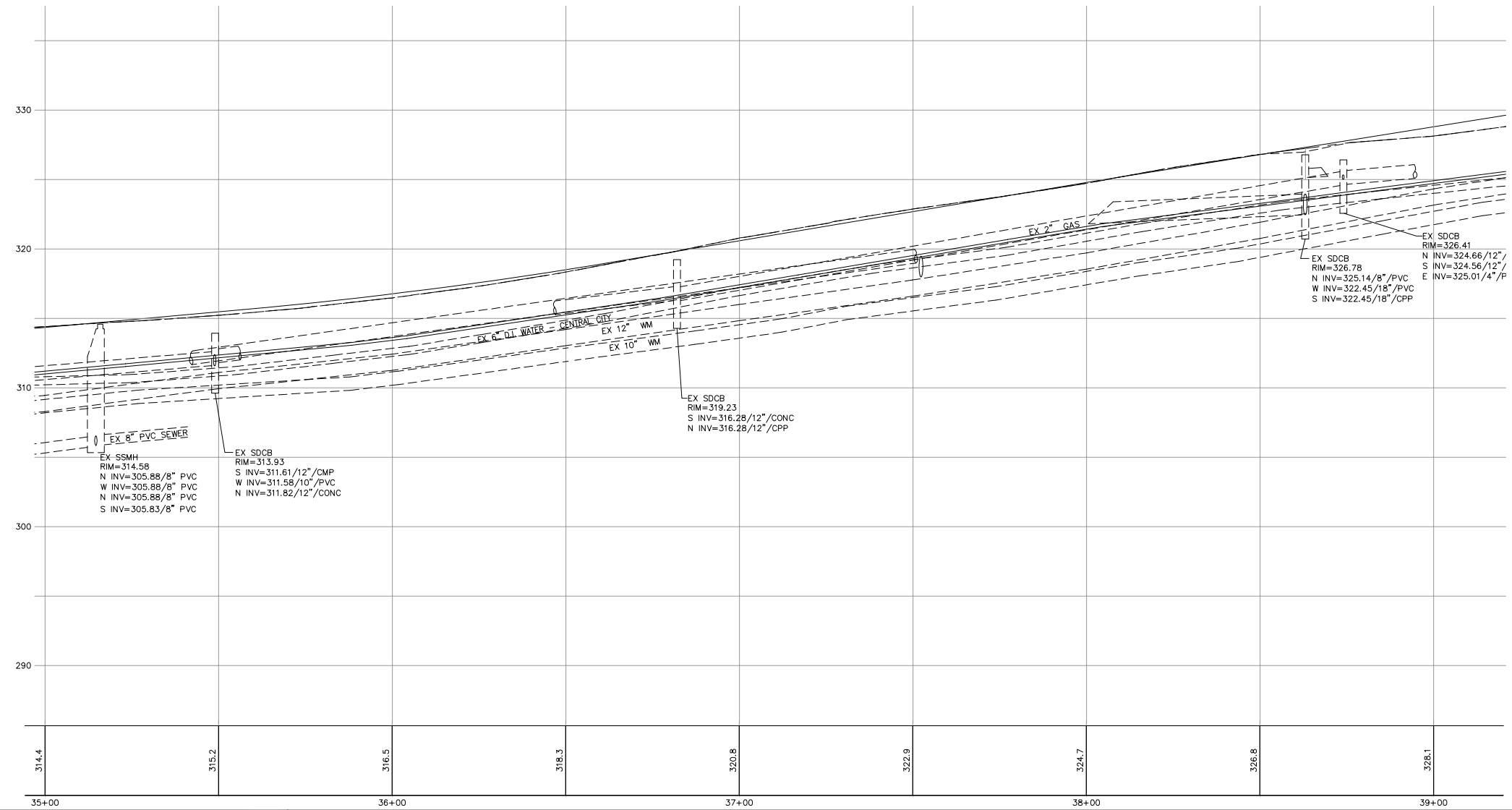
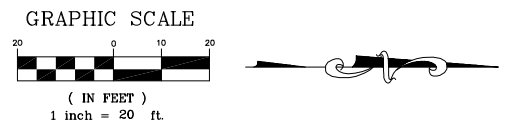
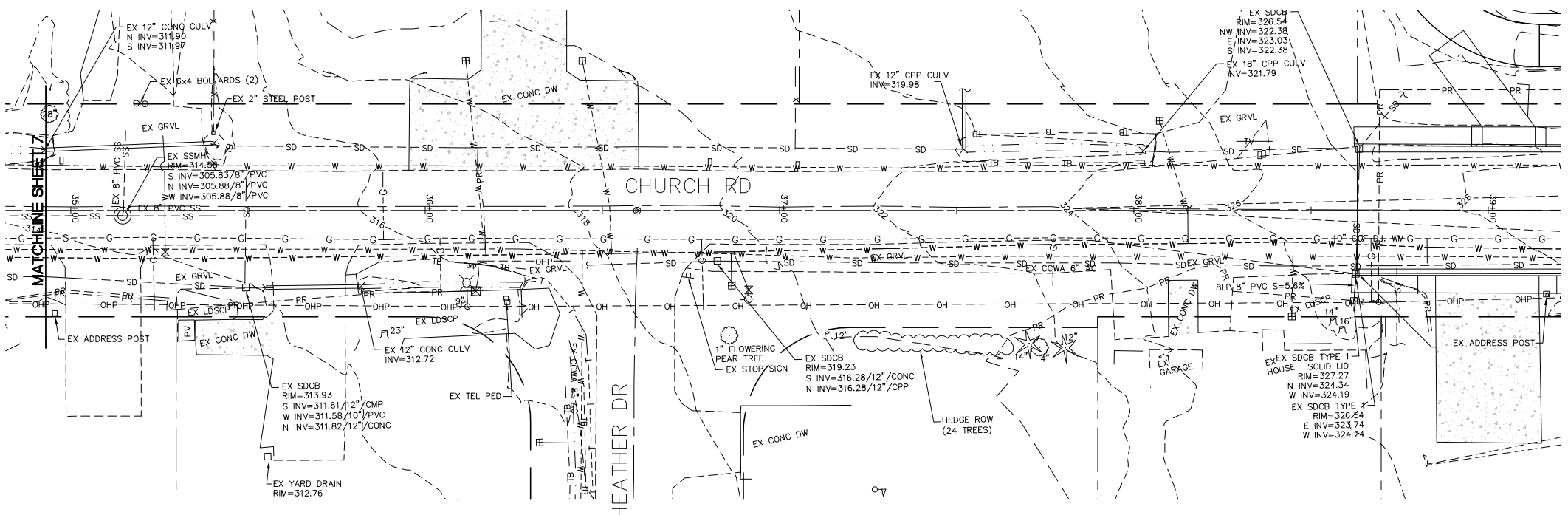
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STREET IMPROVEMENTS
EXISTING CONDITIONS - 29+00 TO 35+00

JOB# / DWG
07037 EX COND
SCALE
H: 1" = 20' V: 1" = 5'

DATE
3-5-14
SHEET
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NO.	DATE	REVISION	BY

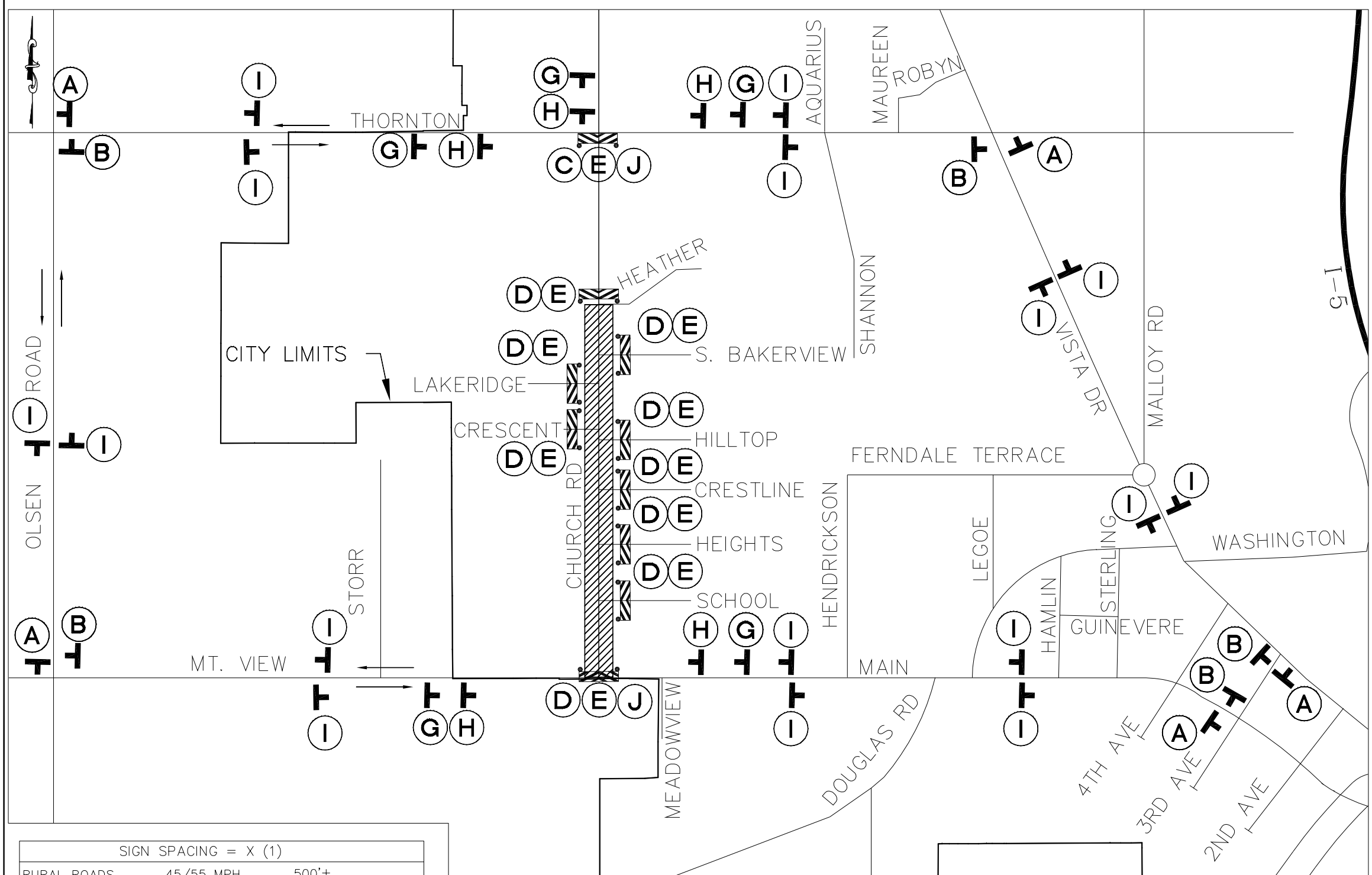
CITY OF FERDALE
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CHURCH ROAD
STREET IMPROVEMENTS
EXISTING CONDITIONS - 35+00 TO 37+66

JOB# / DWG
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SCALE
H: 1"=20' V: 1"=5'

DATE
3-5-14
SHEET
8 of 63

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LEGEND

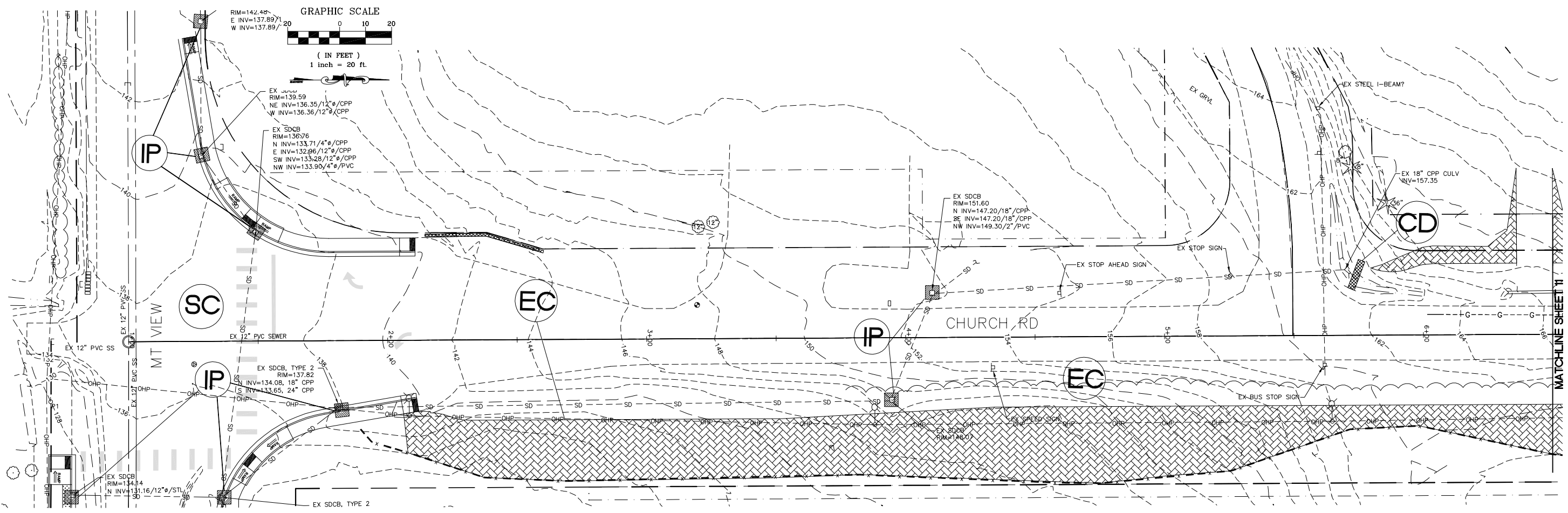
- = DIRECTION OF TRAFFIC
- = SIGN (SHOWN FACING LEFT)
- = PROPOSED WORK AREA
- A M4-10L
- B M4-10R
- C R 11-3
- D R 11-4
- E TYPE III R AND TYPE III L, BARRICADE WITH 2 TYPE A FLASHING WARNING LIGHTS
- F M4-8A
- G W 20-3
- H W20-2
- I M4-8
- J M6-4

SIGN SPACING = X (1)		
RURAL ROADS	45/55 MPH	500'±
URBAN ARTERIALS & RURAL ROADS	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

ALL SIGNS ARE BLACK ON ORANGE UNLESS DESIGNATED OTHERWISE

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMODATE AT-GRADE INTERSECTIONS AND DRIVEWAYS.
 (2) THIS SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

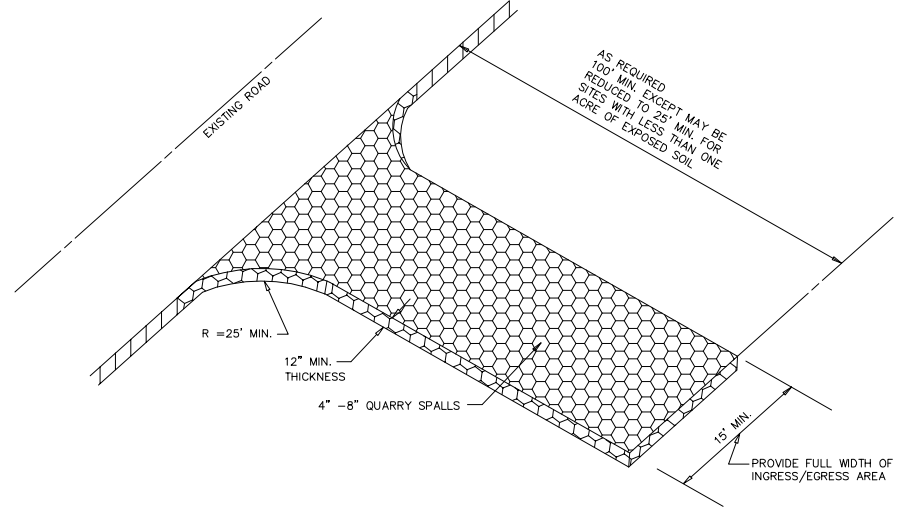




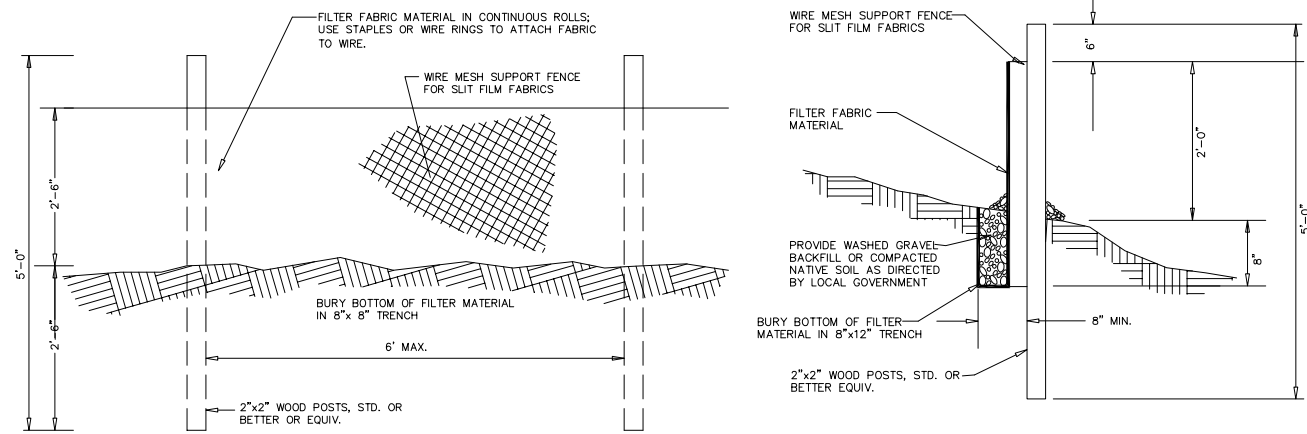
LEGEND

- SYMBOL**
- WASHINGTON STATE DEPT. OF ECOLOGY
BEST MANAGEMENT PRACTICES (BMP)
 REF.: STORMWATER MANAGEMENT MANUAL
 FOR WESTERN WASHINGTON, 2005
- CE** BMP E2.10 STABILIZED CONSTRUCTION ENTRANCE AND TIRE WASH SEE DETAIL THIS SHEET
 - FF** BMP E3.10 FILTER FENCE - SEE DETAIL THIS SHEET
 - P** BMP E3.30 INLET PROTECTION - PLACE SEDIMENT FILTER AROUND OR OVER CATCH BASINS
 - EC** PROPOSED EROSION CONTROL BLANKET
 - CD** GEOTEXTILE ENCASED CHECK DAM
 - SC** STREET CLEANING

- GENERAL NOTES:**
- The contractor shall be responsible for implementation of the sedimentation and erosion control measures as shown.
 - The constructed erosion control and sedimentation plan shall be approved by the engineer prior to performing any site grading or clearing.
 - All steep slope excavations greater than 2:1 shall be covered at the end of each working day.
 - Maintenance and operation of the erosion control and sedimentation system shall be the responsibility of the contractor. The contractor shall be responsible for implementation of the sedimentation and erosion control measures.
 - Any vegetation not in the construction area shall be left undisturbed.
 - All clearing limits shall be visibly marked prior to clearing.
 - All storm drain facilities within the project boundary are to be cleared of sediment and debris prior to final acceptance of the project.
 - This plan represents the minimum requirements for this project. Additional erosion controls may be required by the engineer as are found necessary to prevent contamination of surface waters.
 - The temporary erosion control systems shall be installed prior to all other site construction.
 - The contractor will have a water truck available on site at all times when traffic is running on gravel base or crushed surfacing. Contractor will water the road surface often enough to abate dust as approved by the Engineer. Watering will include weekends and holidays.



STABILIZED CONSTRUCTION ENTRANCE
 NTS

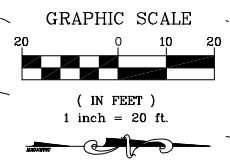


FILTER FABRIC FENCE DETAIL
 NTS

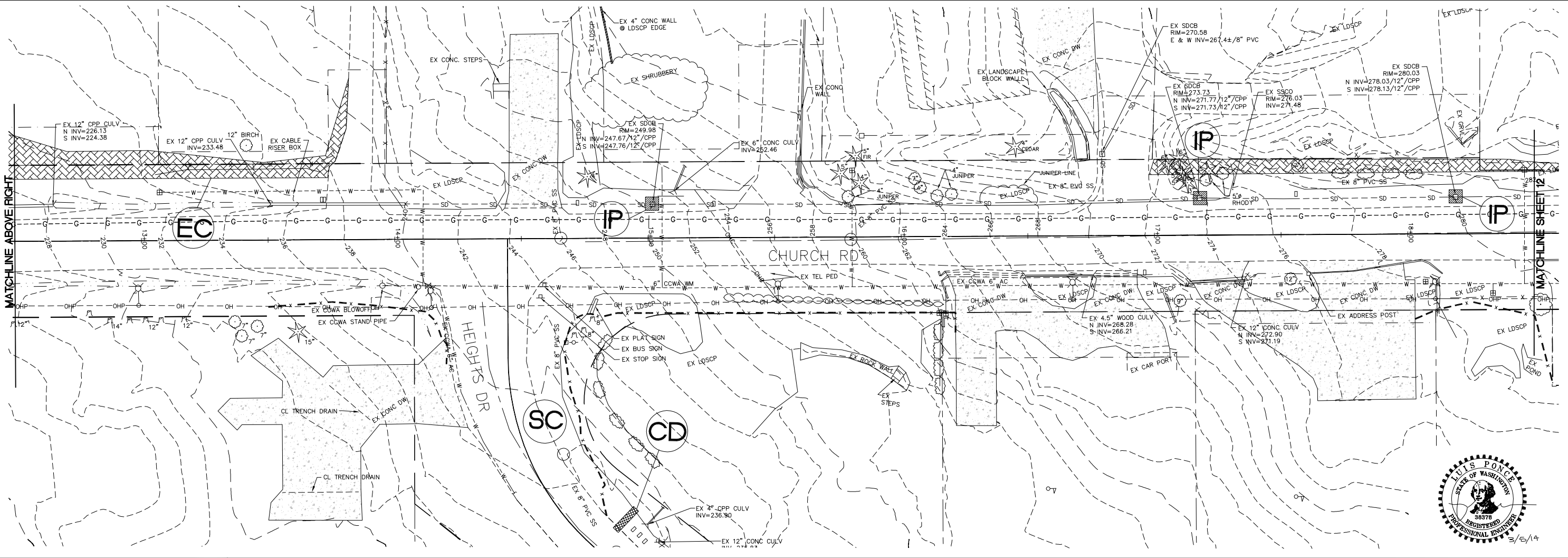
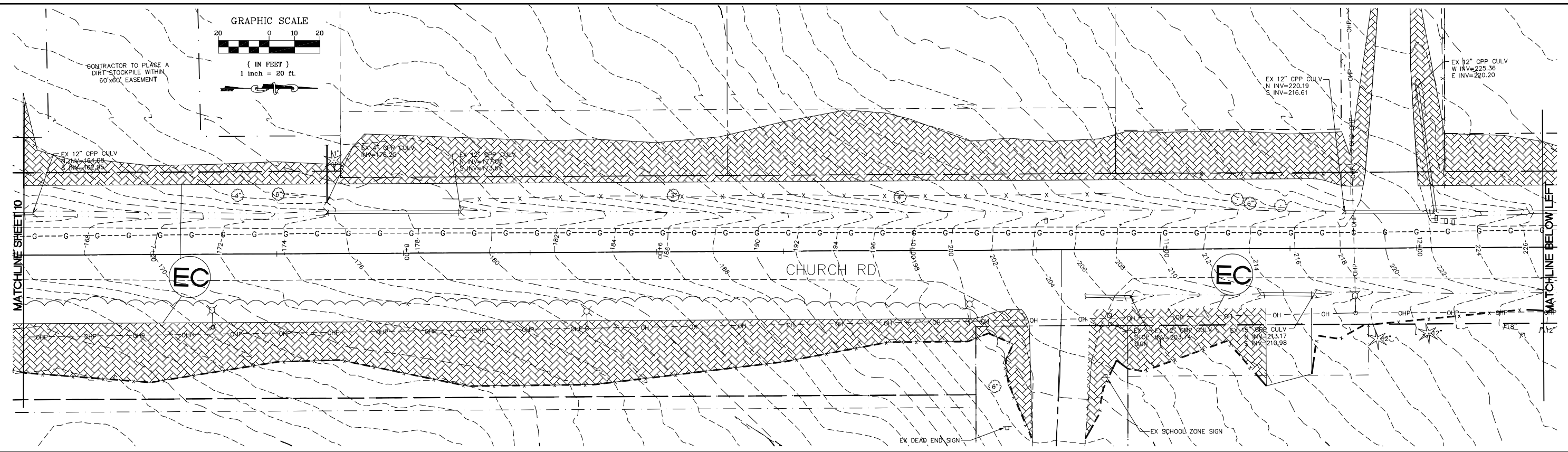


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CONTRACTOR TO PLACE A DIRT STOCKPILE WITHIN 60'x60' EASEMENT



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NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

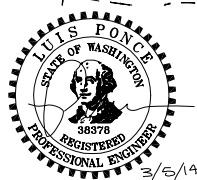
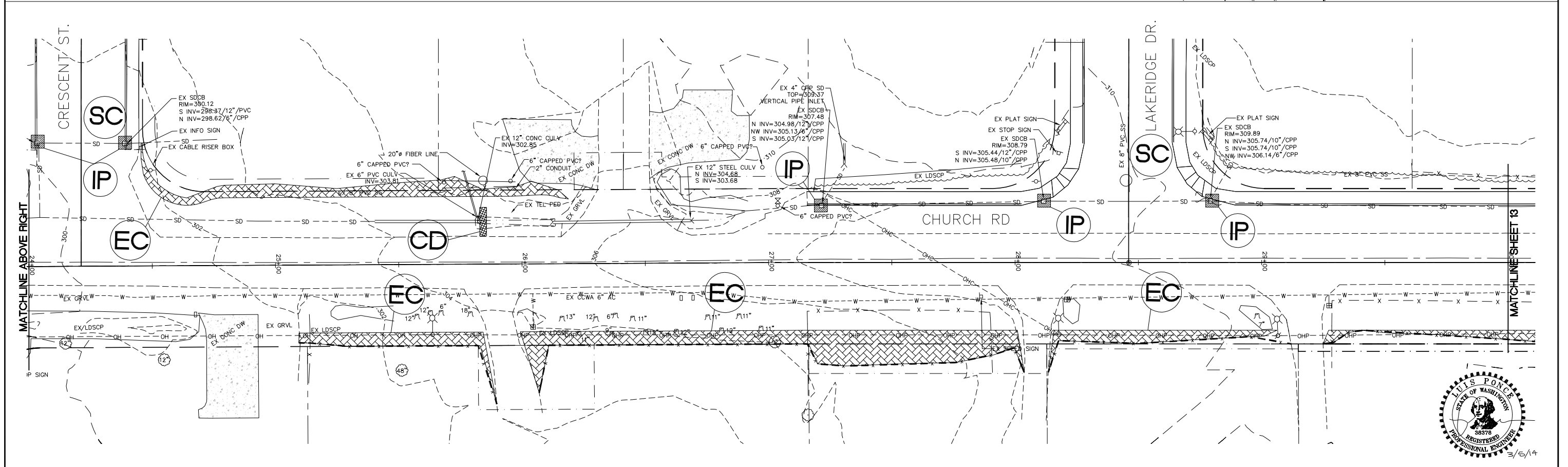
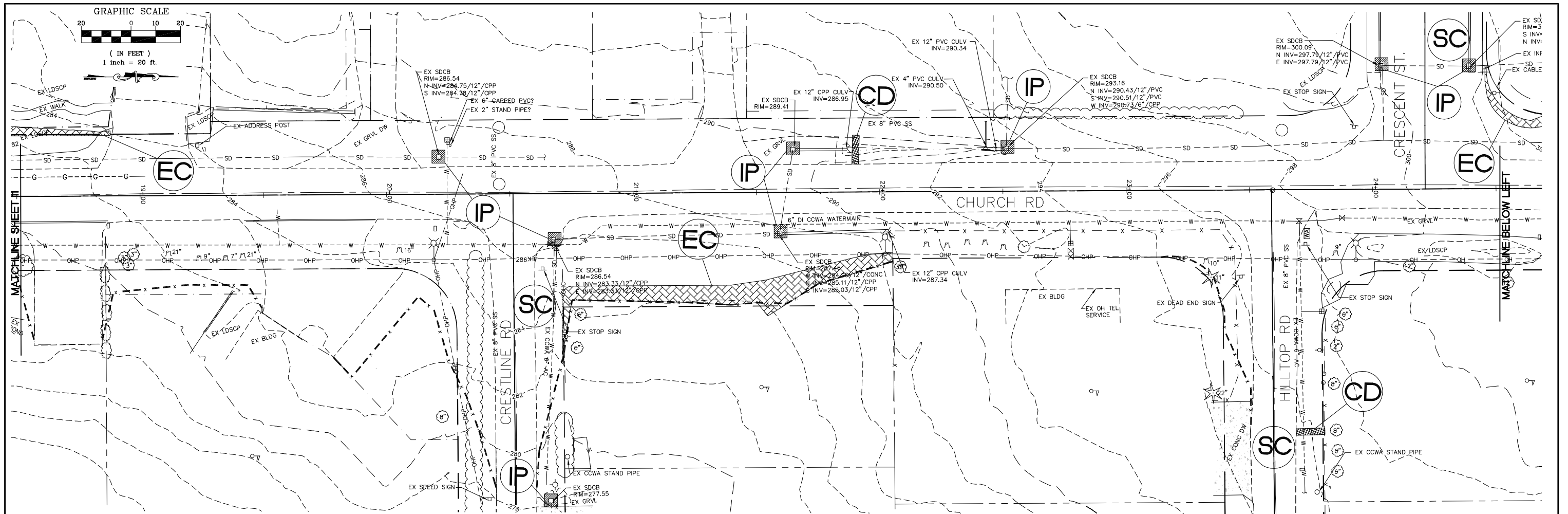
CHURCH ROAD
STREET IMPROVEMENTS
TEMP. EROSION AND SEDIMENTATION CONTROL PLAN

JOB# / DWG 07037 TESC
SCALE H:1"=20' V:N/A

DATE 3-5-14
SHEET 11 of 63



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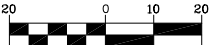
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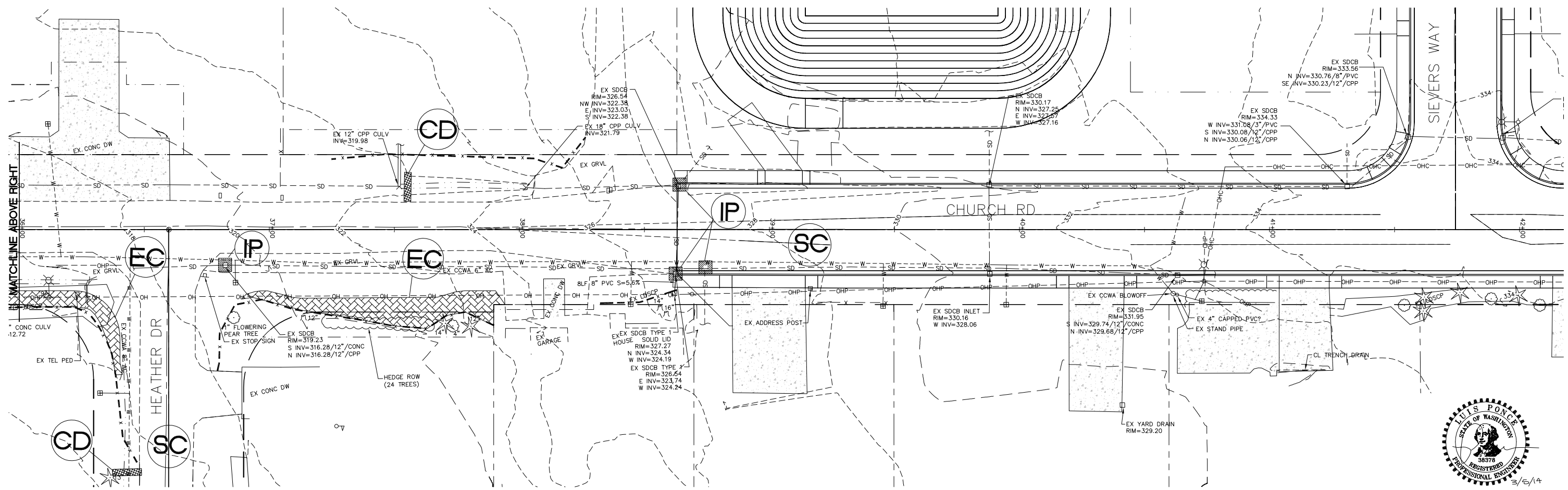
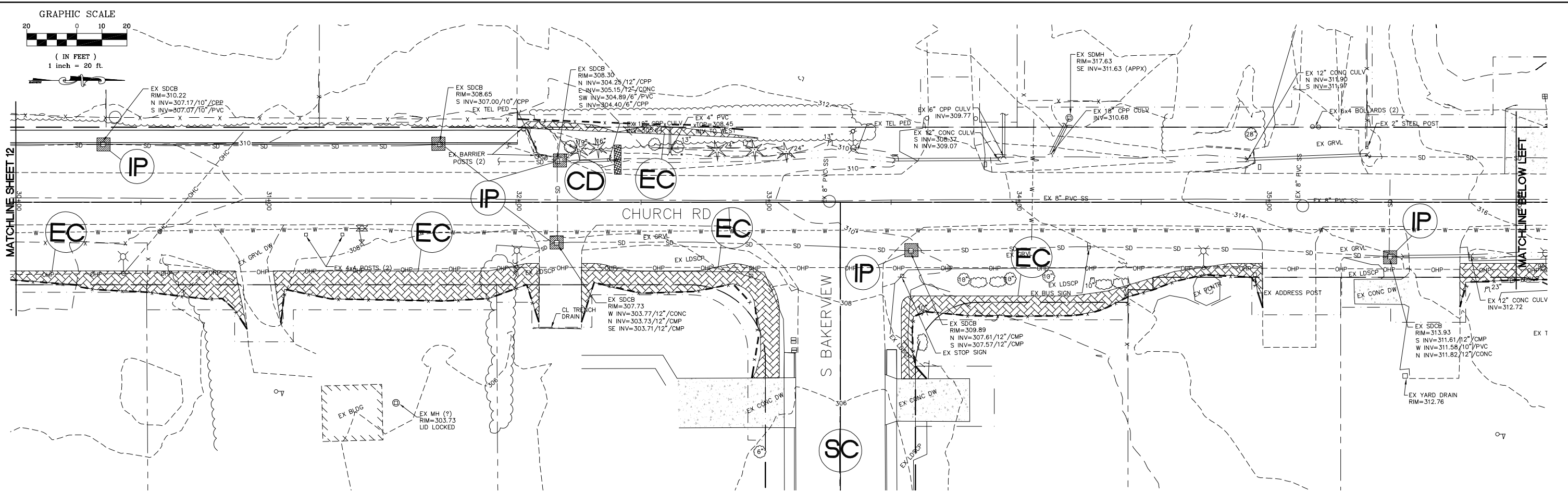
CHURCH ROAD
STREET IMPROVEMENTS
TEMP. EROSION AND SEDIMENTATION CONTROL PLAN

JOB# / DWG 07037 TESC	DATE 3-5-14
SCALE H:1"=20' v:N/A	SHEET 12 of 63

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



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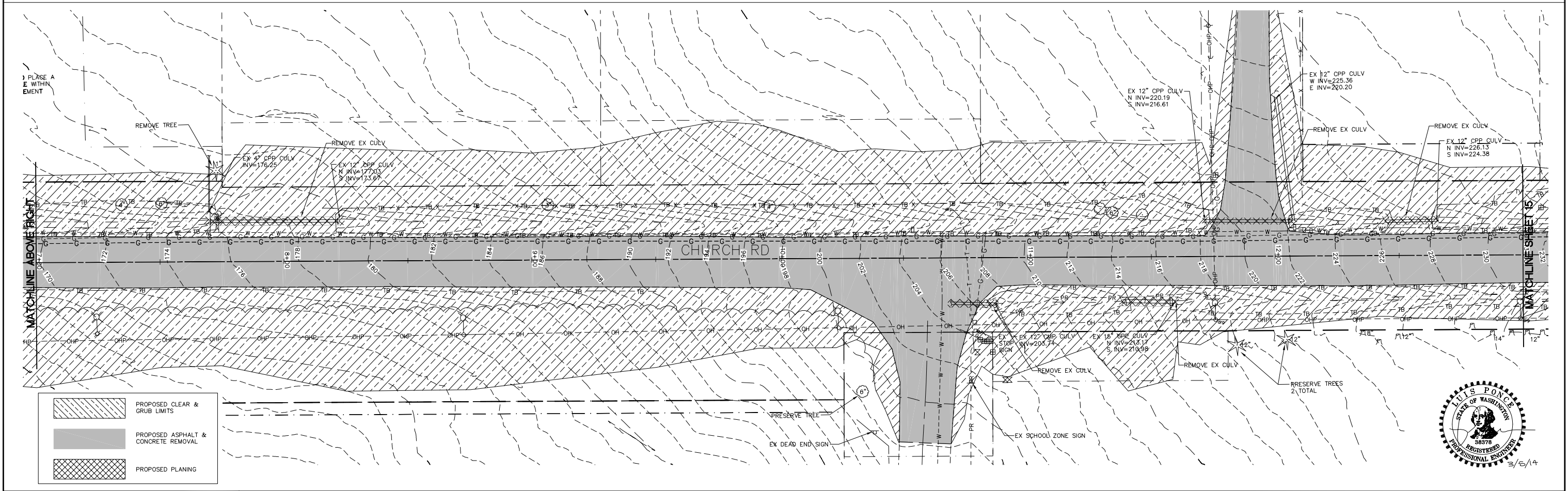
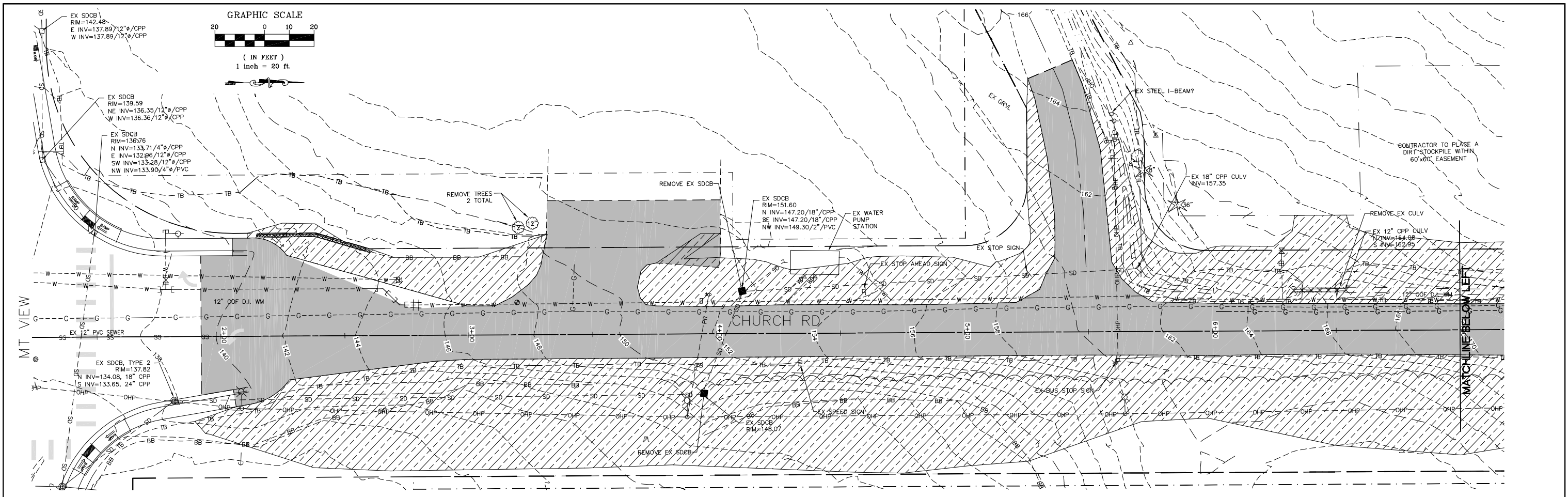
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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
TEMP. EROSION AND SEDIMENTATION CONTROL PLAN

JOB# / DWG 07037 TESC	DATE 3-5-14
SCALE H:1"=20' V:N/A	SHEET 13 of 63

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	PROPOSED CLEAR & GRUB LIMITS
	PROPOSED ASPHALT & CONCRETE REMOVAL
	PROPOSED PLANING



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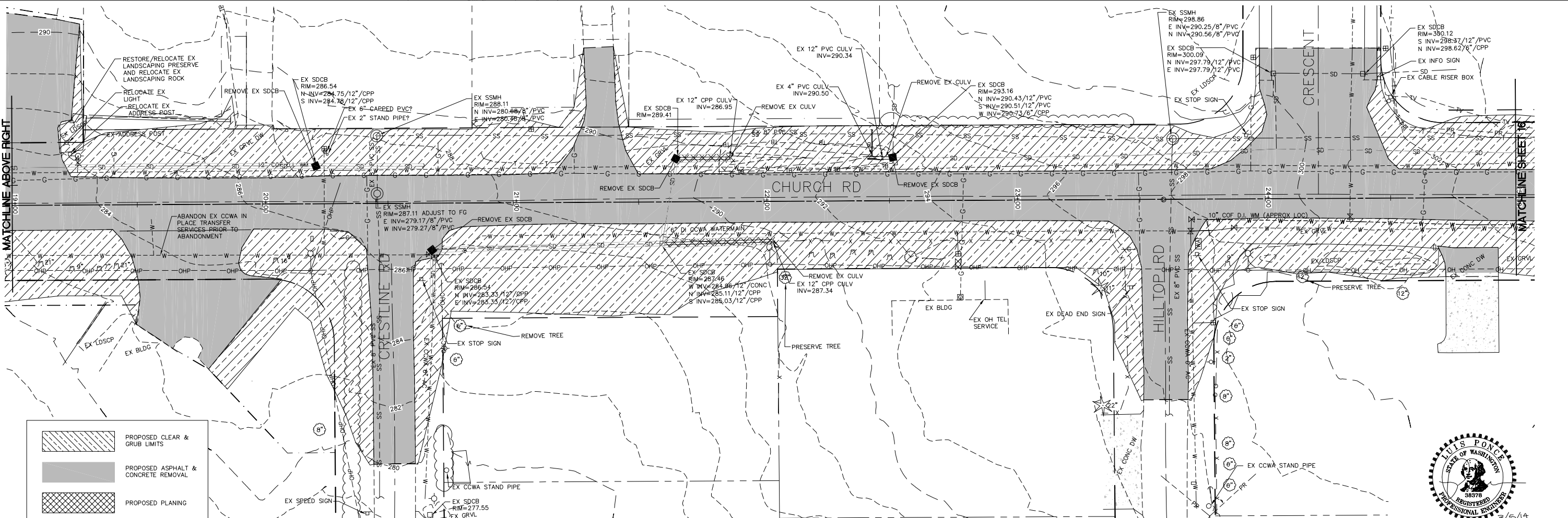
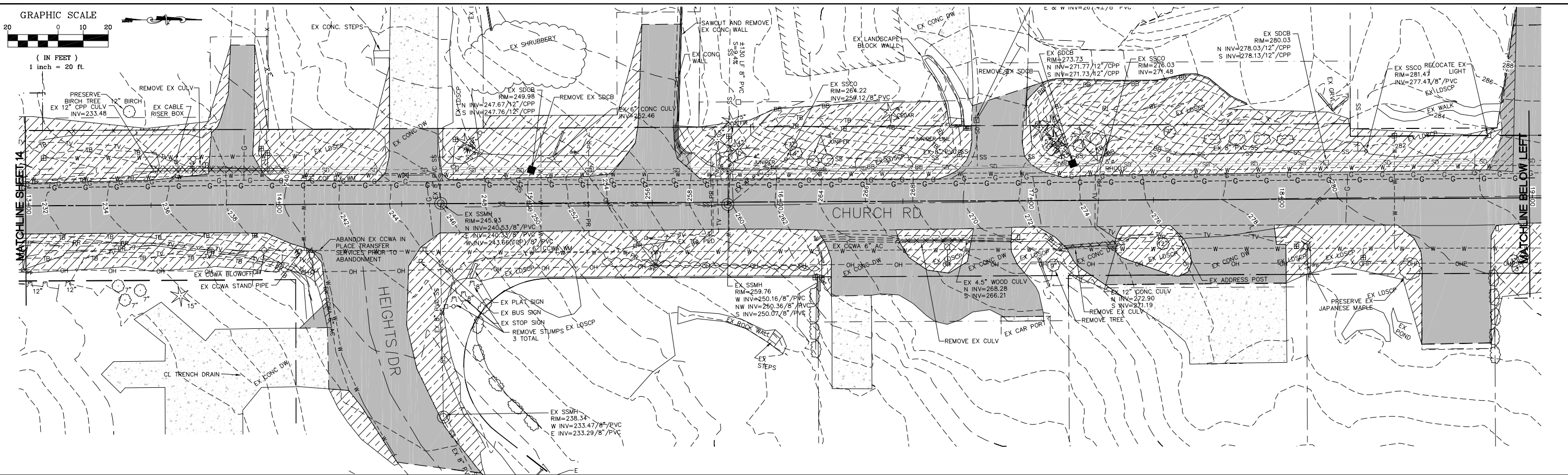
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CHURCH ROAD
STREET IMPROVEMENTS
DEMOLITION PLAN

JOB# / DWG	07037 DEMO	DATE	3-5-14
SCALE	H:1"=20' v:N/A	SHEET	14 of 63



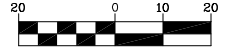
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	PROPOSED ASPHALT & CONCRETE REMOVAL
	PROPOSED PLANING



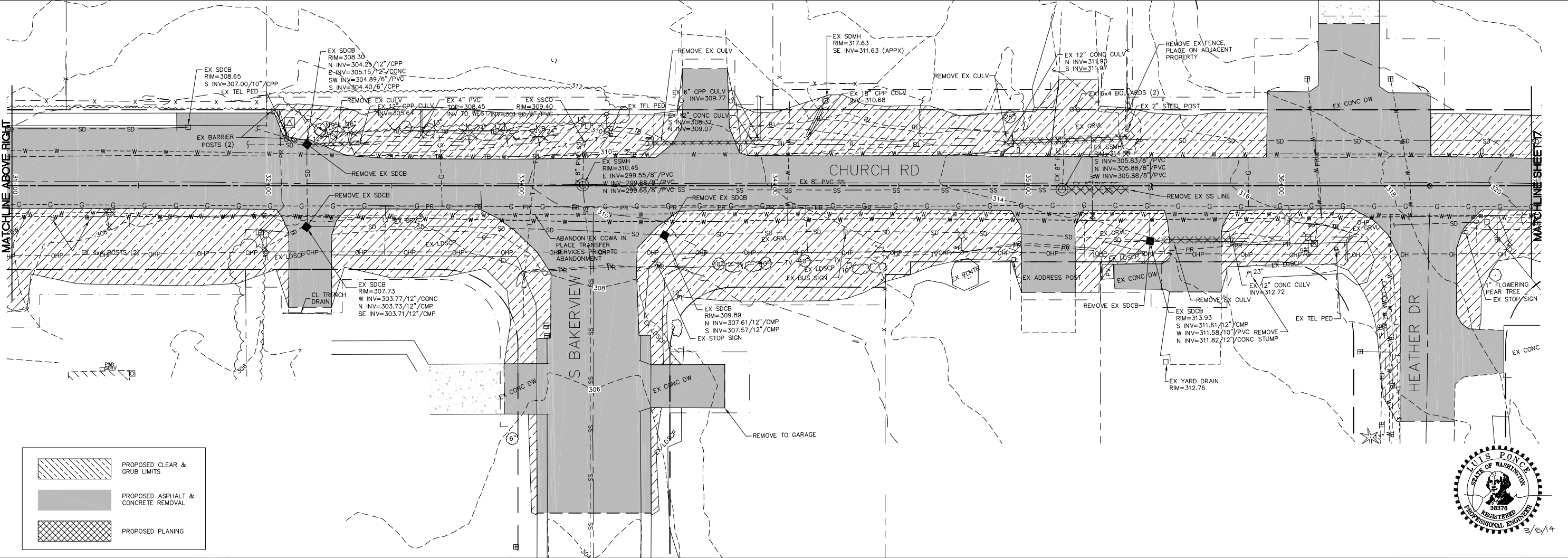
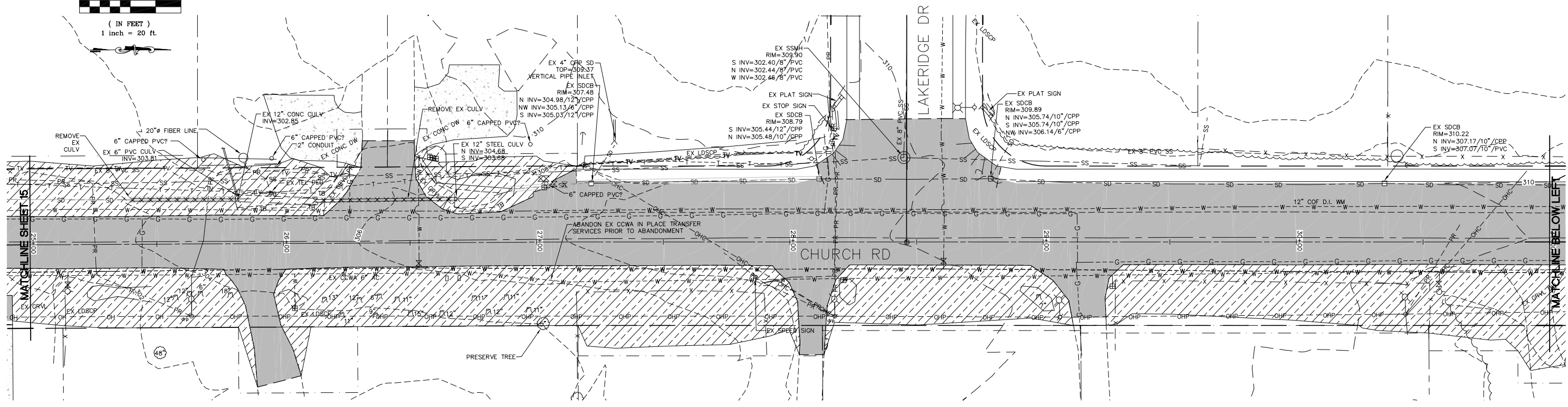
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DRAWN BY LMC		SCALE H:1"=20' V:N/A	15 of 63						
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GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



	PROPOSED CLEAR & GRUB LIMITS
	PROPOSED ASPHALT & CONCRETE REMOVAL
	PROPOSED PLANNING



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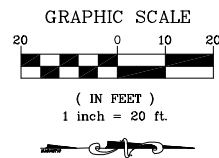
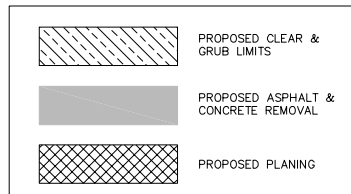
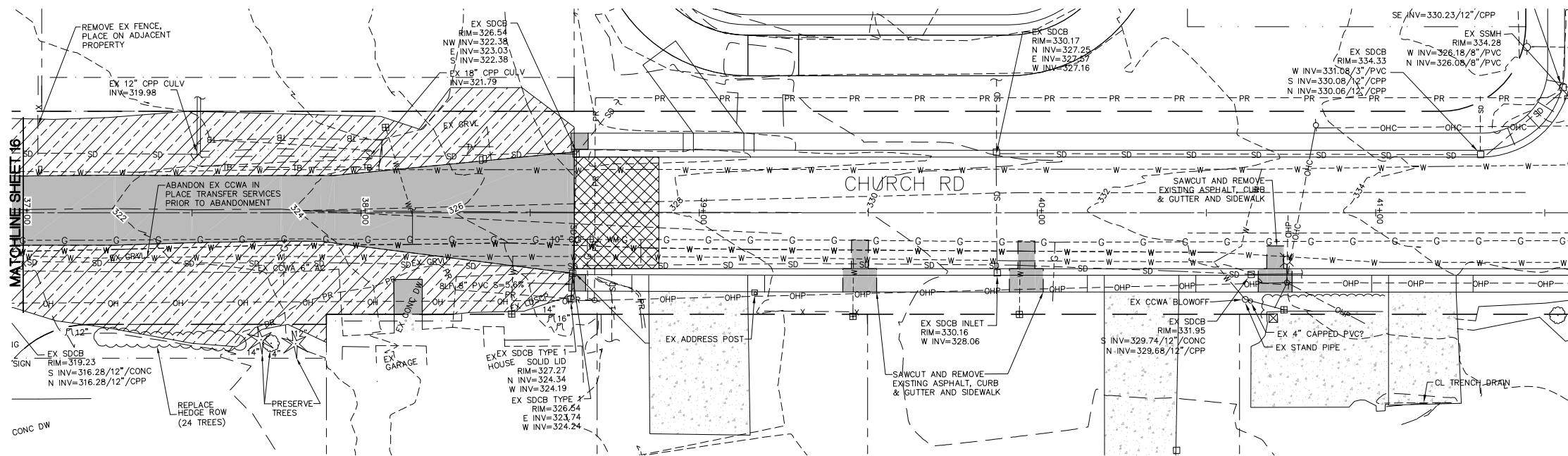
NO.	DATE	REVISION	BY

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2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
DEMOLITION PLAN

JOB# / DWG 07037 DEMO	DATE 3-5-14
SCALE H:1"=20' v:N/A	SHEET 16 of 63

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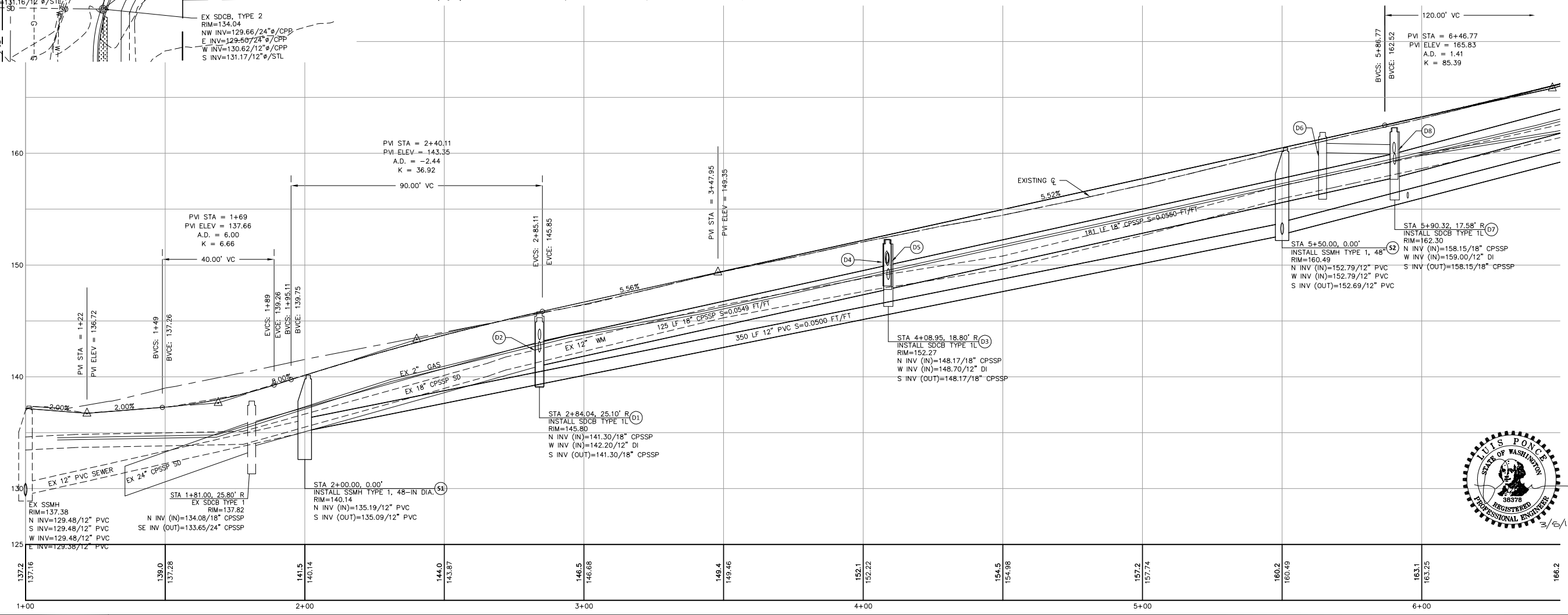
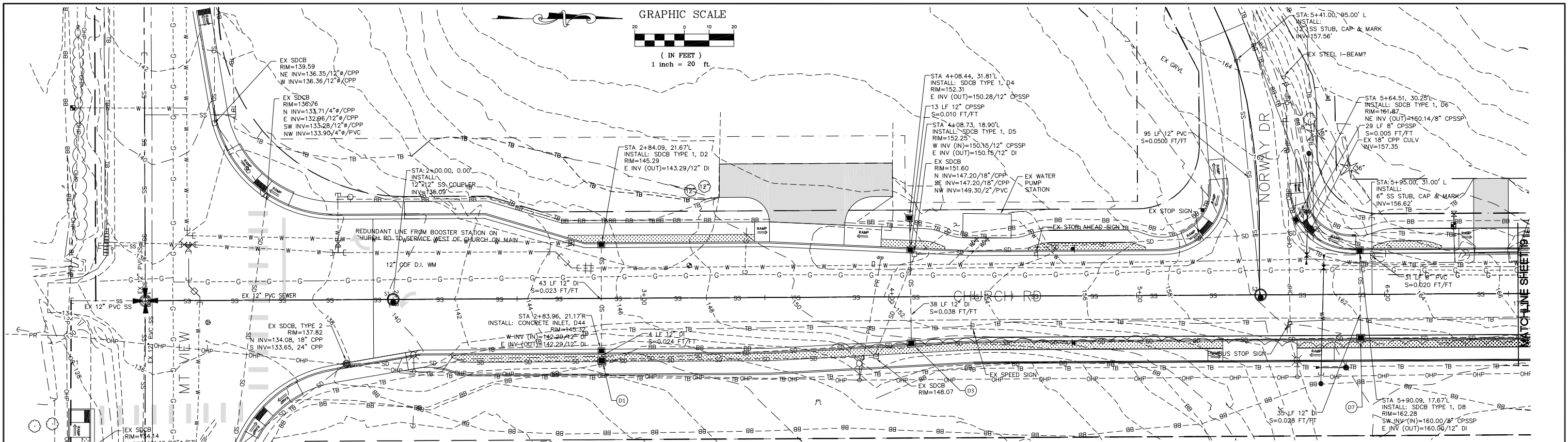
NO.	DATE	REVISION	BY

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2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
DEMOLITION PLAN

JOB# / DWG 07037 DEMO	DATE 3-5-14
SCALE H: 1" = 20' V: N/A	SHEET 17 of 63

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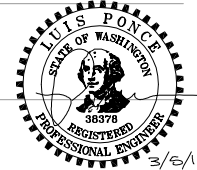
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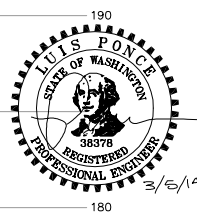
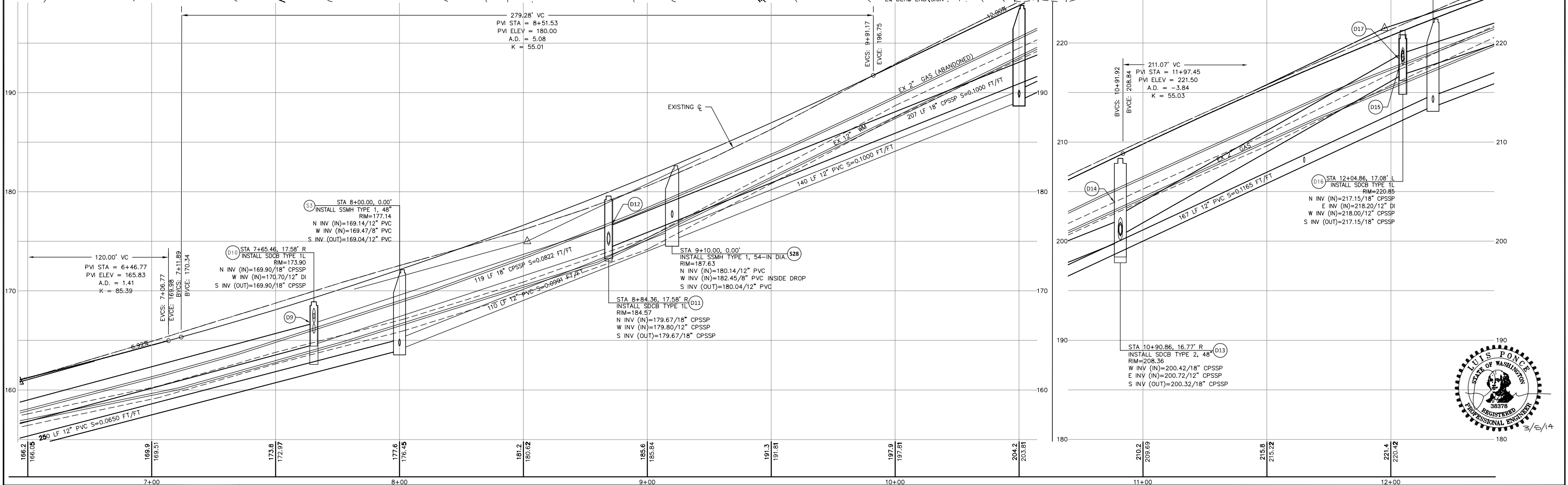
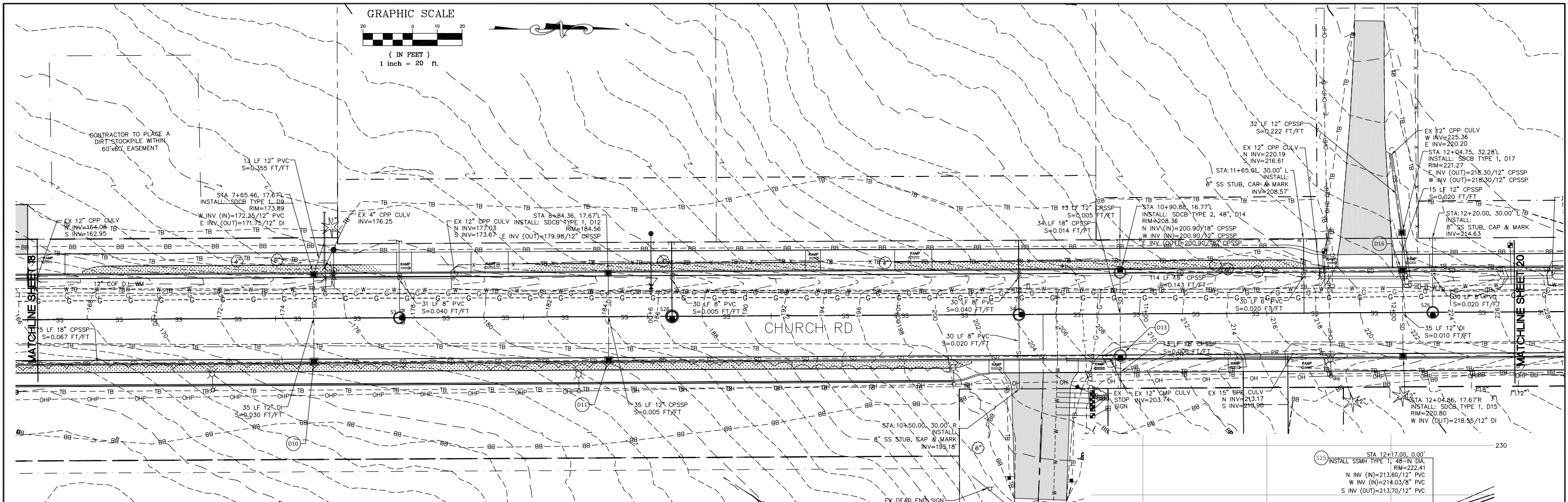
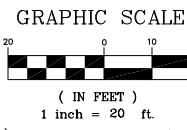
CITY OF FERDALE
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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - SEWER
1+00 TO 6+50

JOB# / DWG
07037 PLANPRO
SCALE
H: 1" = 20' V: 1" = 5'
DATE
3-5-14
SHEET
18 of 63



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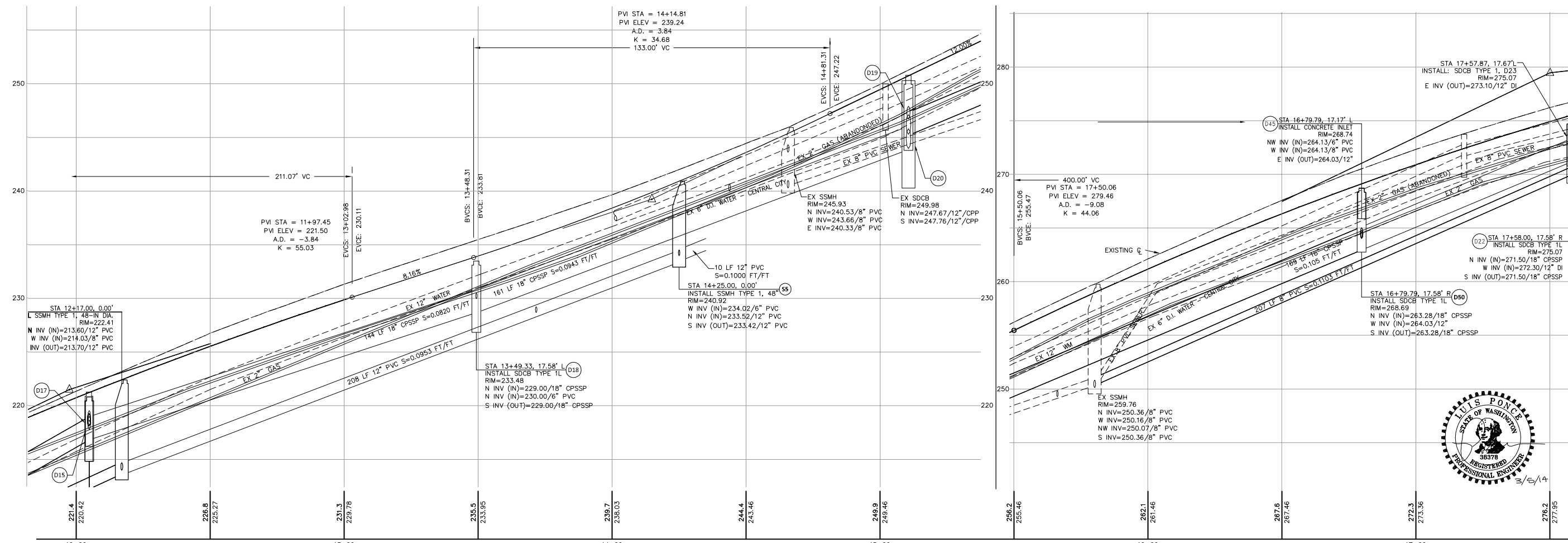
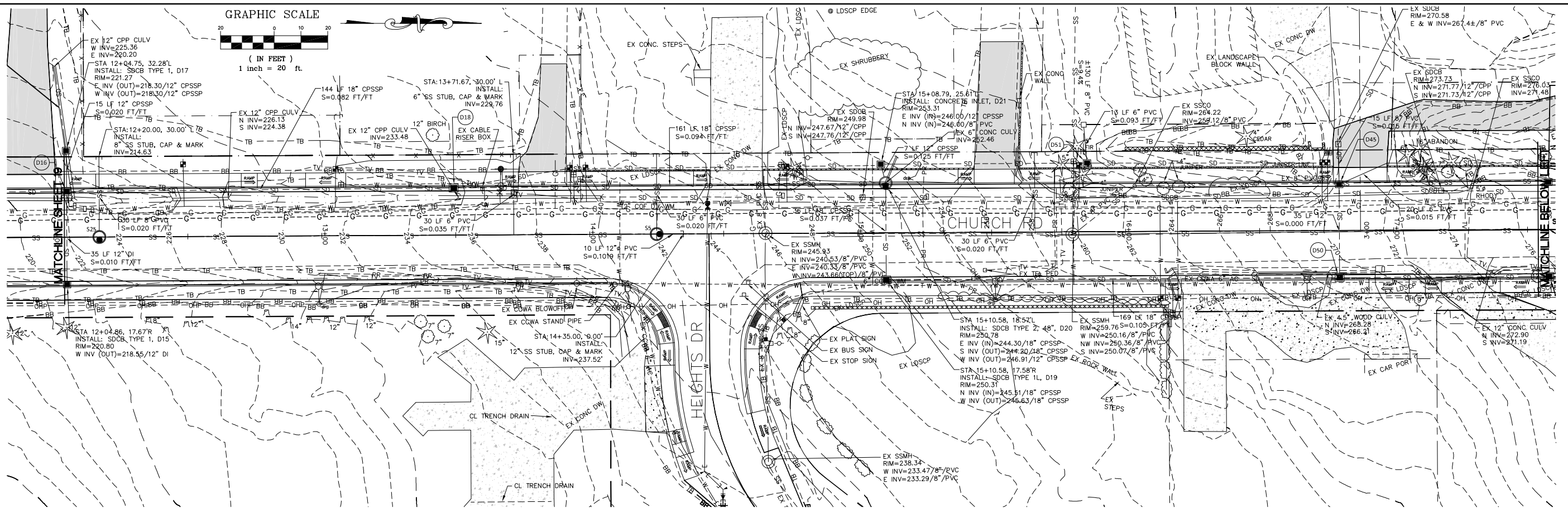
NO.	DATE	REVISION	BY

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FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - SEWER
6+50 TO 12+00

JOB# / DWG
07037 PLANPRO
SCALE
H: 1" = 20' V: 1" = 5'
DATE
3-5-14
SHEET
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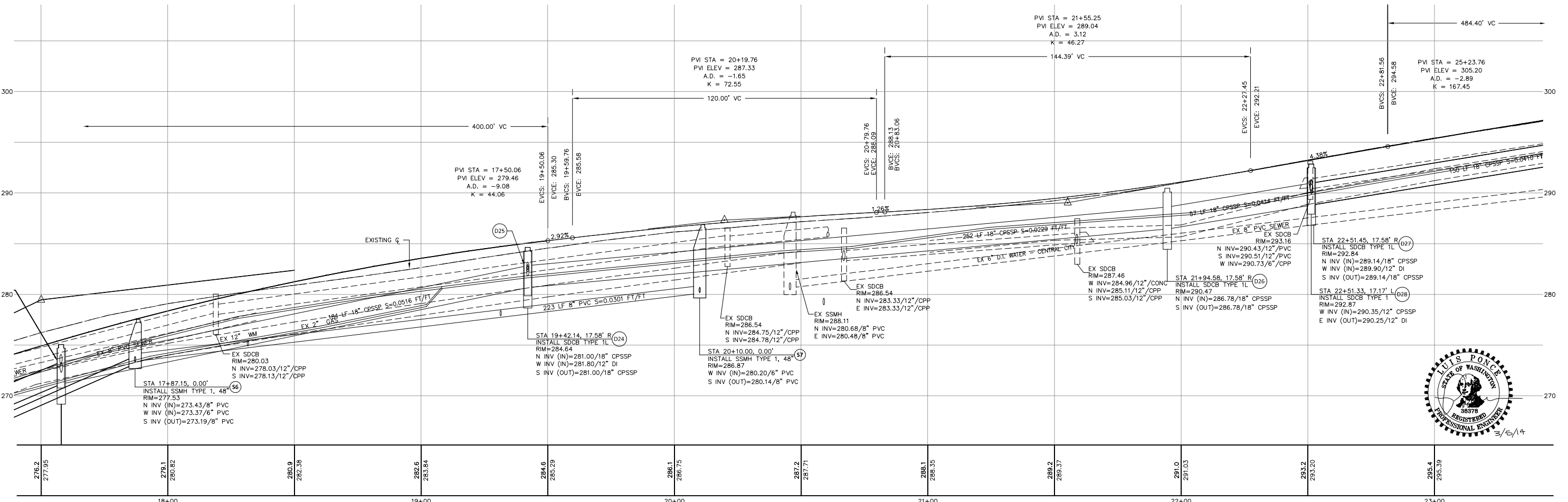
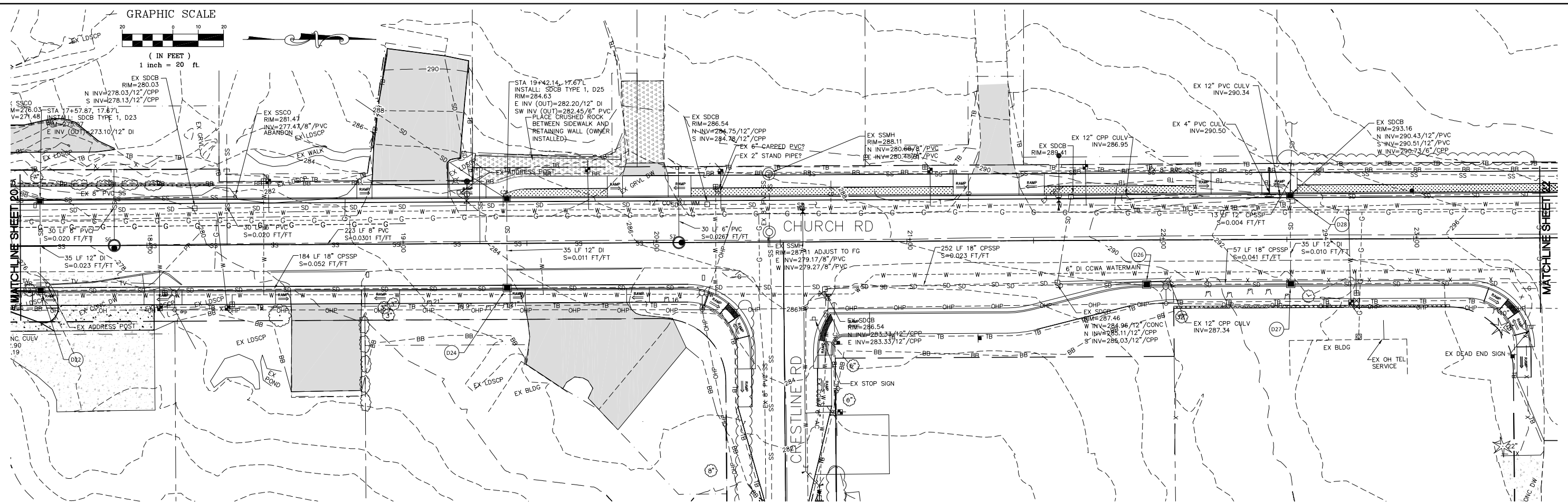
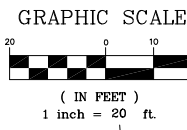
NO.	DATE	REVISION	BY

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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - SEWER
12+00 TO 17+50

JOB# / DWG
07037 PLANPRO
SCALE
H:1"=20' V:1"=5'
DATE
3-5-14
SHEET
20 of 63

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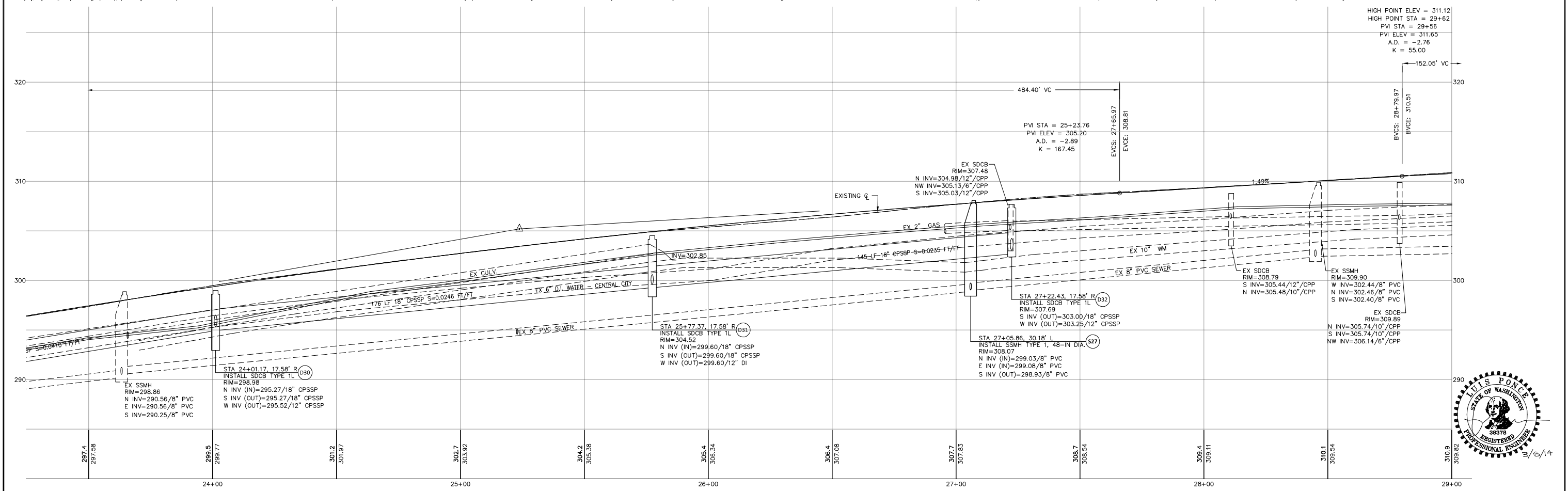
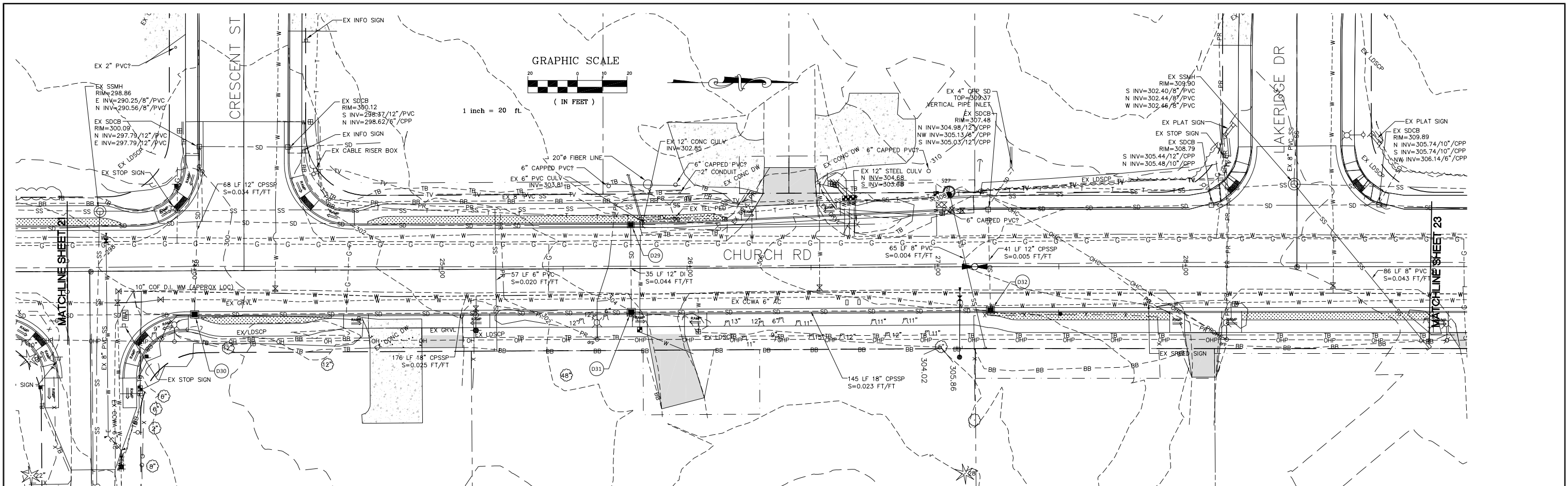
NO.	DATE	REVISION	BY

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CHURCH ROAD
STREET IMPROVEMENTS - SEWER
17+50 TO 23+50

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07037 PLANPRO
SCALE
H:1"=20' V:1"=5'
DATE
3-5-14
SHEET
21 of 63

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 HIGH POINT STA = 29+62
 PVI STA = 29+56
 PVI ELEV = 311.65
 A.D. = -2.76
 K = 55.00

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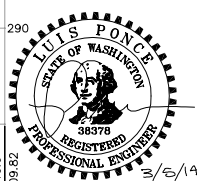
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 FERNDALE, WA 98248

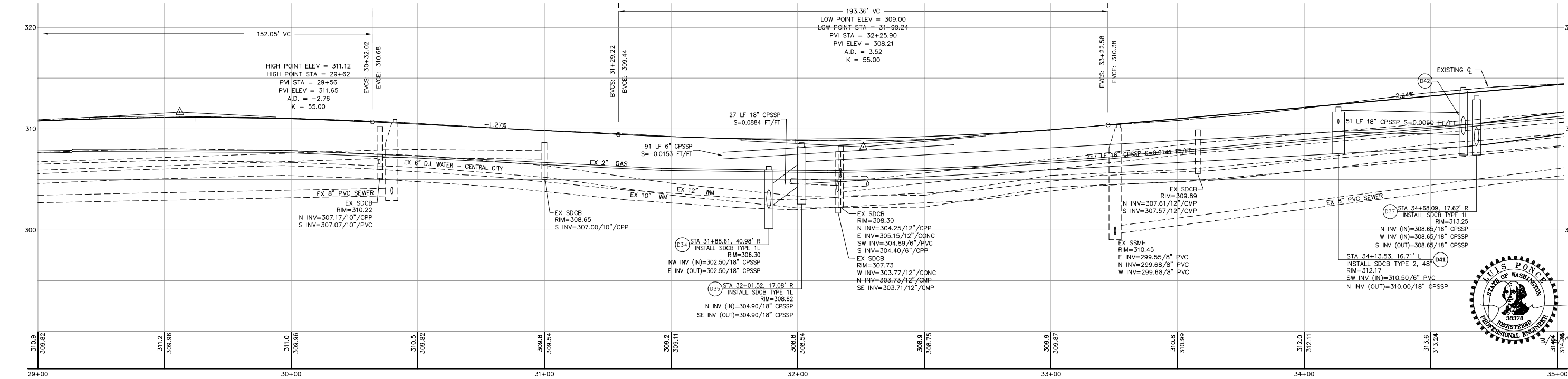
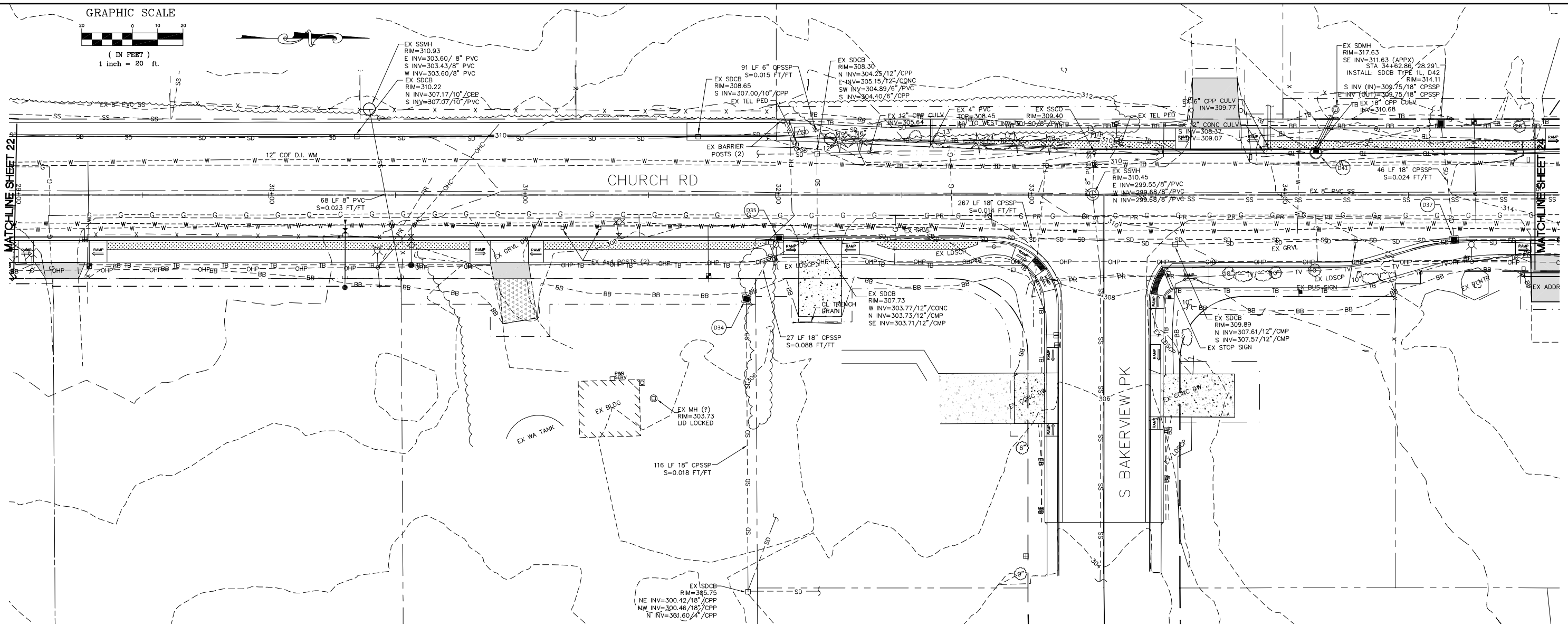
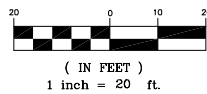
CHURCH ROAD
 STREET IMPROVEMENTS - SEWER
 23+50 TO 29+00

JOB# / DWG
07037 PLANPRO
 SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
 SHEET
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GRAPHIC SCALE



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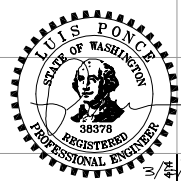
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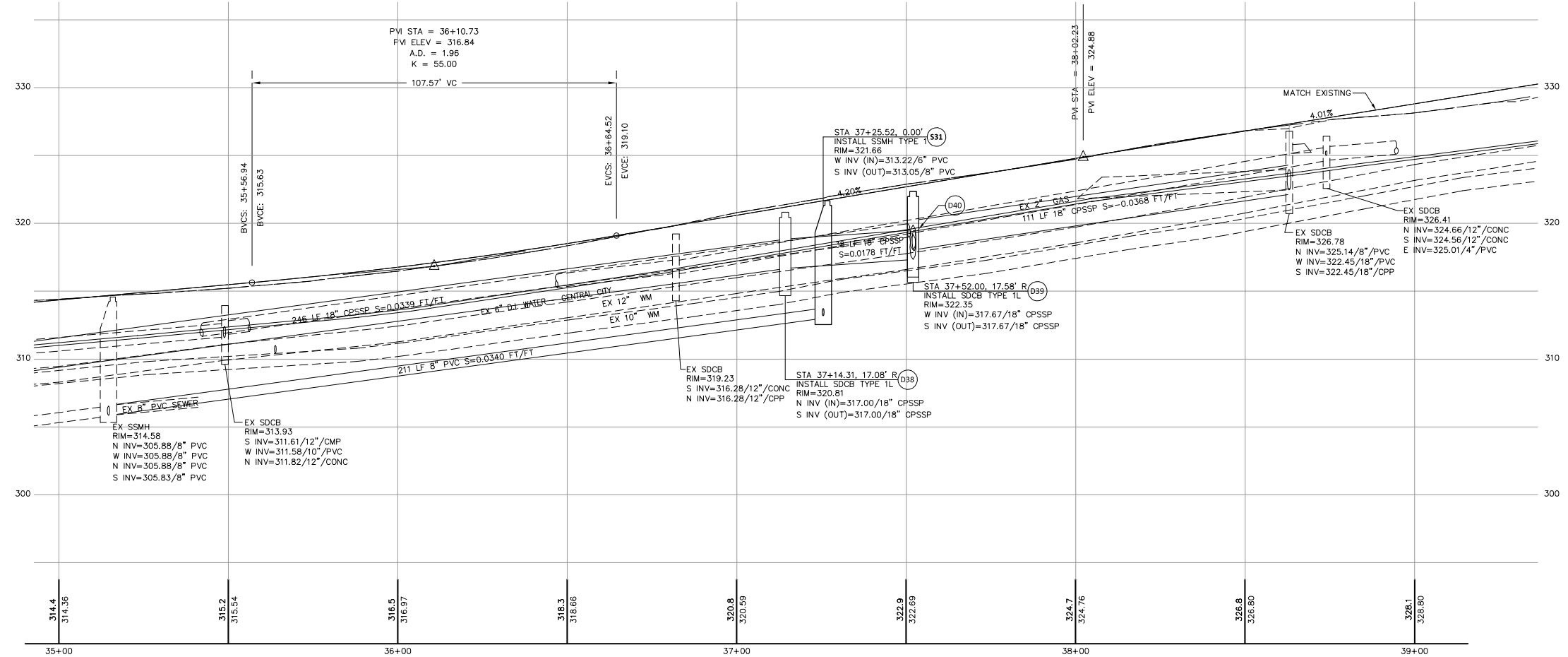
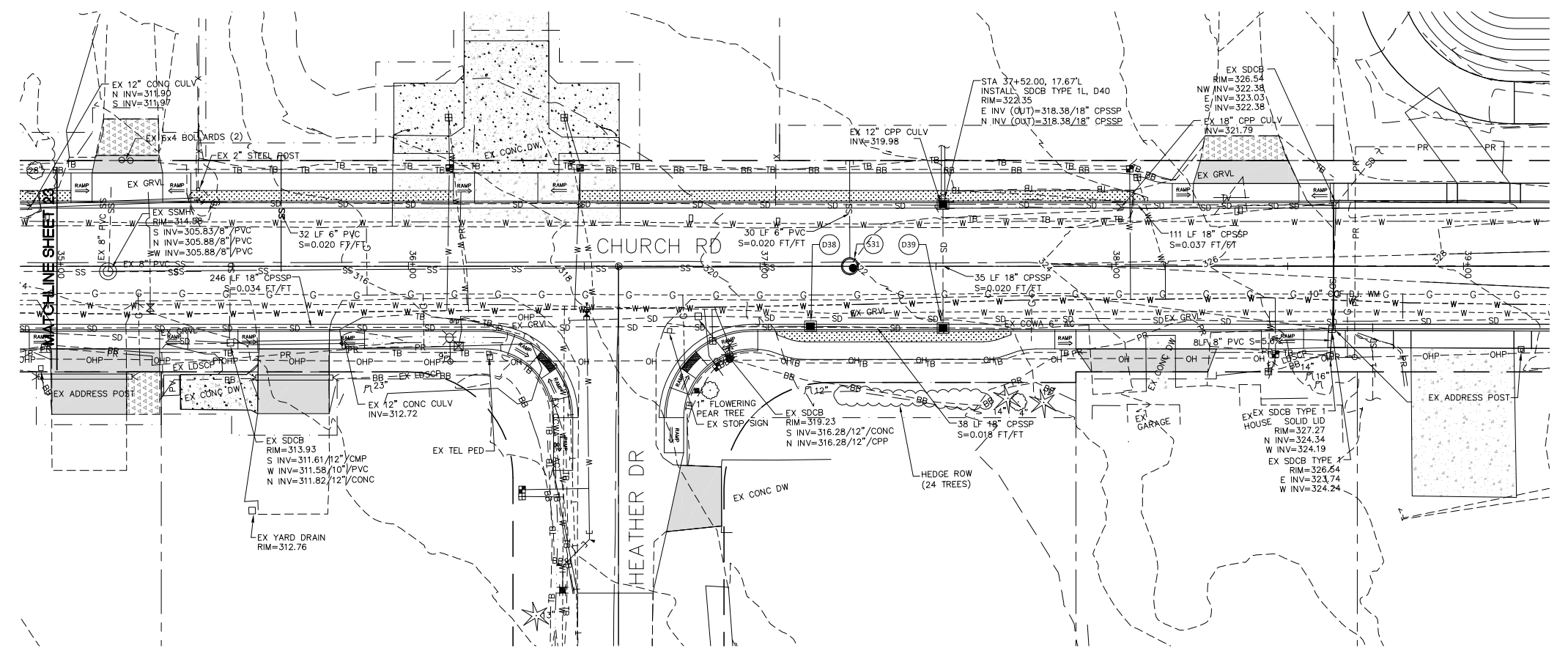
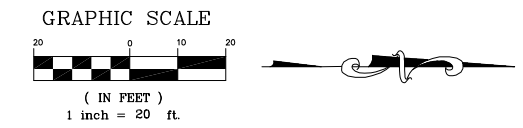
CITY OF FERDALE
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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - SEWER
29+00 TO 35+00

JOB# / DWG
07037 PLANPRO
SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
SHEET
23 of 63





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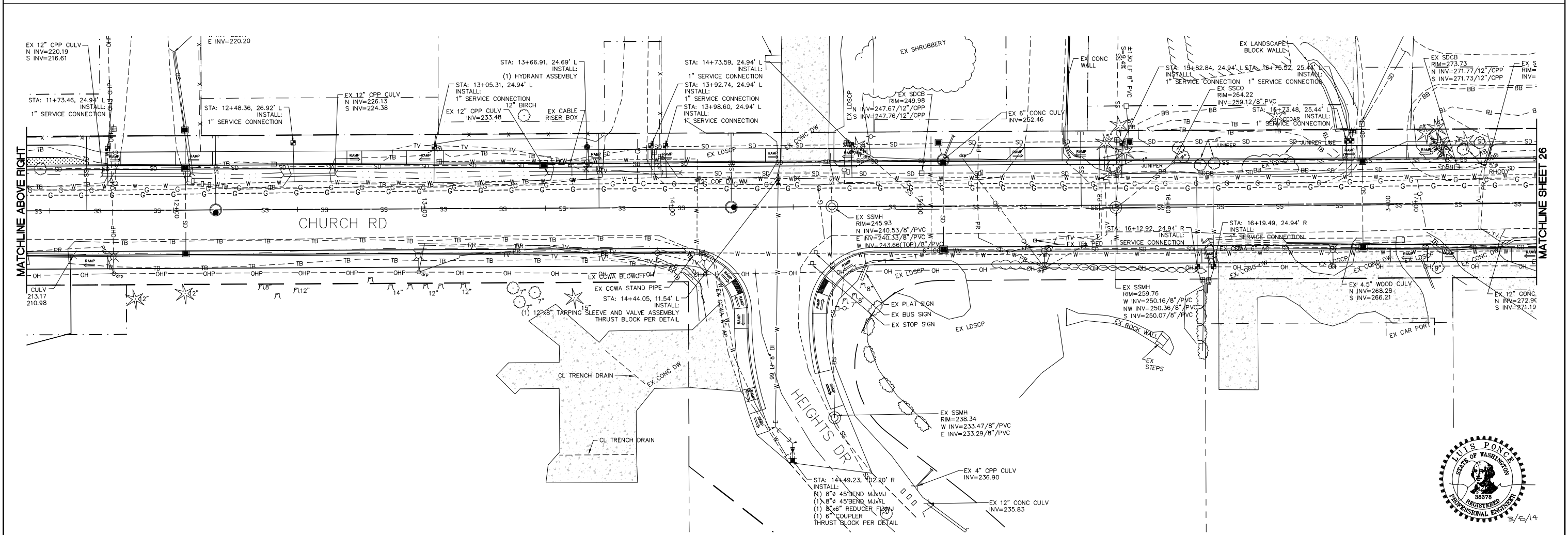
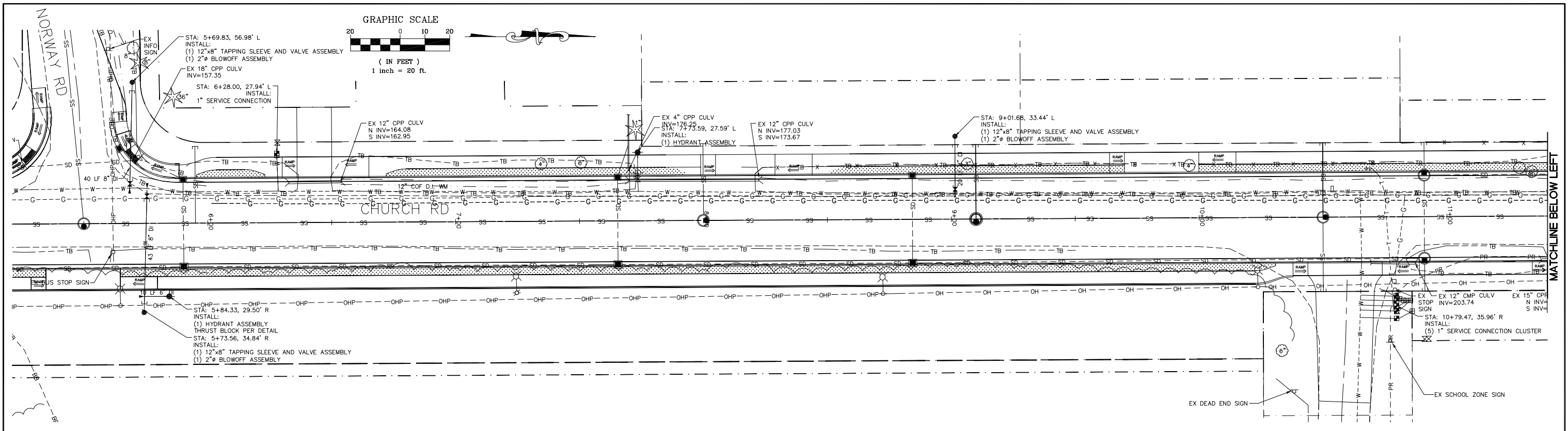
NO.	DATE	REVISION	BY

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2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - SEWER
35+00 TO 39+00

JOB# / DWG 07037 PLANPRO	DATE 3-5-14
SCALE H: 1"=20' V: 1"=5'	SHEET 24 of 63

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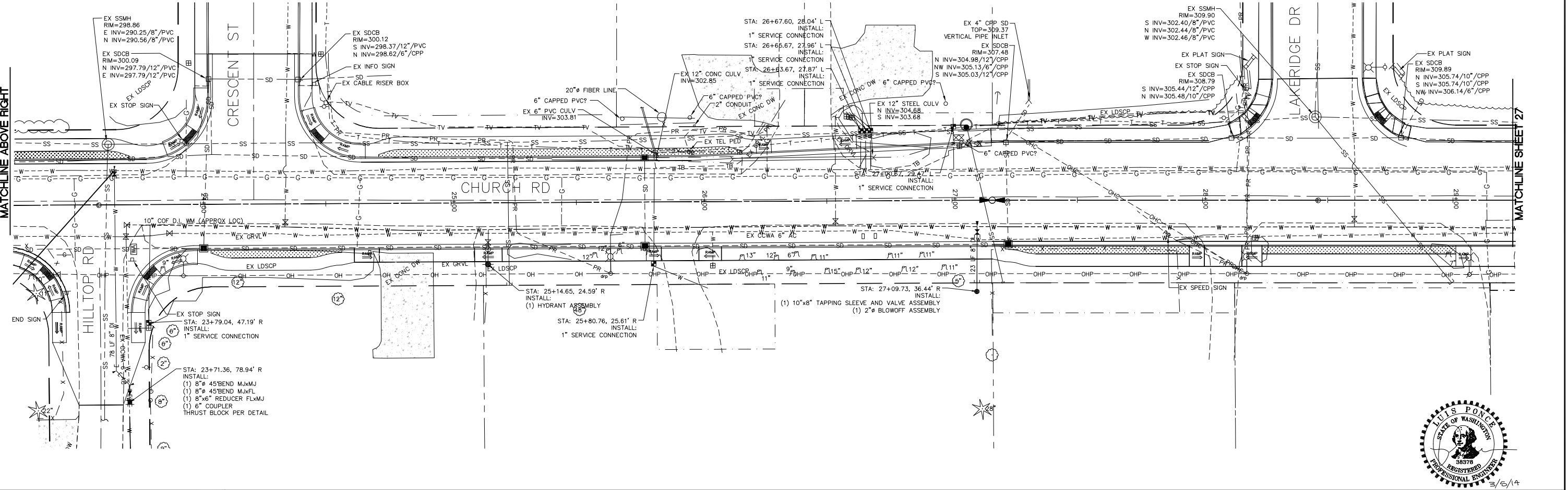
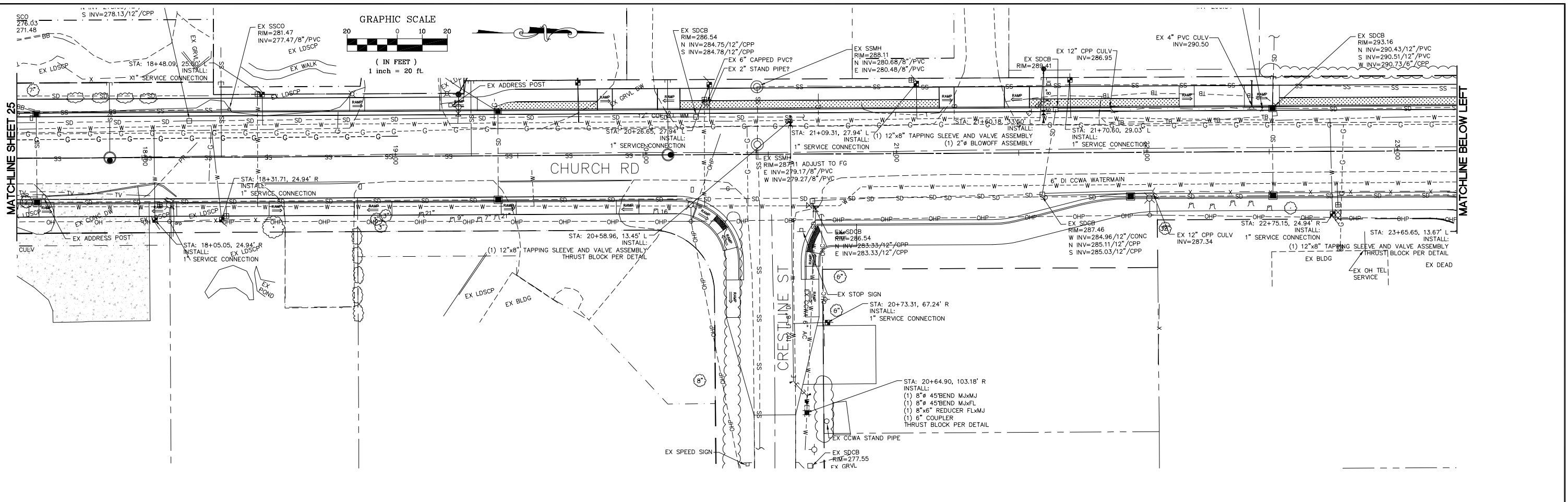
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CHURCH ROAD
STREET IMPROVEMENTS
WATER PLAN

JOB# / DWG 07037	WATER	DATE 3-5-14
SCALE H:1"=20'	V:N/A	SHEET 25 of 63



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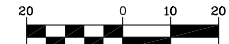
CHURCH ROAD
STREET IMPROVEMENTS
WATER PLAN

JOB# / DWG	07037 WATER	DATE	3-5-14
SCALE	H:1"=20' V:N/A	SHEET	26 of 63

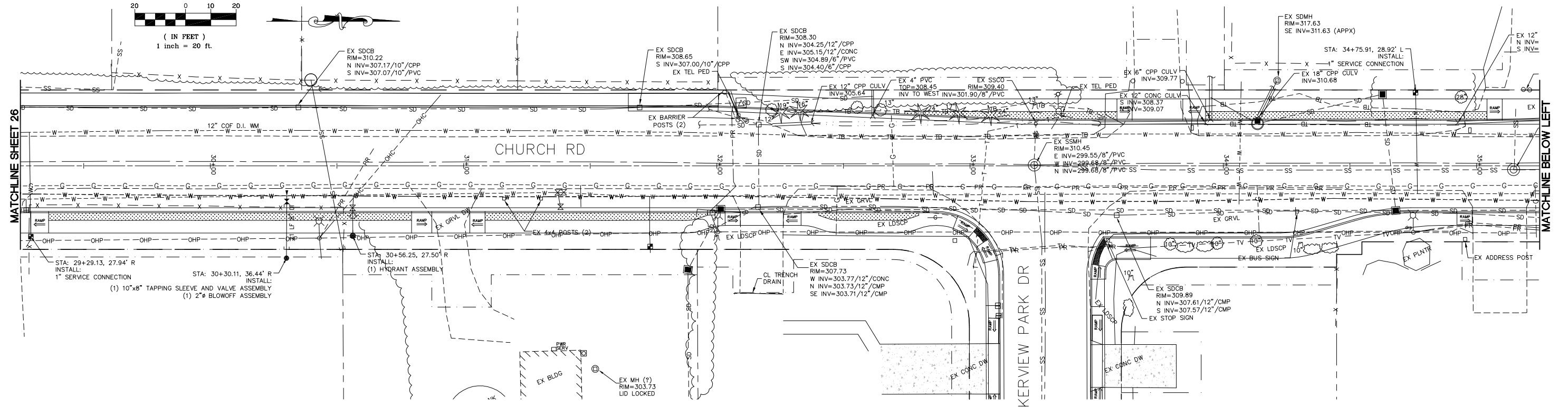


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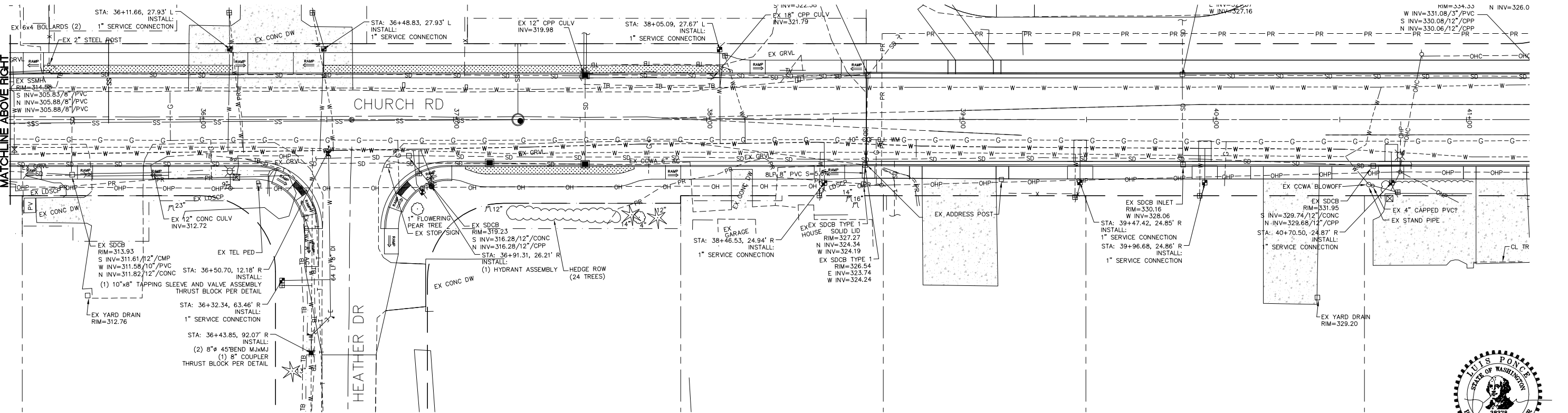


(IN FEET)
1 inch = 20 ft.



MATCHLINE SHEET 26

MATCHLINE BELOW LEFT



MATCHLINE ABOVE RIGHT



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NO.	DATE	REVISION	BY

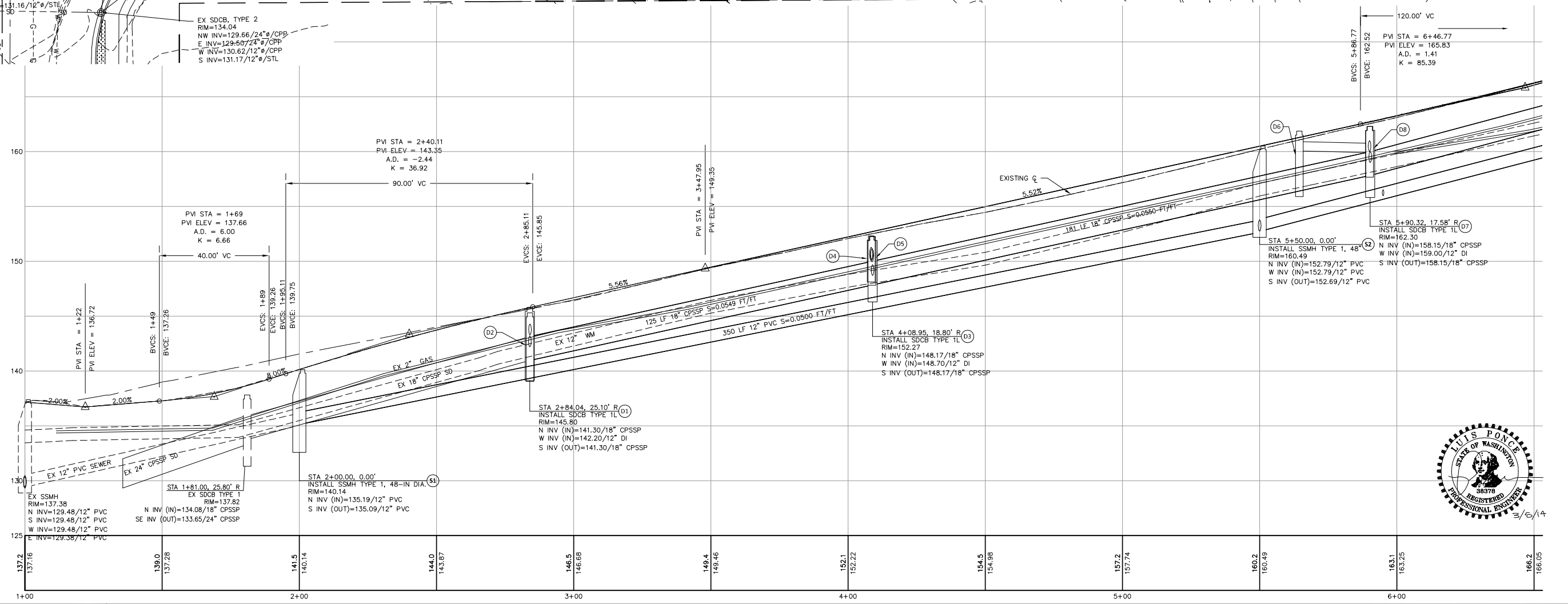
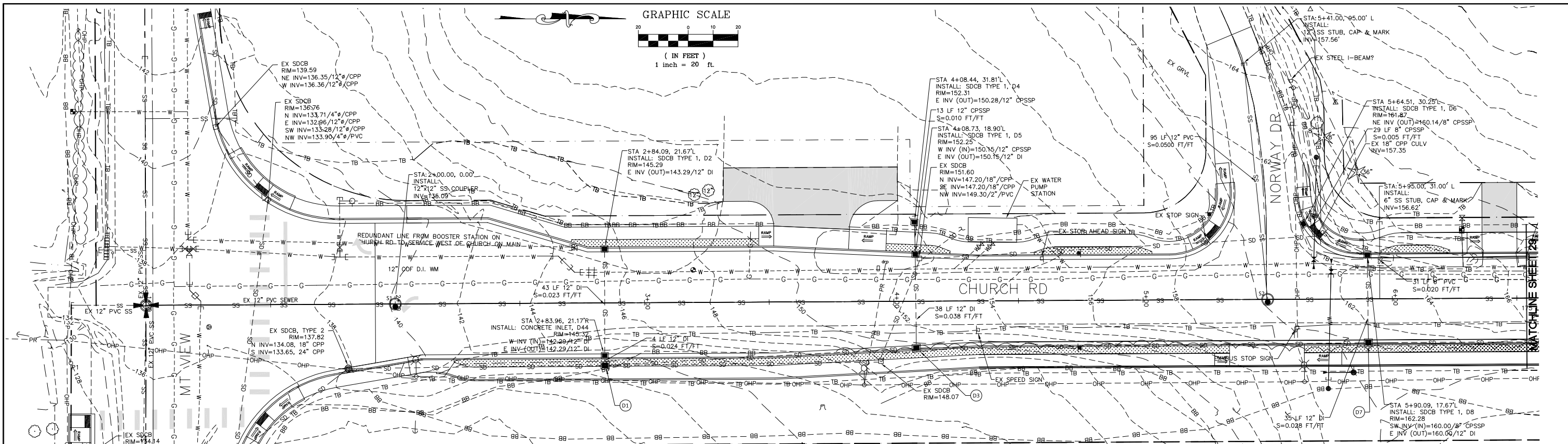
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CHURCH ROAD
STREET IMPROVEMENTS
WATER PLAN

JOB# / DWG	DATE
07037 WATER	3-5-14
SCALE	SHEET
H:1"=20' v:N/A	27 of 63

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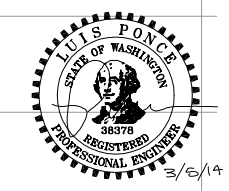
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FERNDALE, WA 98248

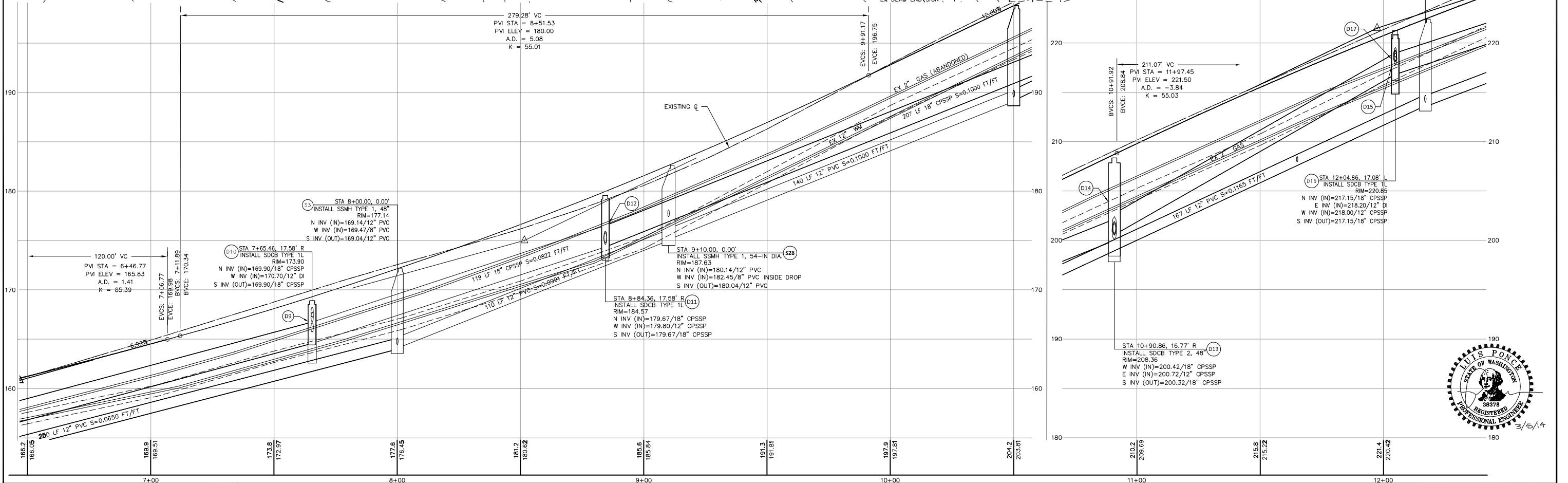
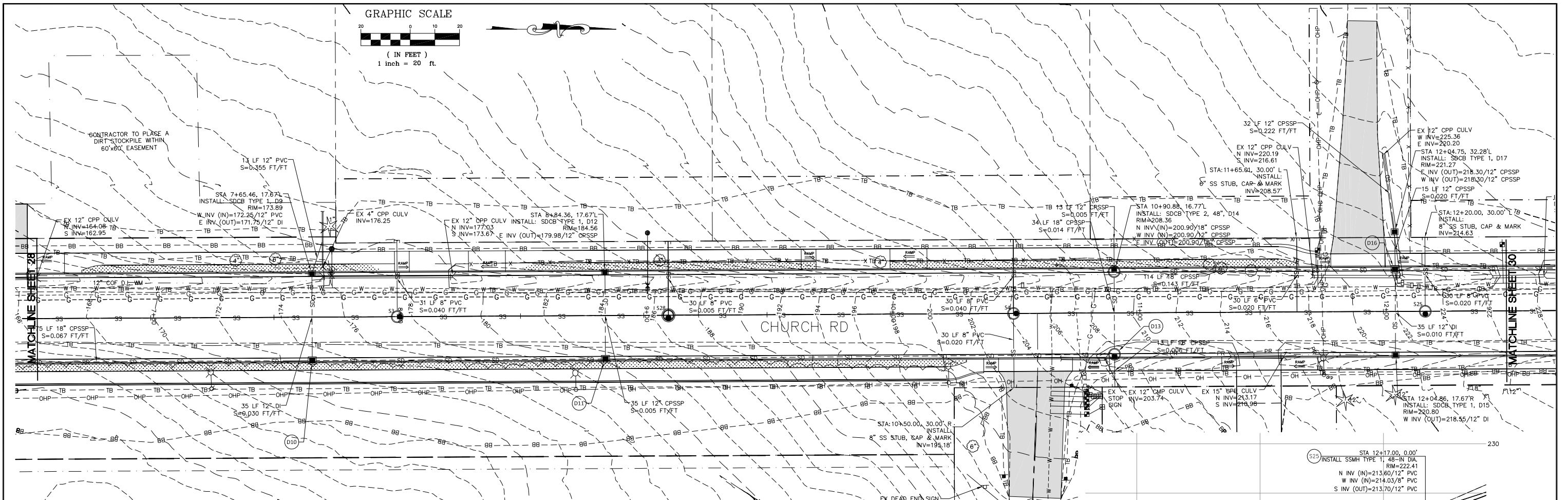
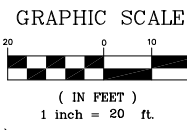
CHURCH ROAD
STREET IMPROVEMENTS - STORM
1+00 TO 6+50

JOB# / DWG
07037 PLANPRO
SCALE
H: 1"=20' V: 1"=5'

DATE
3-5-14
SHEET
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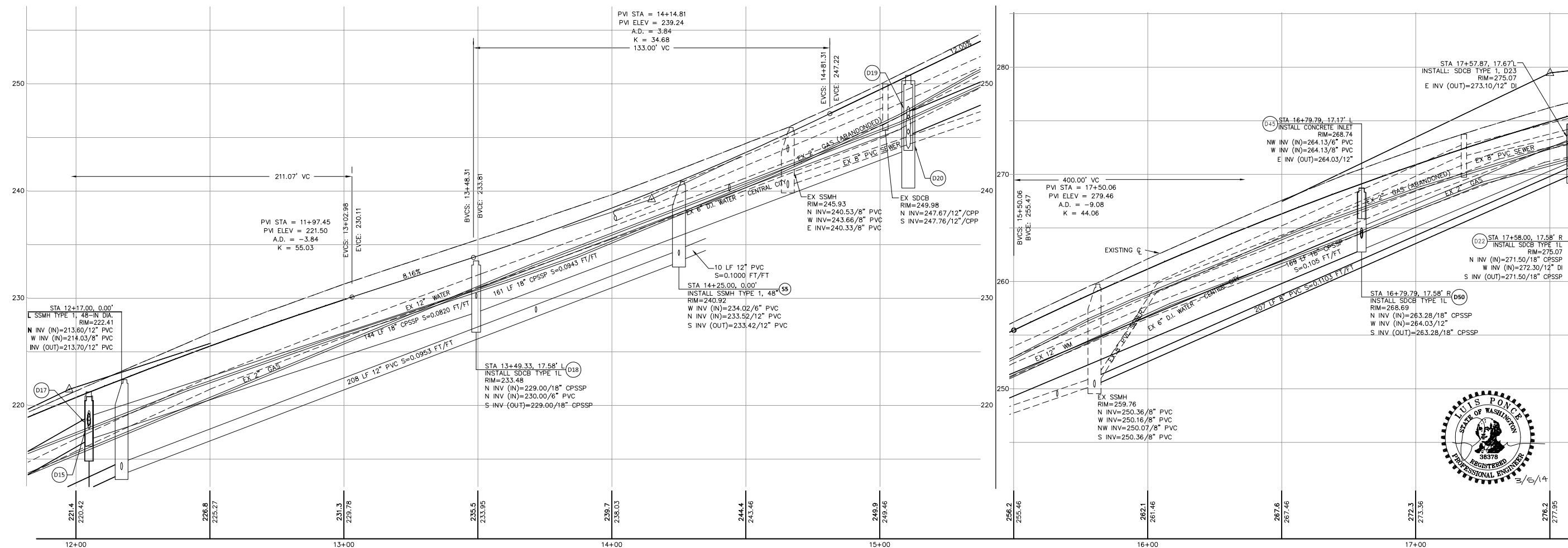
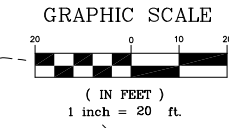
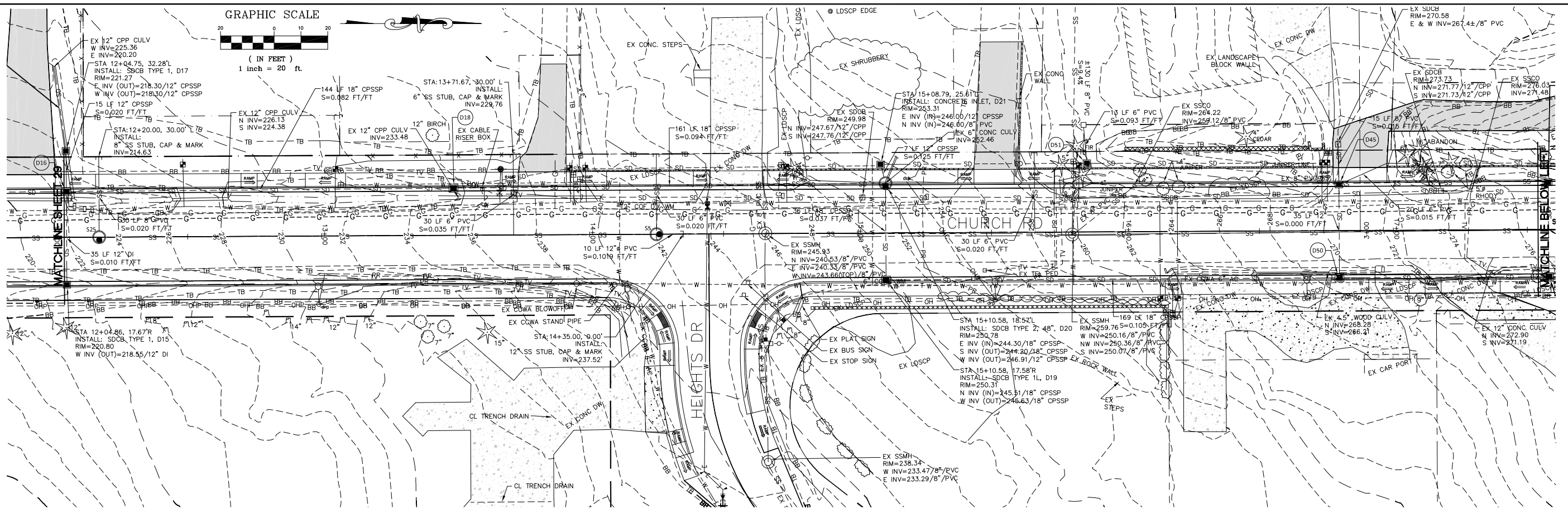
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CHURCH ROAD
STREET IMPROVEMENTS - STORM
6+50 TO 12+00

JOB# / DWG
07037 PLANPRO
SCALE
H:1"=20' V:1"=5'
DATE
3-5-14
SHEET
29 of 63

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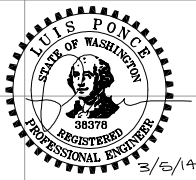
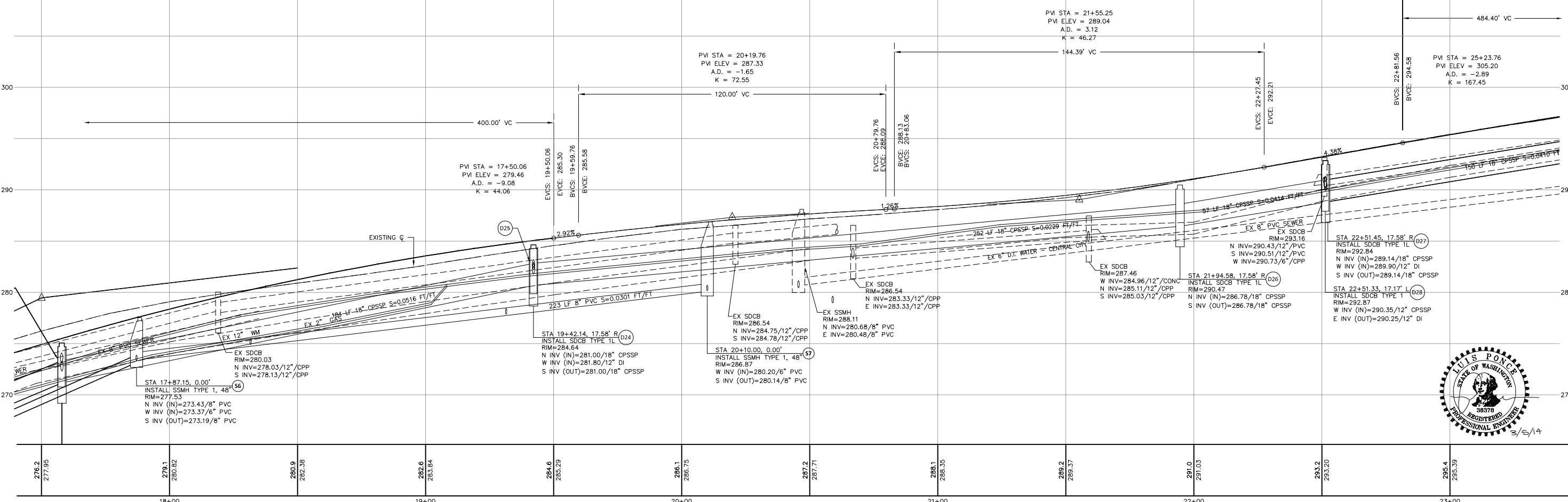
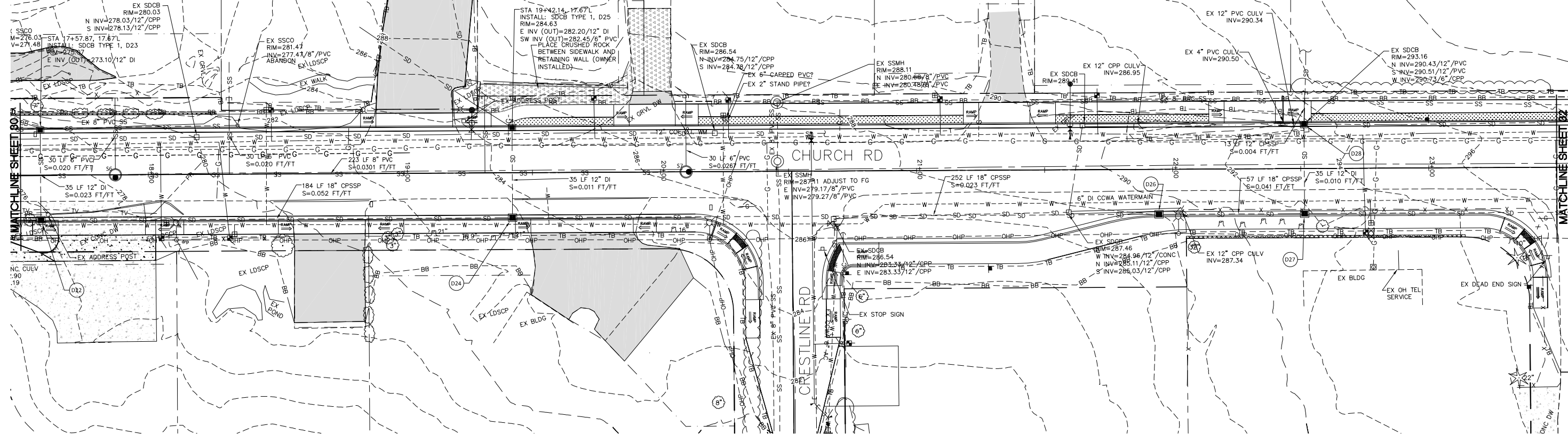
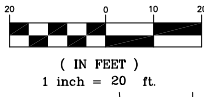
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2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - STORM
12+00 TO 17+50

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07037 PLANPRO
SCALE
H:1"=20' V:1"=5'
DATE
3-5-14
SHEET
30 of 63

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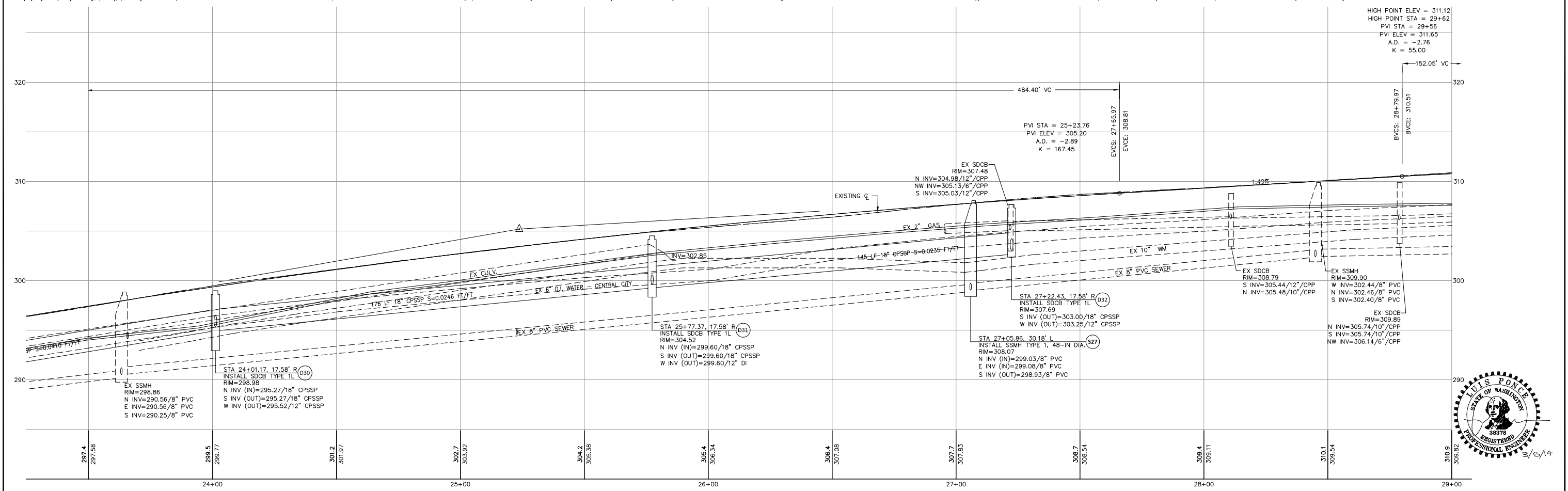
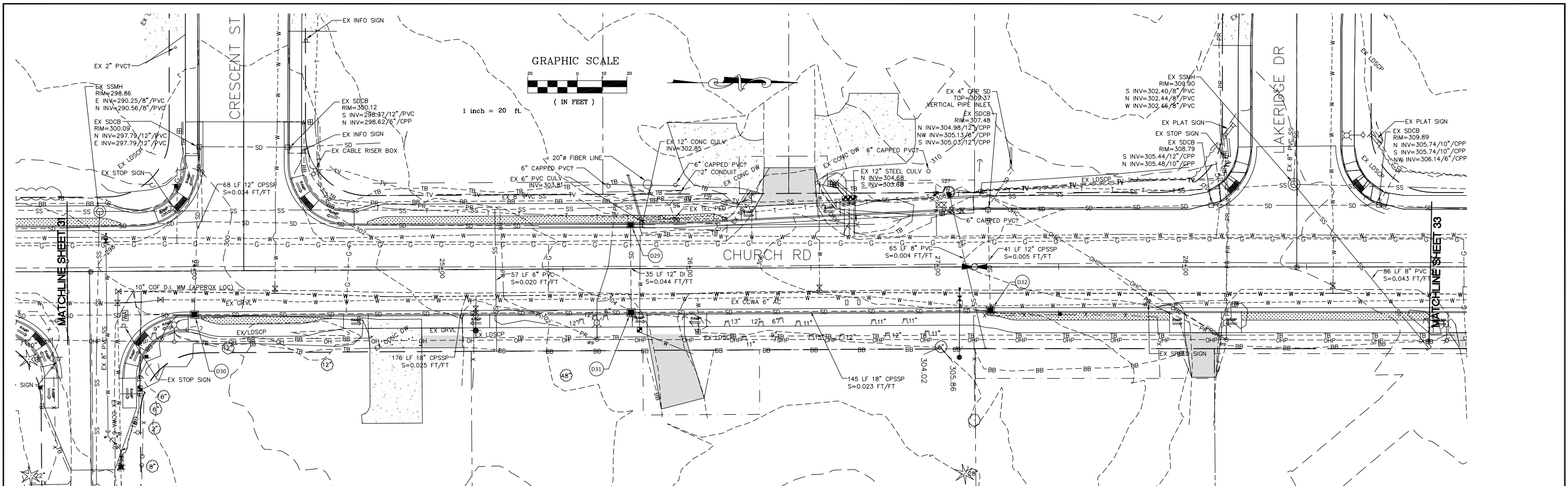
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STREET IMPROVEMENTS - STORM
17+50 TO 23+50

JOB# / DWG
07037 PLANPRO
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H:1"=20' V:1"=5'

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HIGH POINT ELEV = 311.12
 HIGH POINT STA = 29+62
 PVI STA = 29+56
 PVI ELEV = 311.65
 A.D. = -2.76
 K = 55.00

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LP/GKG
 DRAWN BY
LMC
 CHECKED BY
LP

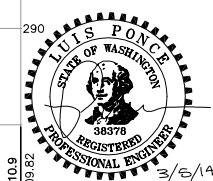
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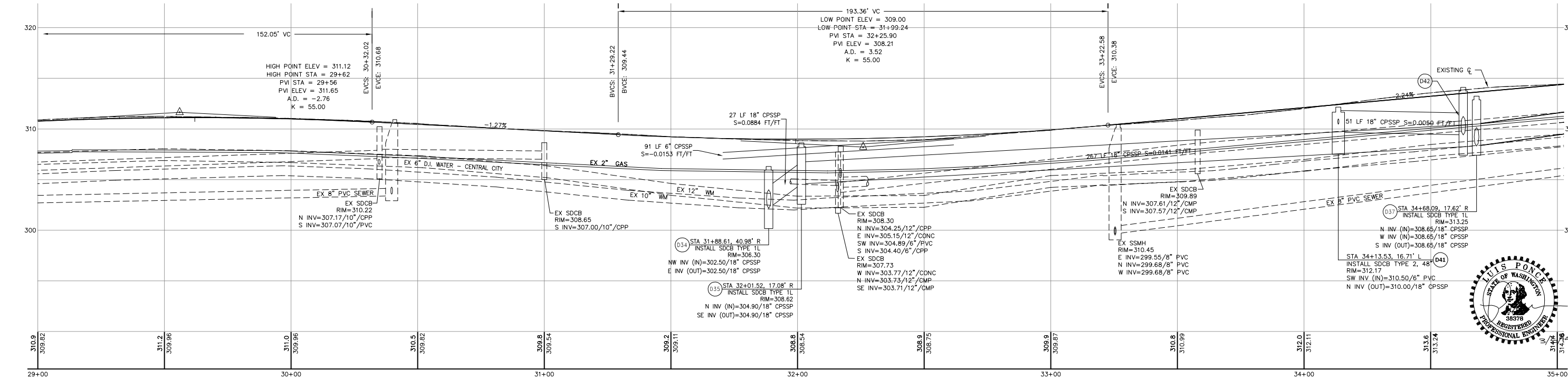
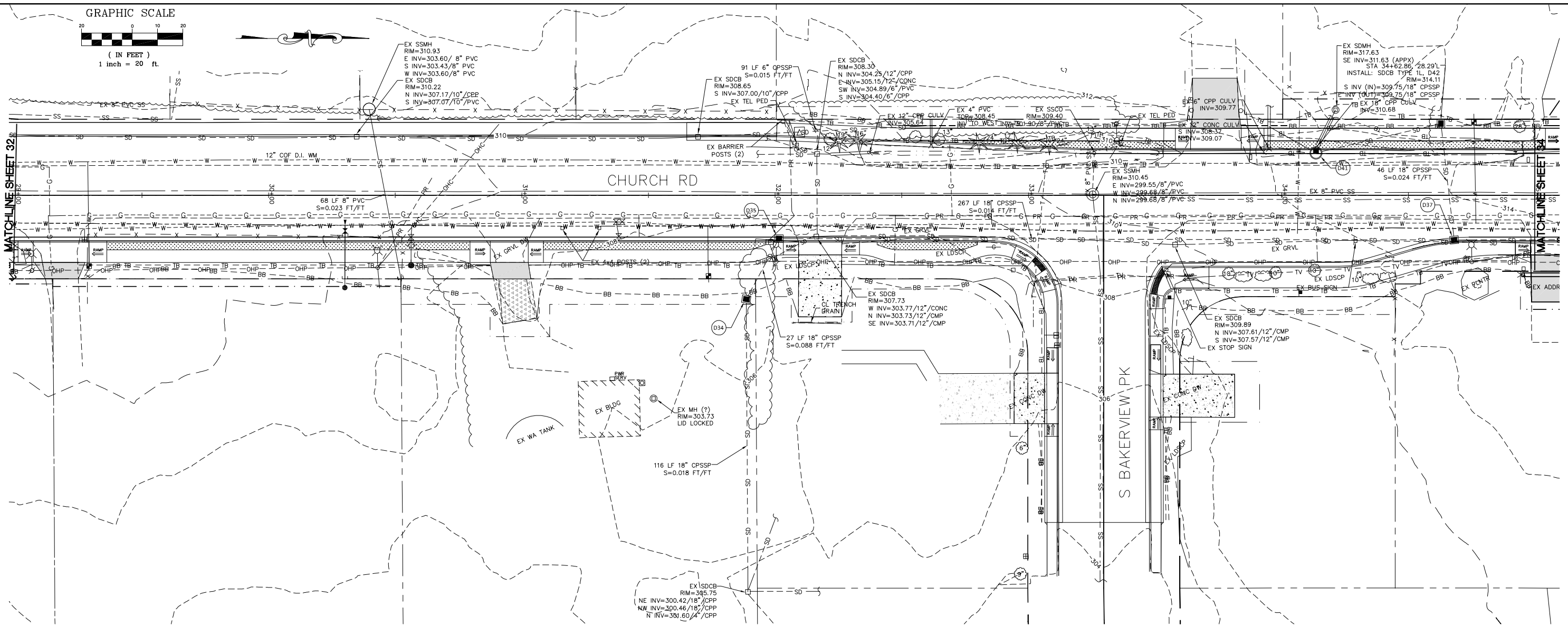
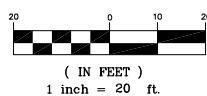
CITY OF FERNDALE
 2095 MAIN STREET
 FERNDALE, WA 98248

CHURCH ROAD
 STREET IMPROVEMENTS - STORM
 23+50 TO 29+00

JOB# / DWG
07037 PLANPRO
 DATE
3-5-14
 SCALE
H:1"=20' V:1"=5'
 SHEET
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GRAPHIC SCALE



P:\Projects\07037\dwg\C3D\Plan Sheets\07037 STORM PLANPRO.dwg, 29+00-35+00, 3/6/2014 12:48:47 PM

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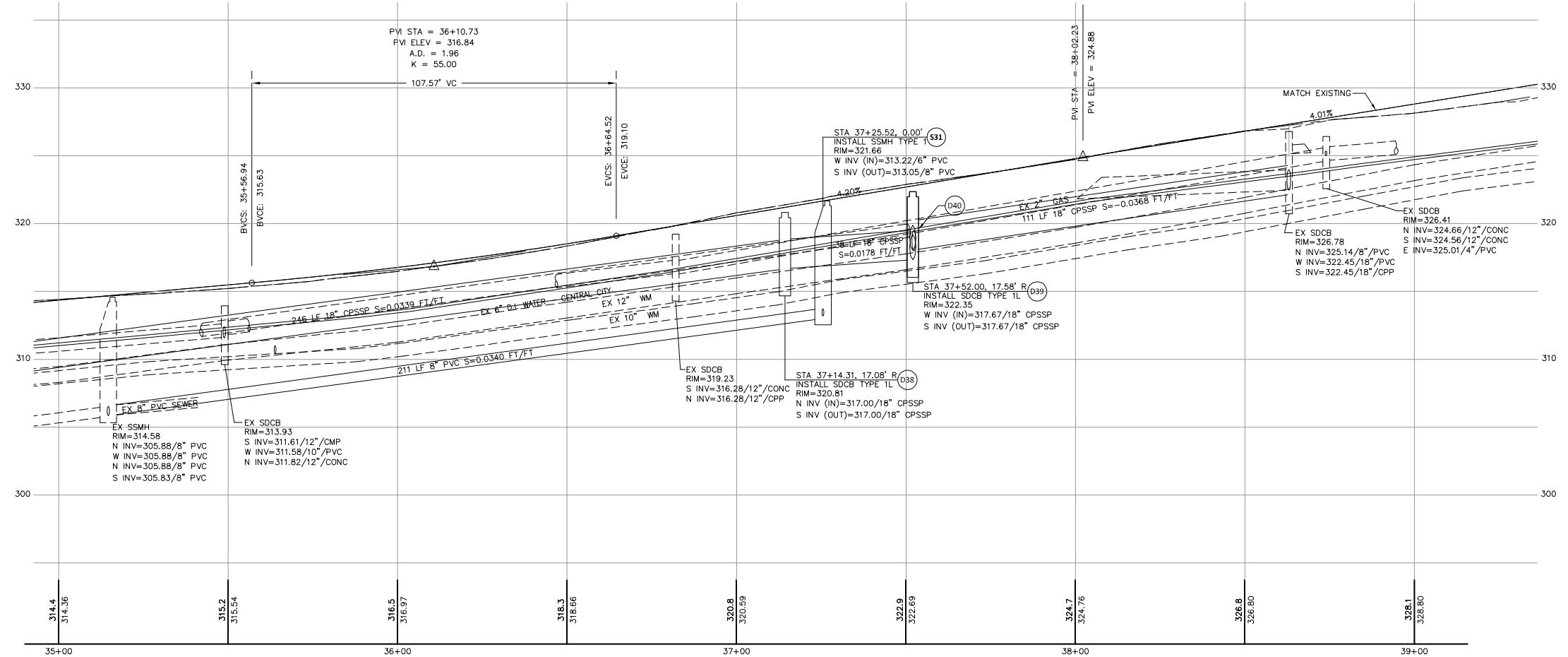
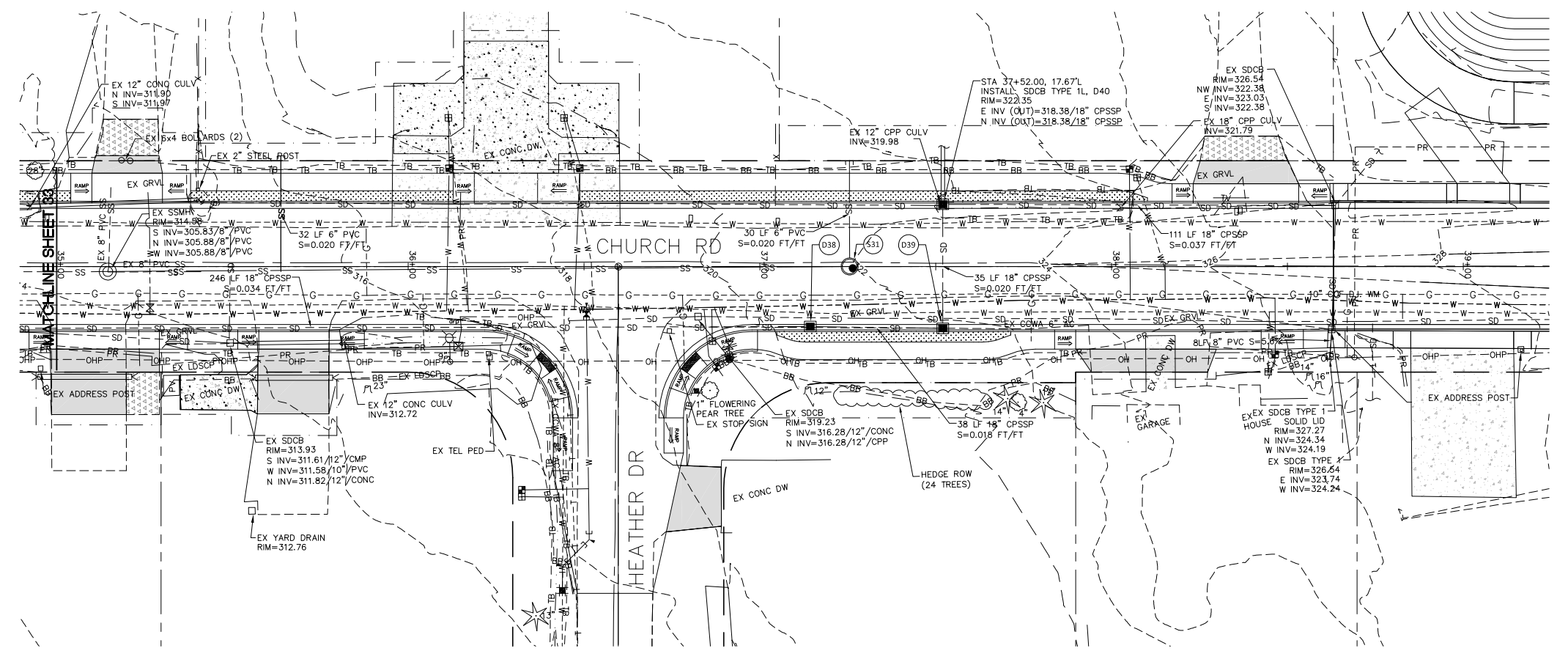
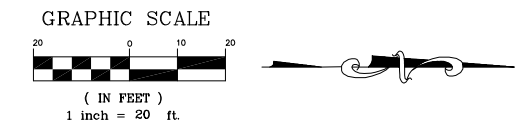
CITY OF FERDALE
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FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS - STORM
29+00 TO 35+00

JOB# / DWG
07037 PLANPRO
SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
SHEET
33 of 63





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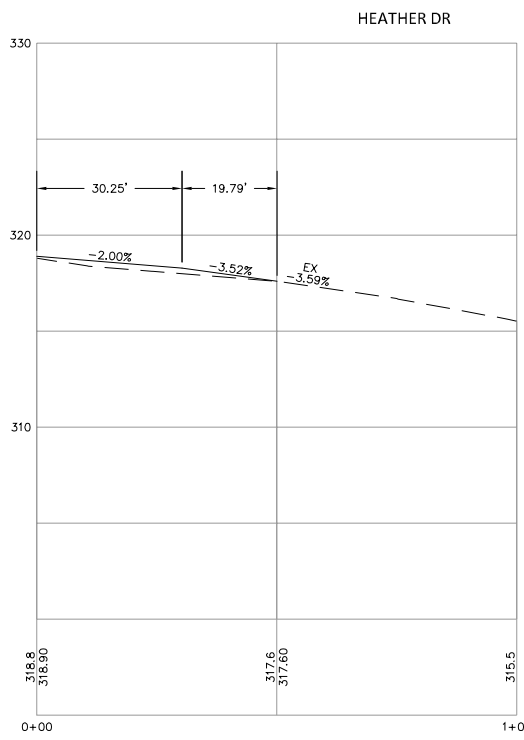
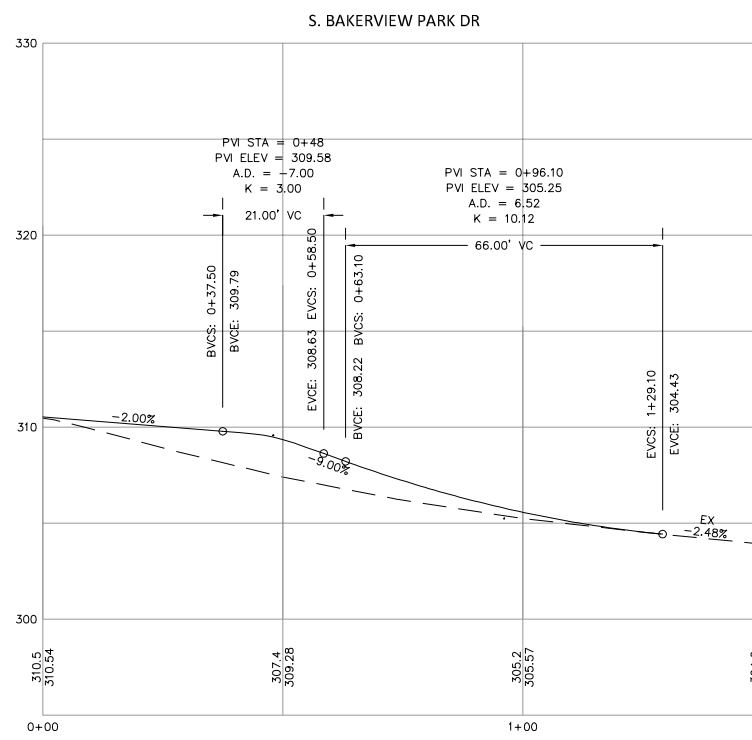
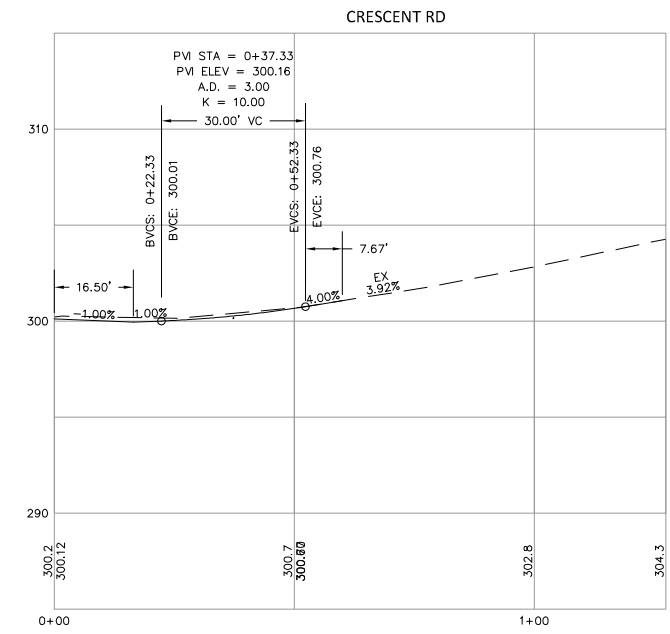
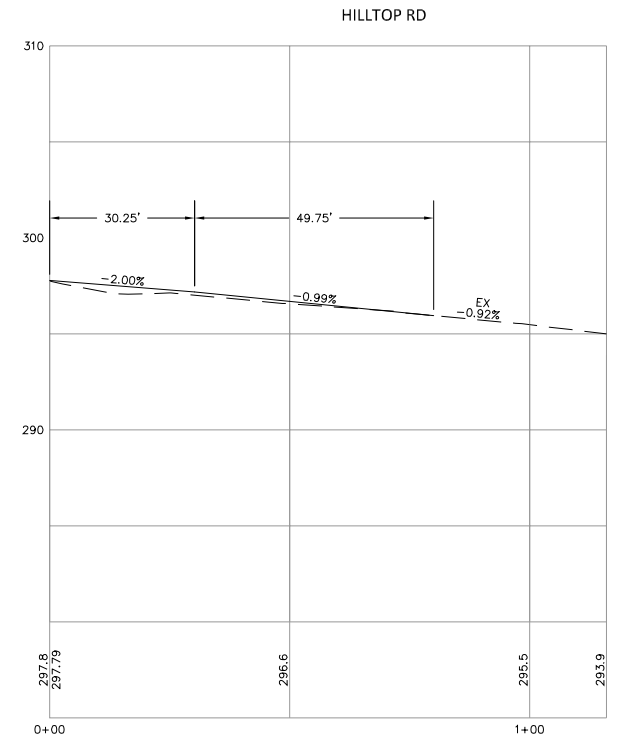
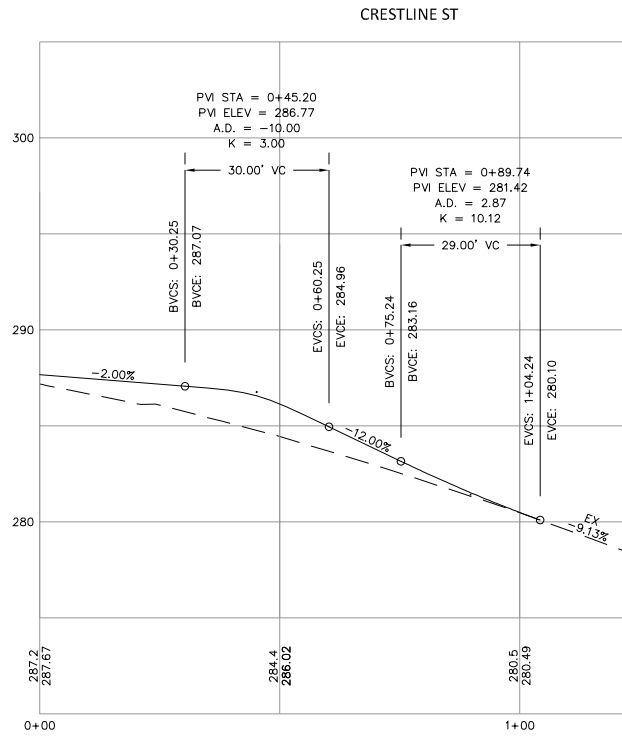
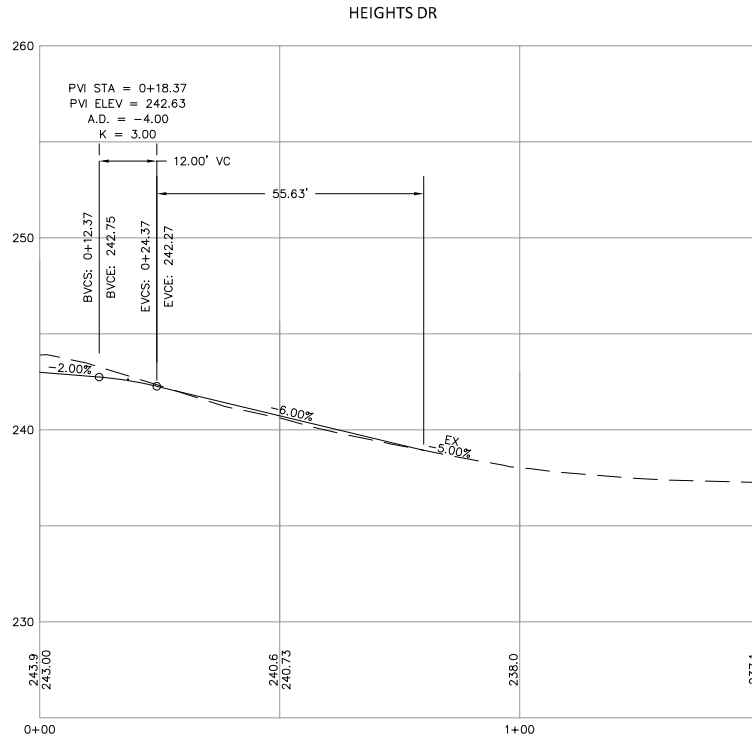
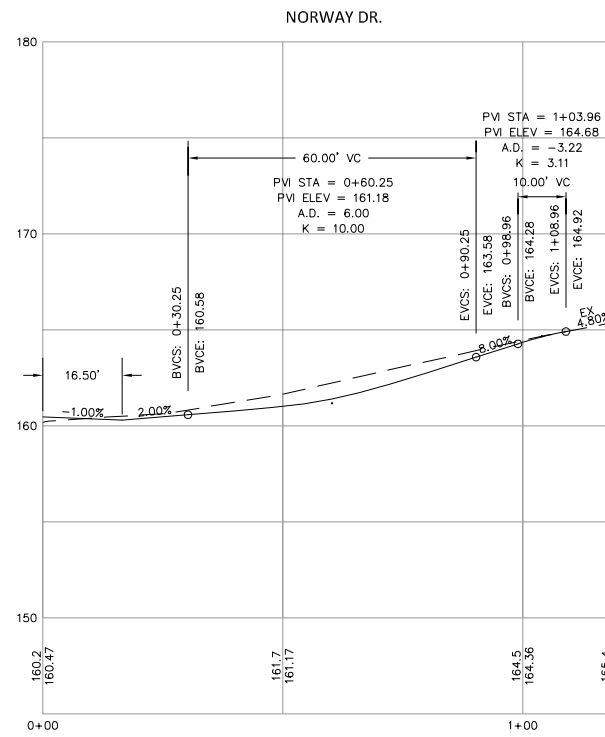
NO.	DATE	REVISION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

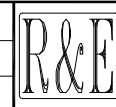
CHURCH ROAD
STREET IMPROVEMENTS - STORM
35+00 TO 39+00

JOB# / DWG 07037 PLANPRO	DATE 3-5-14
SCALE H: 1"=20' V: 1"=5'	SHEET 34 of 63

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NO.	DATE	REVISION	BY

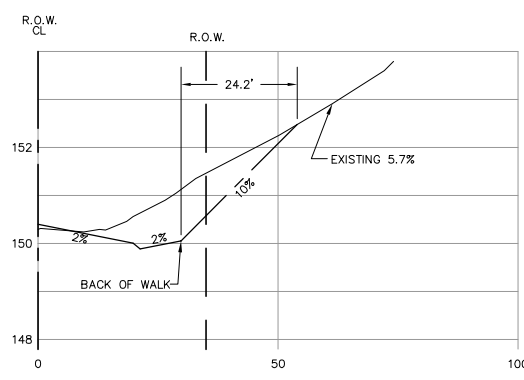
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
INTERSECTION PROFILES

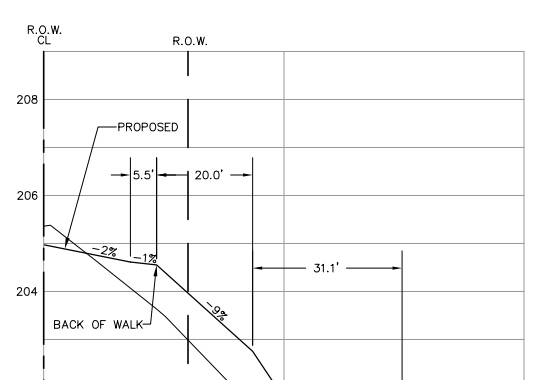
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SCALE H: 1" = 20' V: N/A	SHEET 35 of 63



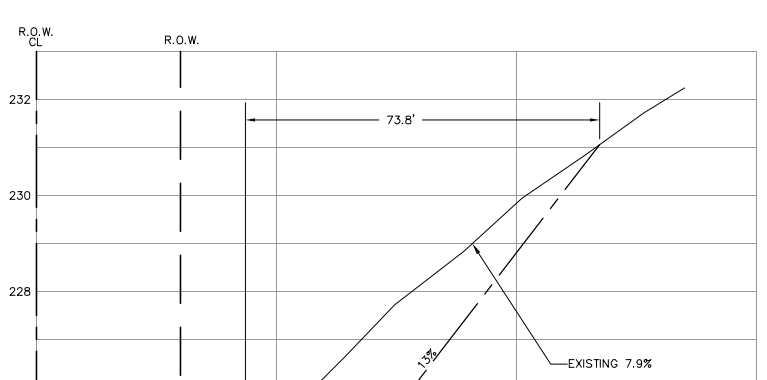
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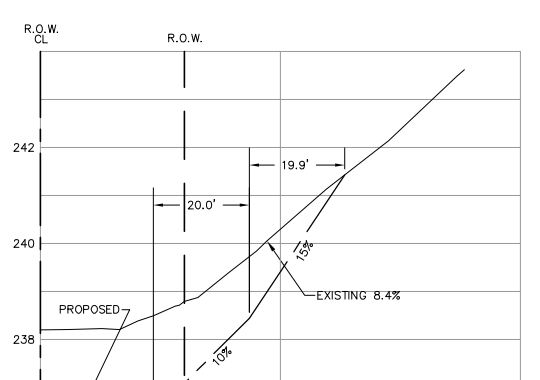
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STATION 3+67, LT**



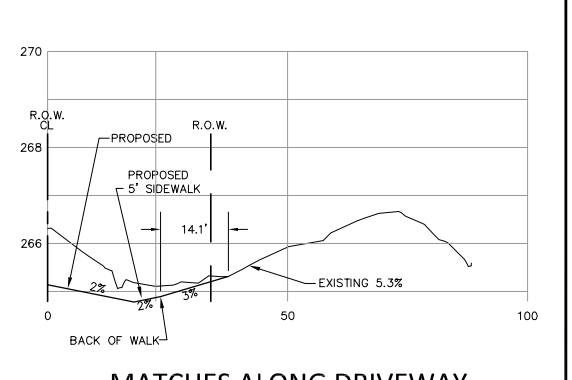
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STATION 10+59.68, RT**



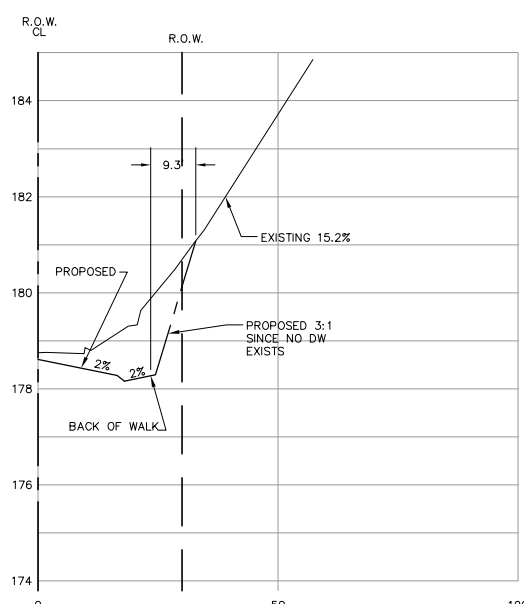
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STATION 11+90, LT**



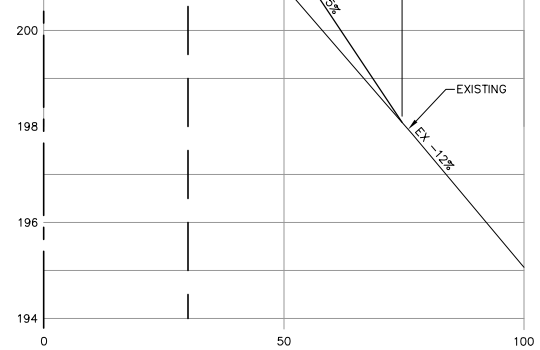
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STATION 13+83, LT**



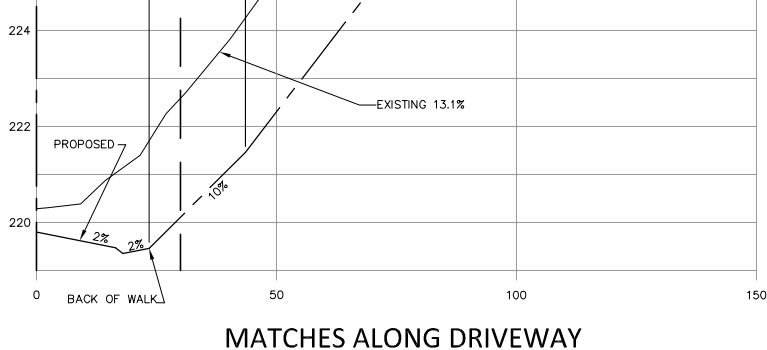
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STATION 16+38, RT**



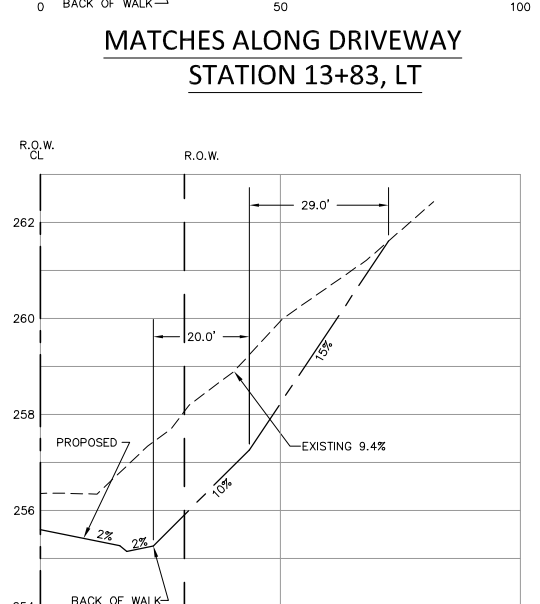
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STATION 8+17, LT**



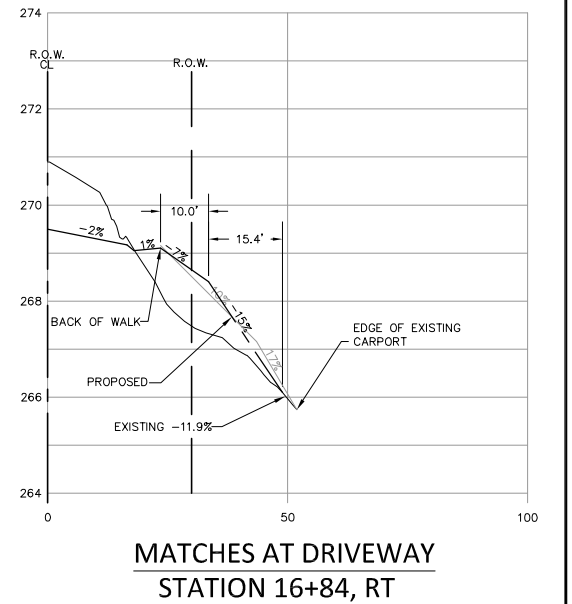
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STATION 11+49, RT**



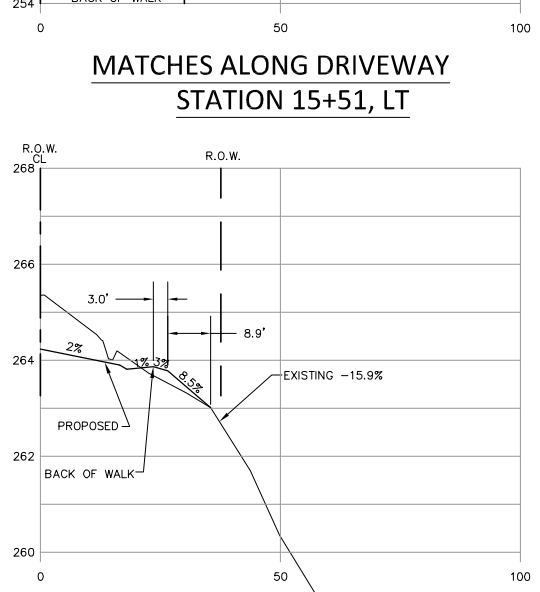
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STATION 12+85, LT**



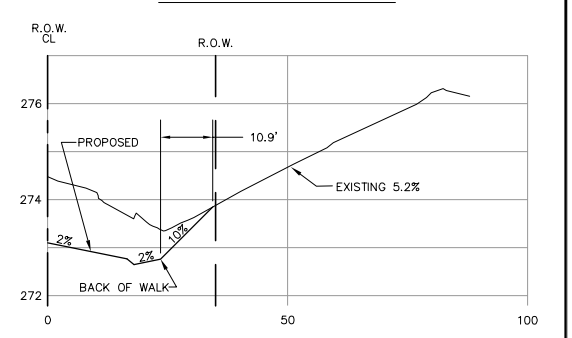
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STATION 15+51, LT**



**MATCHES AT DRIVEWAY
STATION 16+84, RT**



**MATCHES AT DRIVEWAY
STATION 16+29, RT**



**MATCHES ALONG DRIVEWAY
STATION 17+27, RT**

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2095 MAIN STREET
FERDALE, WA 98248

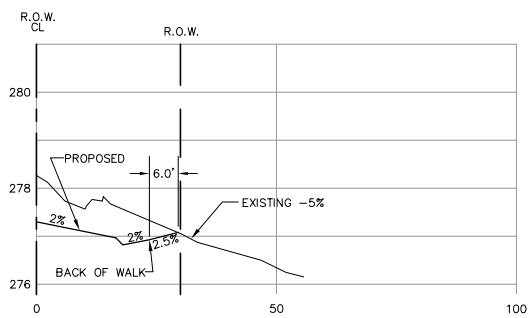
CHURCH ROAD
STREET IMPROVEMENTS
DRIVEWAY PROFILES

JOB# / DWG
07037 DWY-INT
SCALE
H: 1" = 20' V: N/A

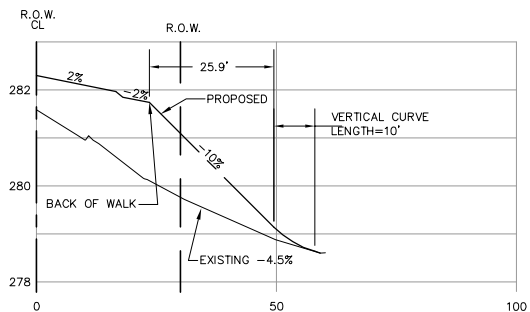
DATE
3-5-14
SHEET
36 of 63



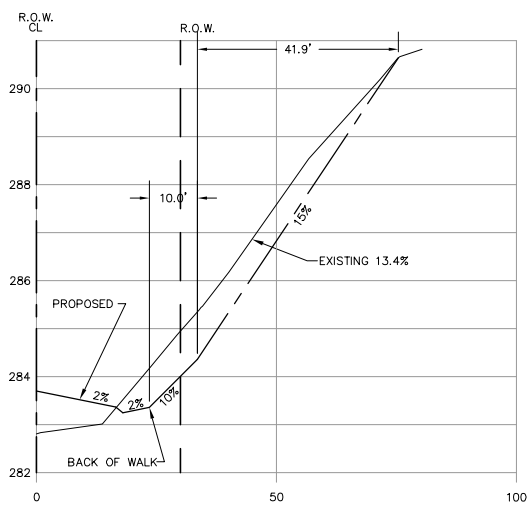
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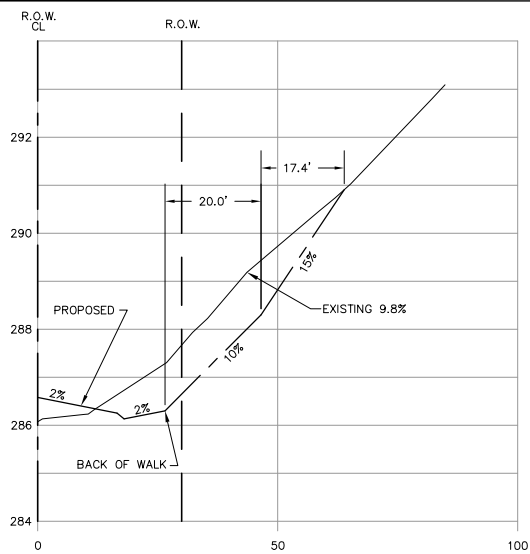
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STATION 17+83, RT



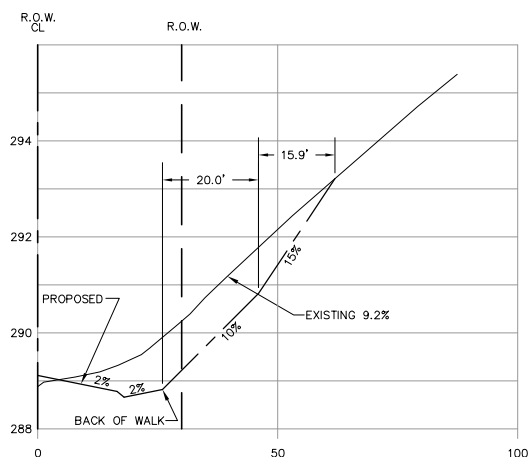
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STATION 18+71, RT



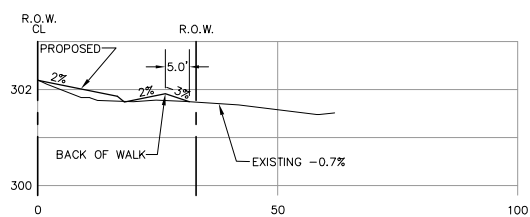
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STATION 19+04, LT



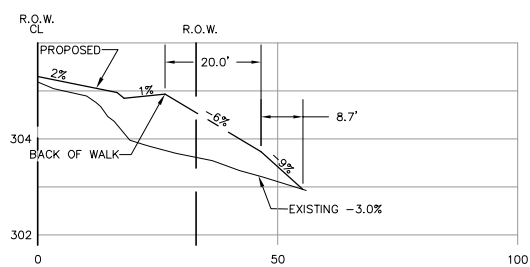
MATCHES ALONG DRIVEWAY
STATION 19+97, LT



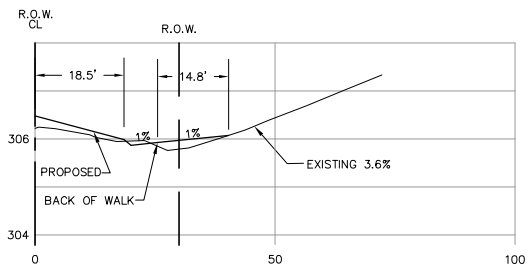
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STATION 21+36, LT



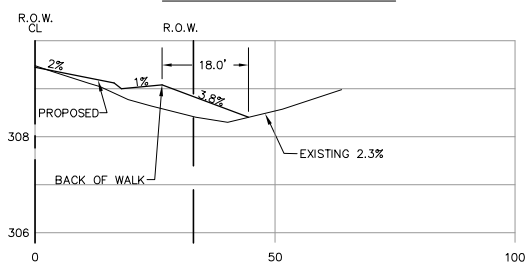
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STATION 24+83, RT



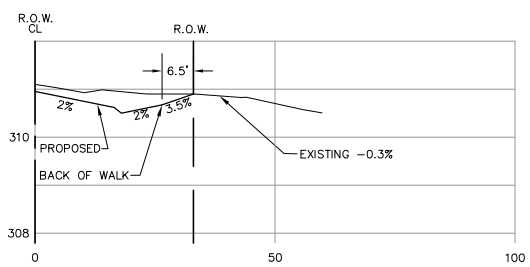
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STATION 25+91, RT



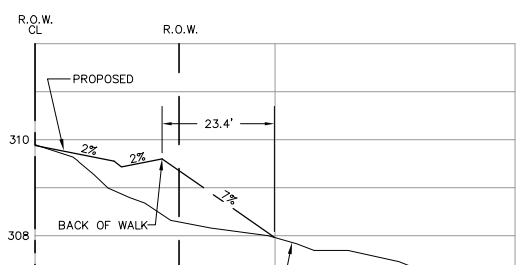
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STATION 26+41, LT



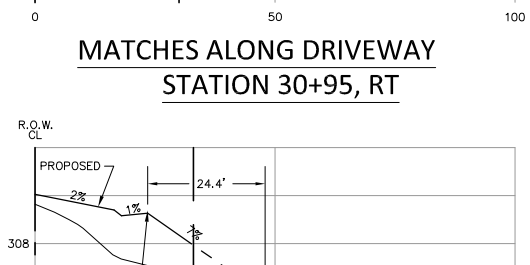
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STATION 28+09, RT



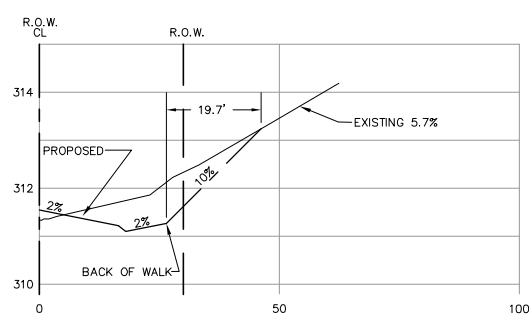
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STATION 29+18, RT



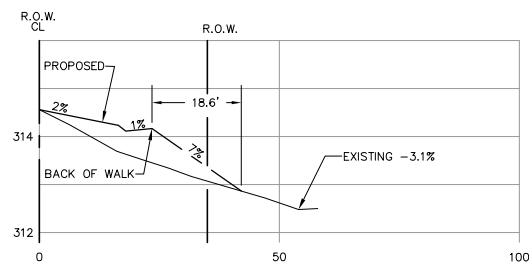
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STATION 30+95, RT



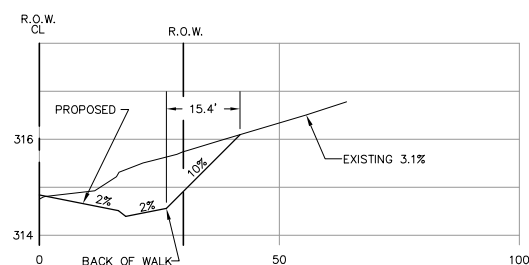
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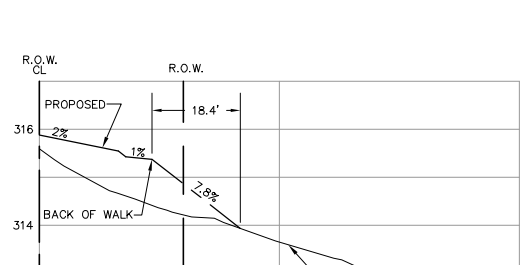
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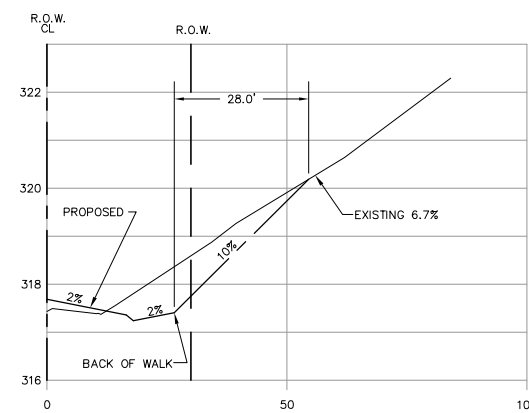
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STATION 35+09, RT



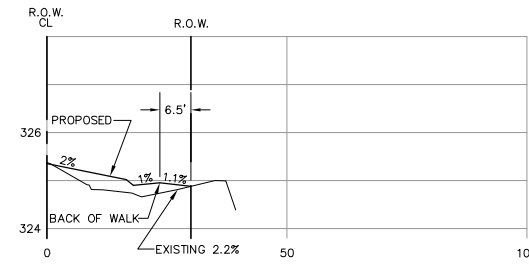
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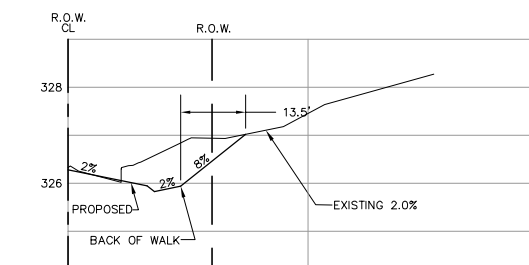
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STATION 35+68, RT



MATCHES ALONG DRIVEWAY
STATION 36+28, LT



MATCHES ALONG DRIVEWAY
STATION 38+14, RT



MATCHES ALONG DRIVEWAY
STATION 38+37, LT

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2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
DRIVEWAY PROFILES

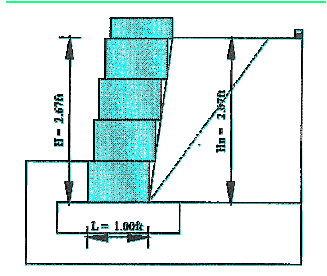
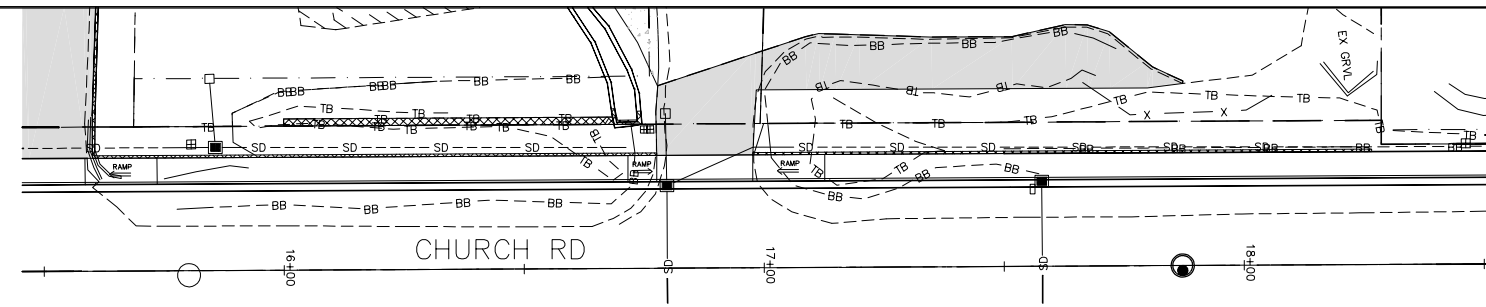
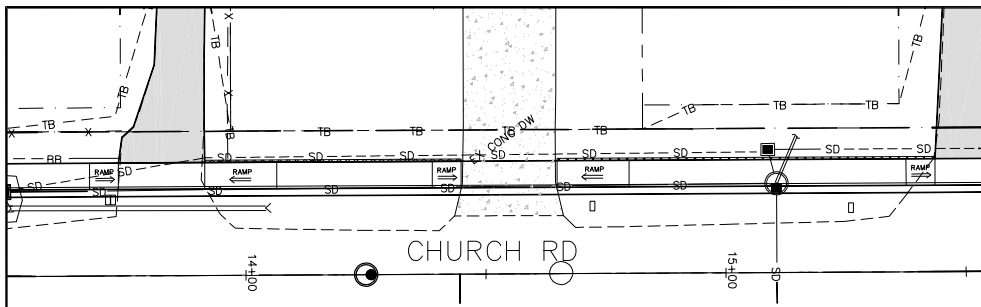
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SCALE
H: 1" = 20' V: N/A

DATE
3-5-14
SHEET
37 of 63



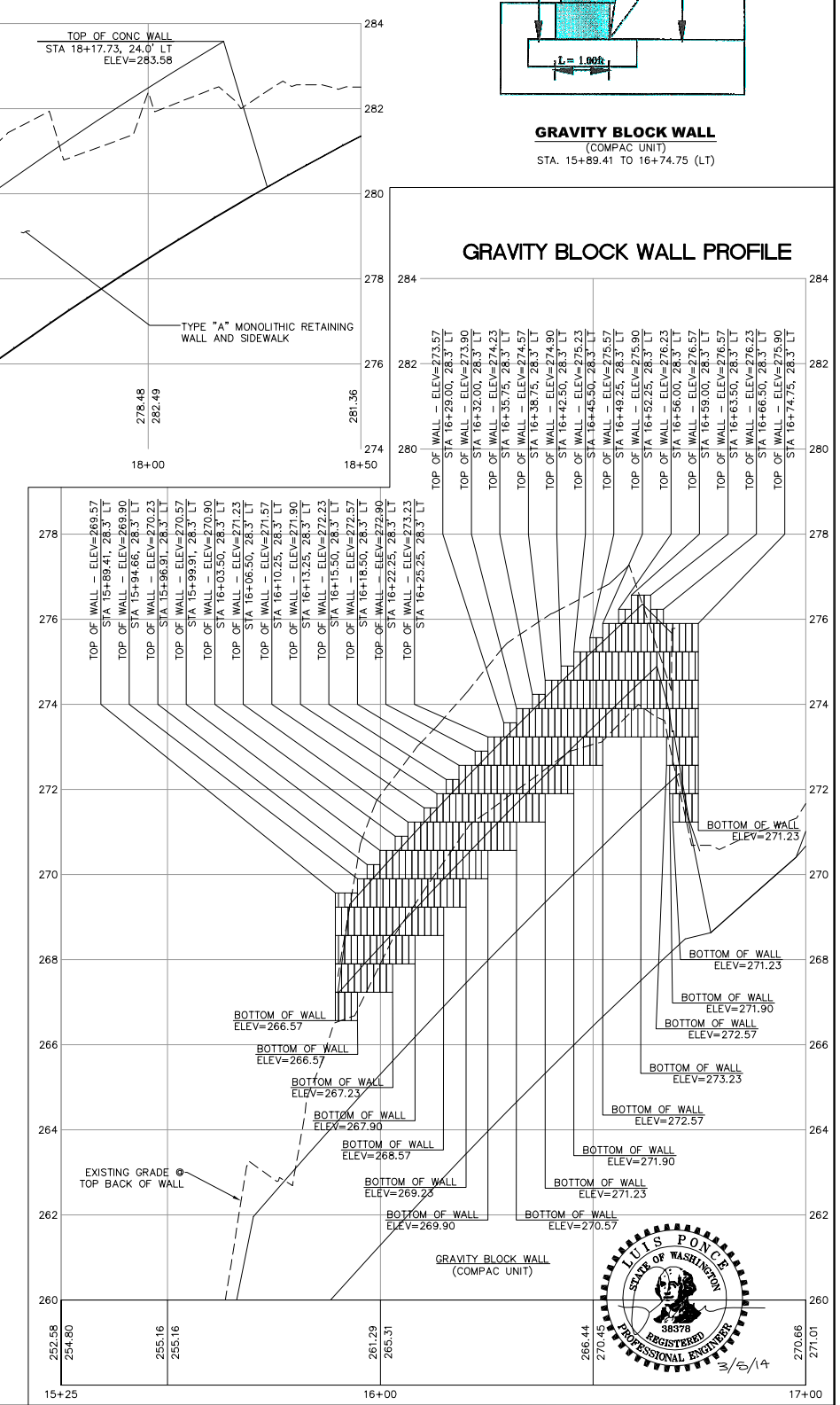
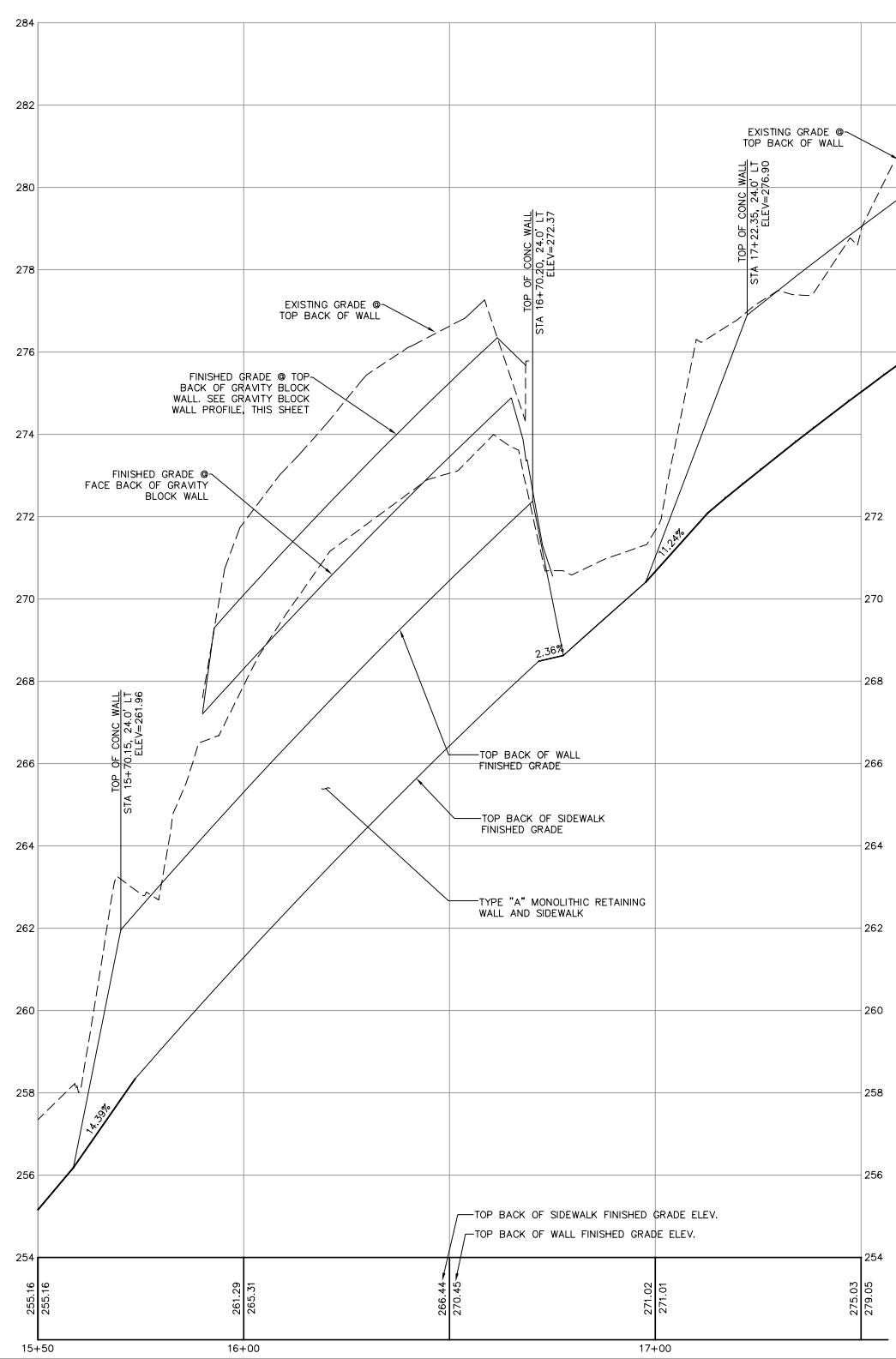
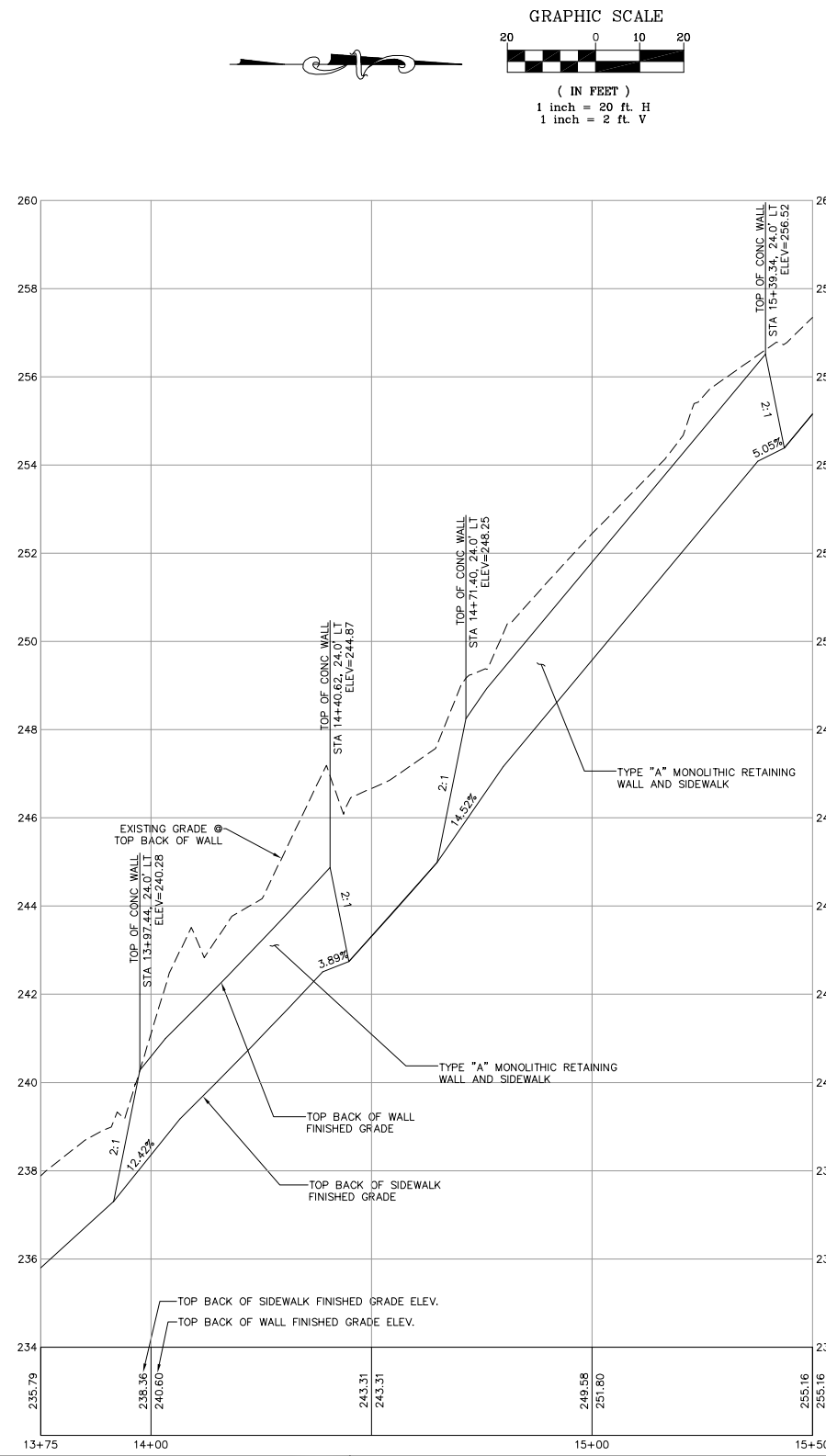
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GRAVITY BLOCK WALL
(COMPACT UNIT)
STA. 15+89.41 TO 16+74.75 (LT)

GRAVITY BLOCK WALL PROFILE



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CHECKED BY
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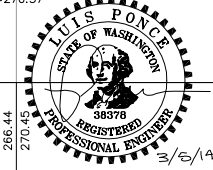
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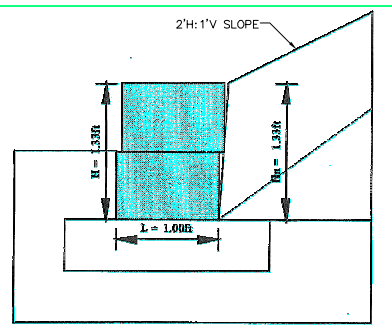
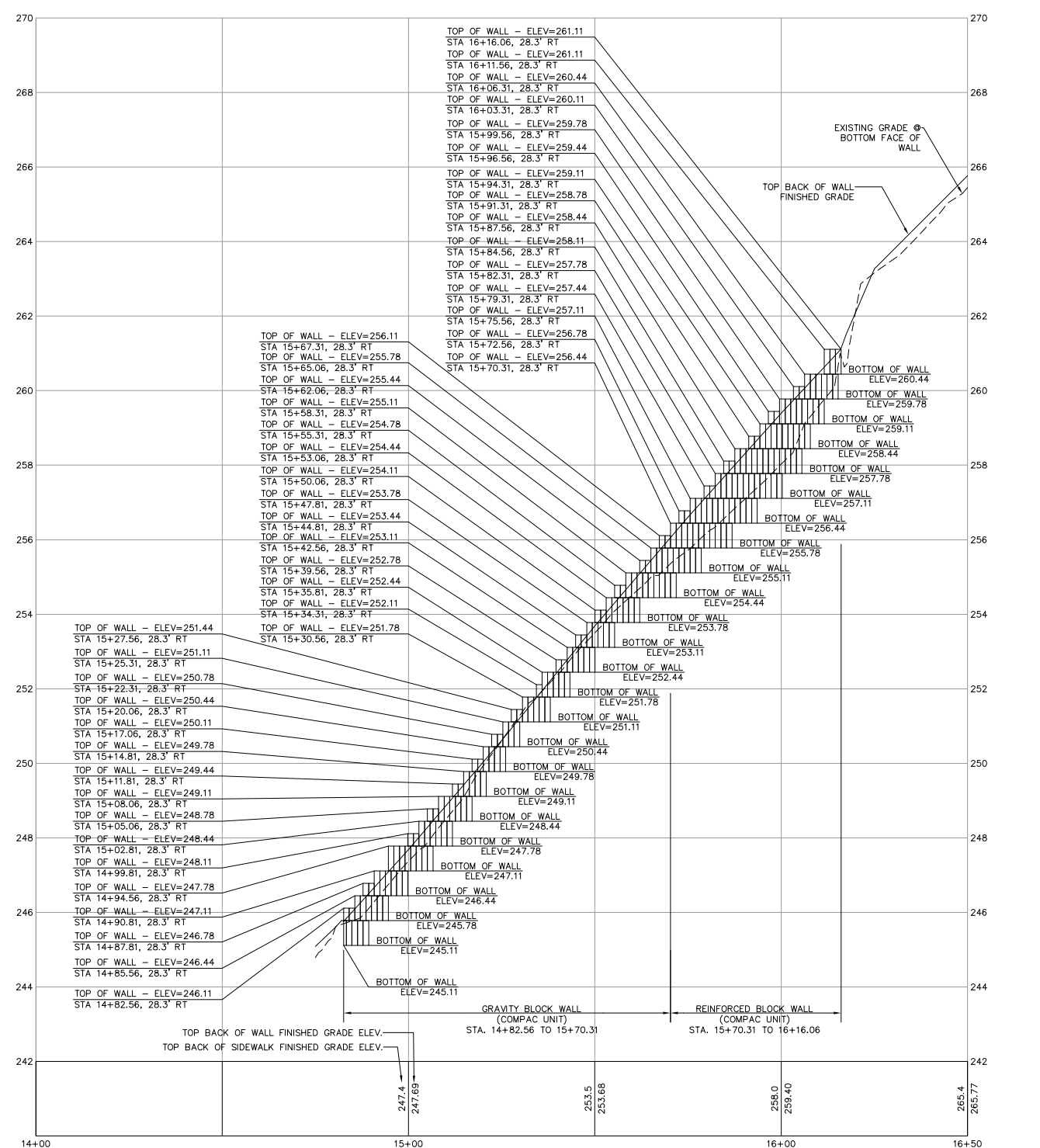
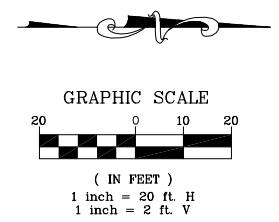
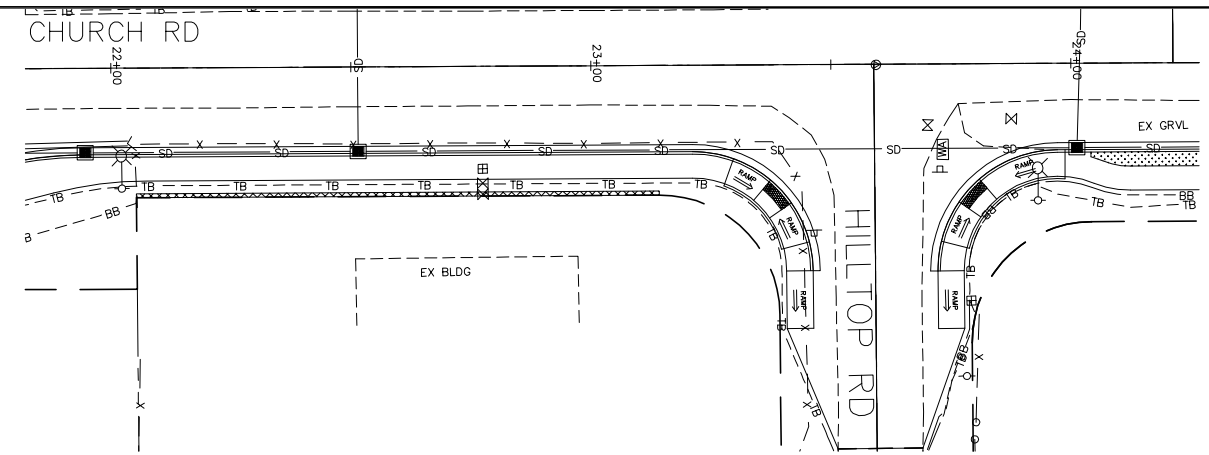
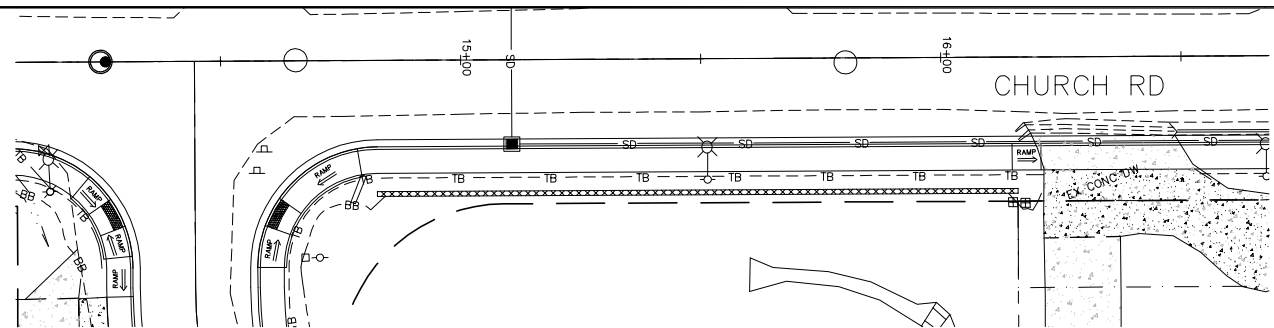
NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

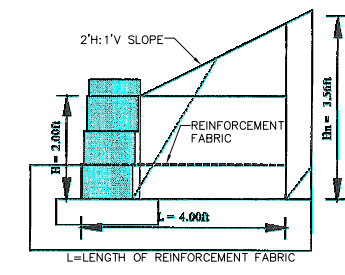
CHURCH ROAD
STREET IMPROVEMENTS
WALL PLAN AND PROFILE

JOB# / DWG	07037 WALL	DATE	3-5-14
SCALE	H:1"=20' V:1"=2'	SHEET	38 of 63

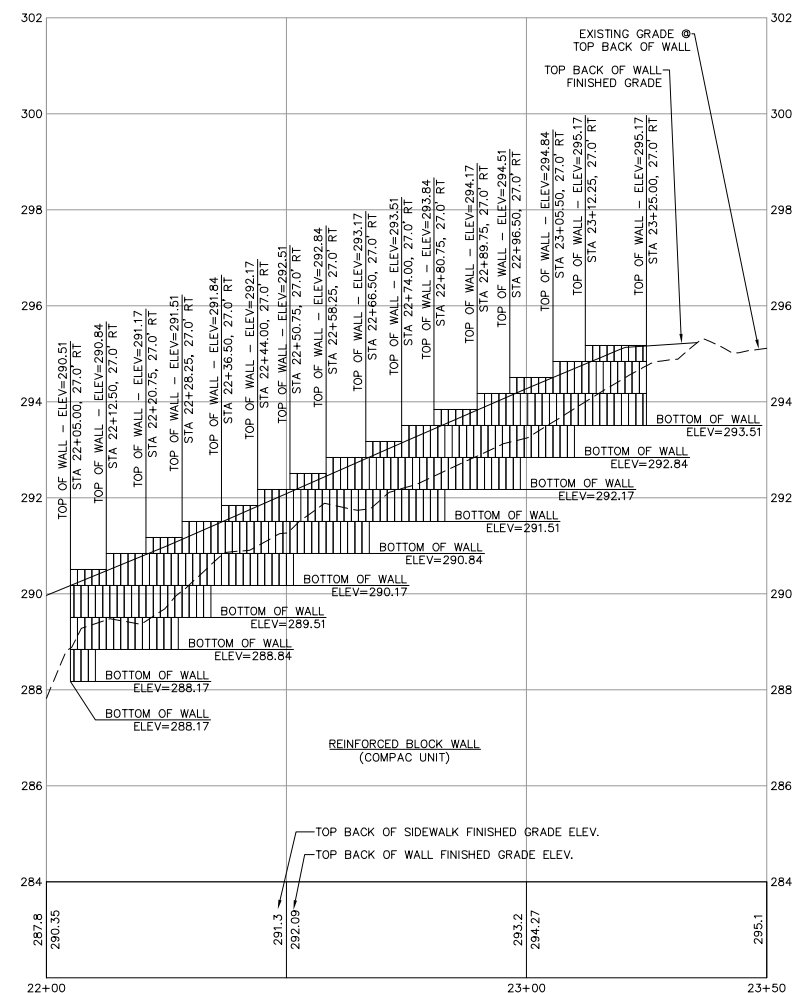




GRAVITY BLOCK WALL
(COMPACT UNIT)
STA. 14+82.56 TO 15+70.31 (RT)



REINFORCED BLOCK WALL
(COMPACT UNIT)
STA. 15+70.31 TO 16+16.06 (RT)
STA. 22.05.00 TO 23+25.00 (LT)



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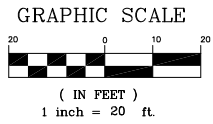
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Fax (360) 354-0407

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FERNDALE, WA 98248

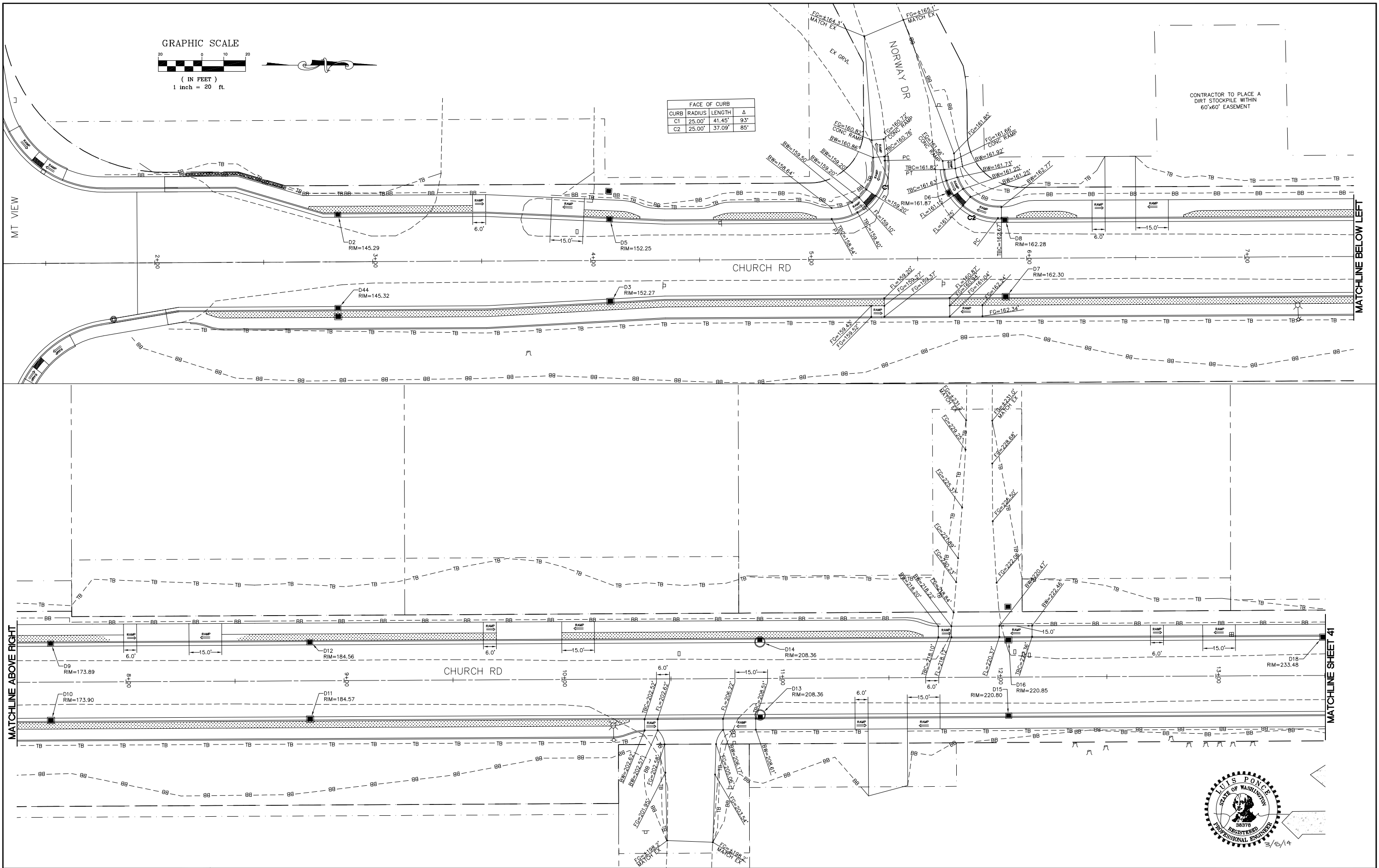
CHURCH ROAD
STREET IMPROVEMENTS
WALL PLAN AND PROFILE

JOB# / DWG	07037 WALL	DATE	3-5-14
SCALE	H:1"=20' V:1"=2'	SHEET	39 of 63



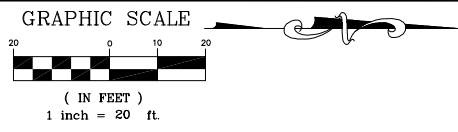
FACE OF CURB			
CURB	RADIUS	LENGTH	Δ
C1	25.00'	41.45'	93°
C2	25.00'	37.09'	85°

CONTRACTOR TO PLACE A
DIRT STOCKPILE WITHIN
60'x60' EASEMENT



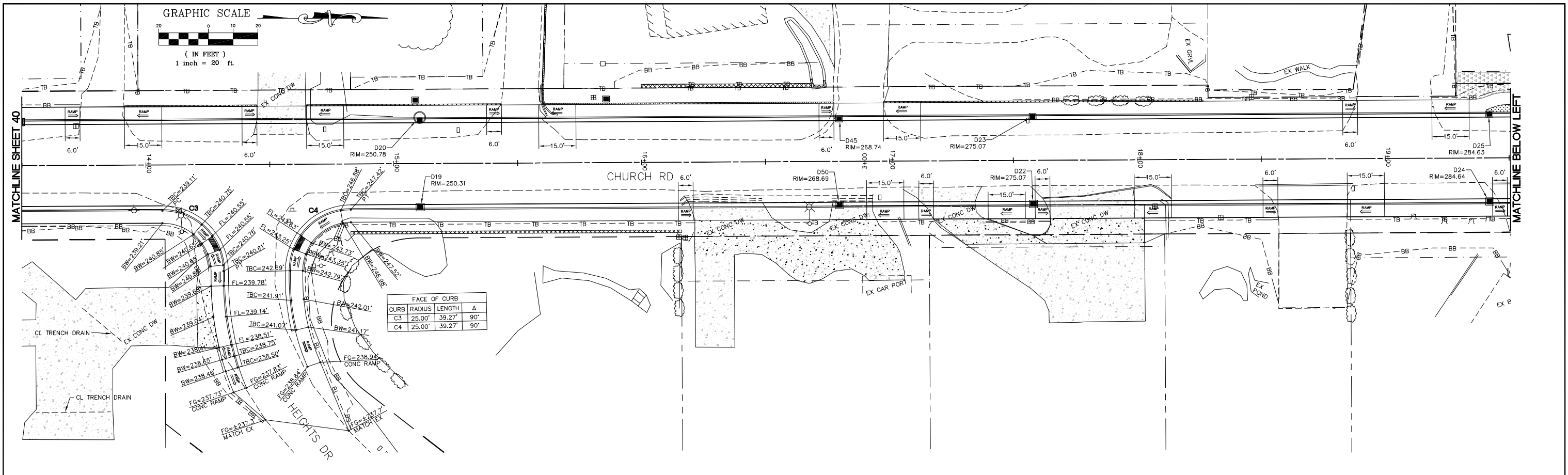
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DESIGNED BY LP/GKG DRAWN BY LMC CHECKED BY LP	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264 Ph (360) 354-3687 Fax (360) 354-0407	NO.	DATE	REVISION	BY	CITY OF FERDALE 2095 MAIN STREET FERDALE, WA 98248	CHURCH ROAD STREET IMPROVEMENTS GRADING PLAN	JOB# / DWG 07037 GRADE SCALE H:1"=20' v:N/A	DATE 3-5-14 SHEET 40 of 63



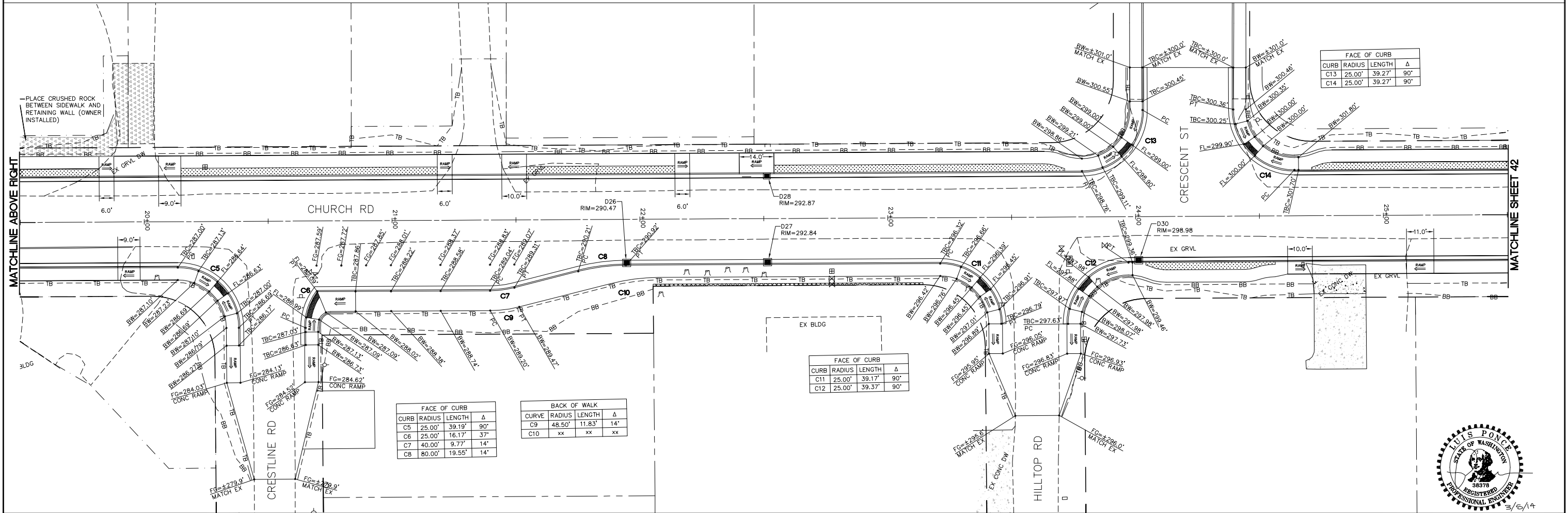
MATCHLINE SHEET 40

MATCHLINE BELOW LEFT



MATCHLINE ABOVE RIGHT

MATCHLINE SHEET 42



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NO.	DATE	REVISION	BY

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FERDALE, WA 98248

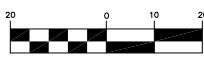
CHURCH ROAD
STREET IMPROVEMENTS
GRADING PLAN

JOB# / DWG	GRADE	DATE
07037	GRADE	3-5-14
SCALE	H:1"=20'	V:N/A
		SHEET
		41 of 63

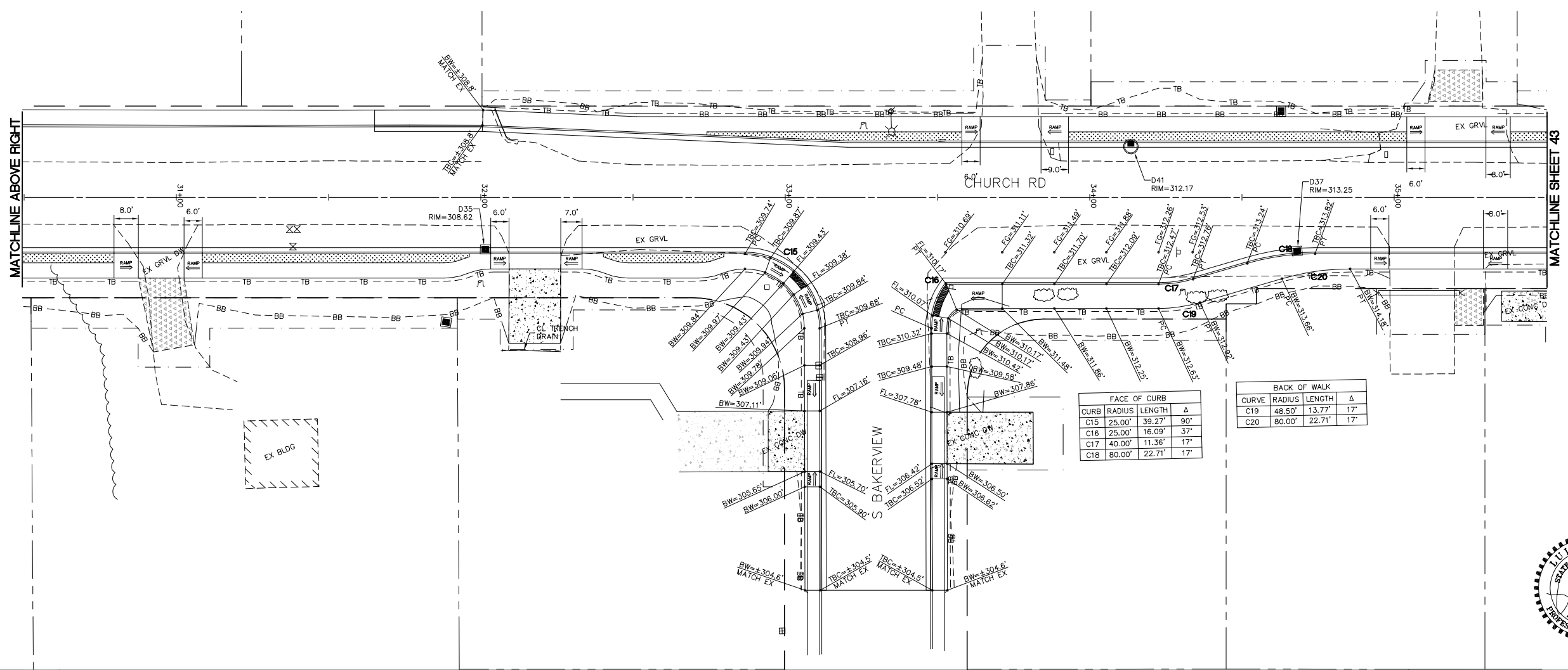
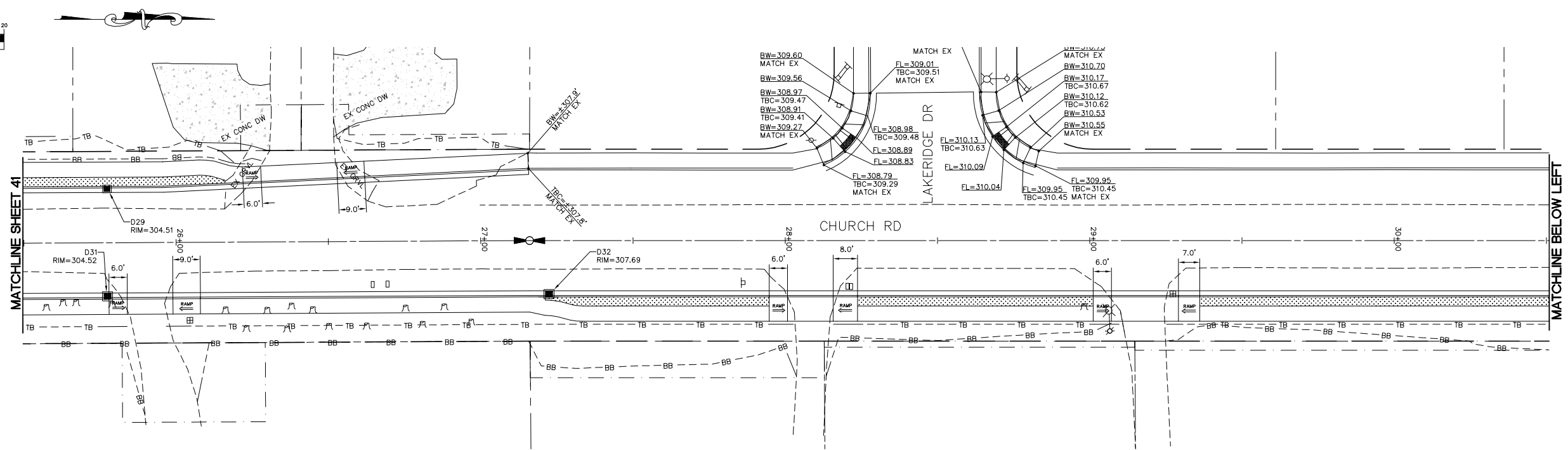


3/6/14

GRAPHIC SCALE

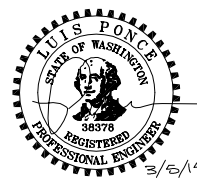


(IN FEET)
1 inch = 20 ft.



FACE OF CURB			
CURB	RADIUS	LENGTH	Δ
C15	25.00'	39.27'	90°
C16	25.00'	16.09'	37°
C17	40.00'	11.36'	17°
C18	80.00'	22.71'	17°

BACK OF WALK			
CURVE	RADIUS	LENGTH	Δ
C19	48.50'	13.77'	17°
C20	80.00'	22.71'	17°



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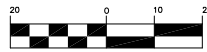
CHURCH ROAD
STREET IMPROVEMENTS
GRADING PLAN

JOB# / DWG
07037 GRADE
SCALE
1" = 20' v: N/A

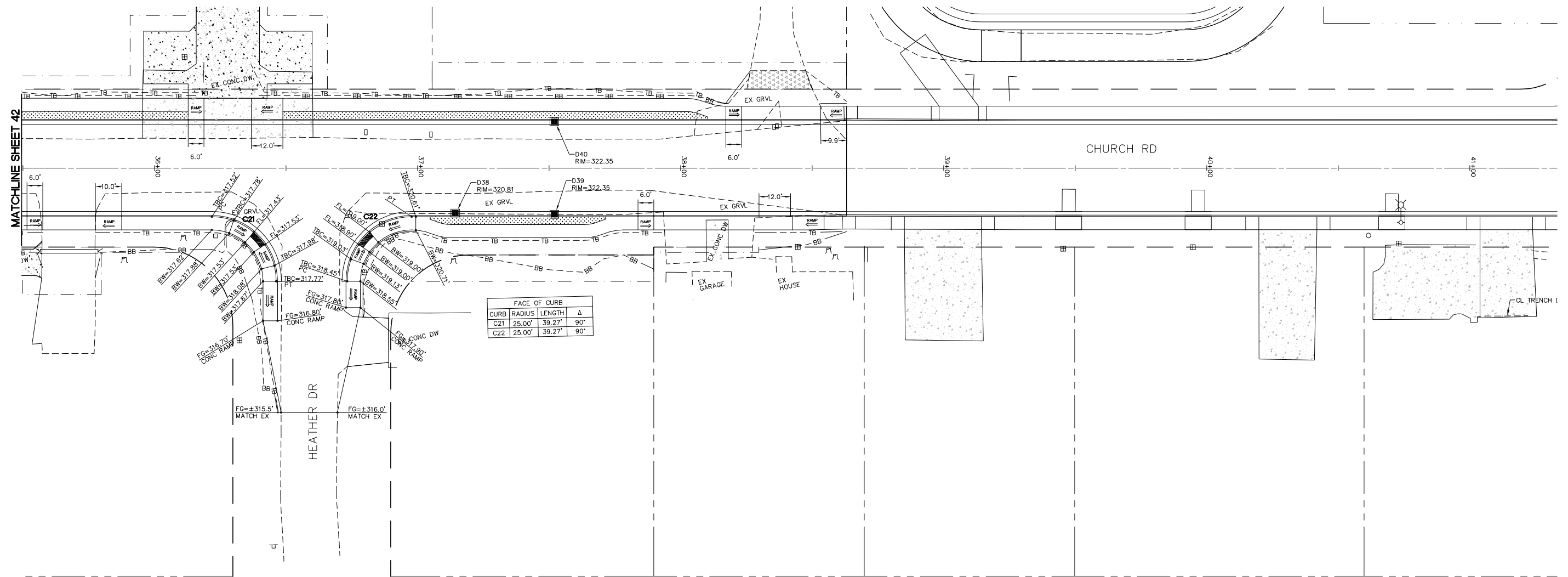
DATE
3-5-14
SHEET
42 of 63

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GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



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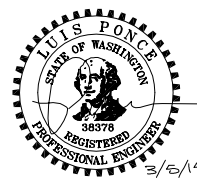
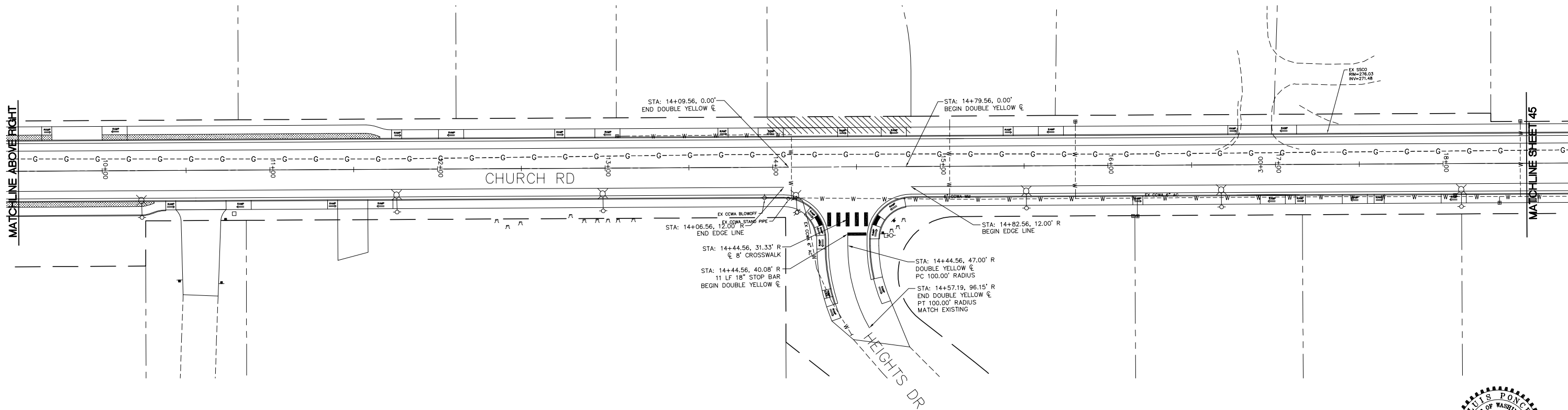
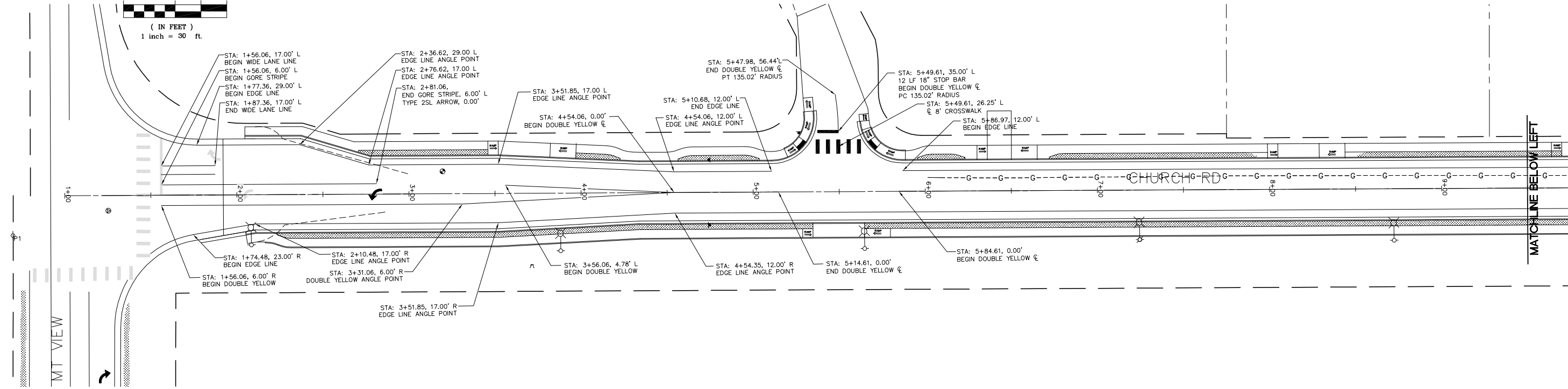
CHURCH ROAD
STREET IMPROVEMENTS
GRADING PLAN

JOB# / DWG	GRADE	DATE
07037	GRADE	3-5-14
SCALE H: 1" = 20' V: N/A		SHEET 43 of 63

P:\Projects\07037\dwg\C3D\Plan Sheets\07037 CHAN.dwg, CHAN (1), 3/6/2014 12:59:20 PM

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.



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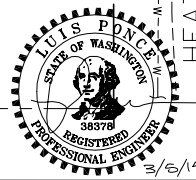
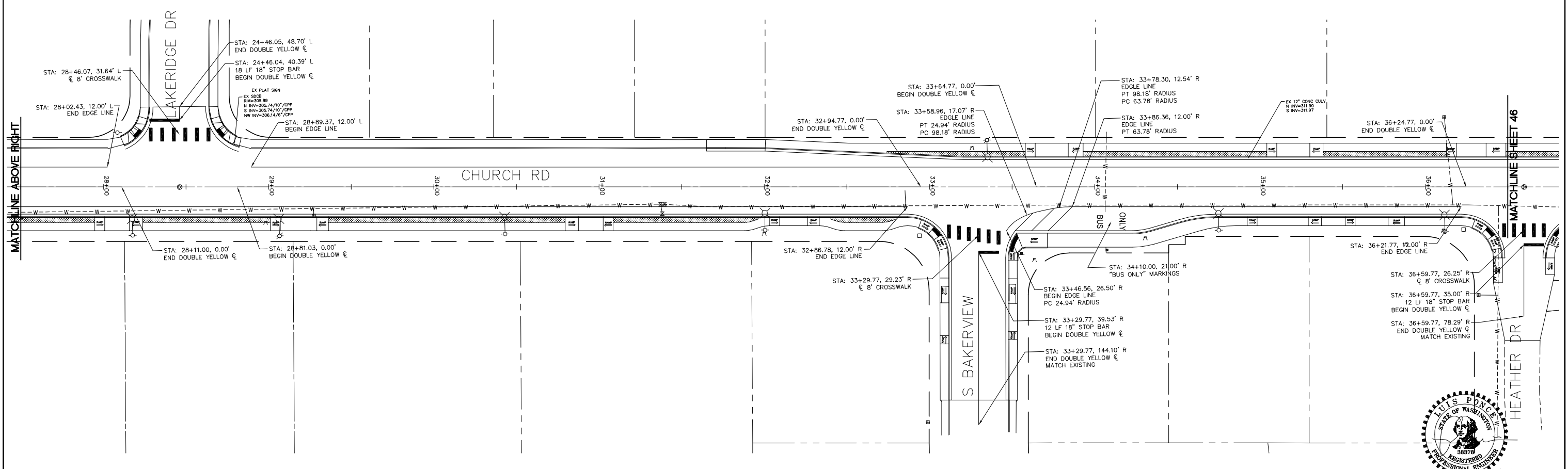
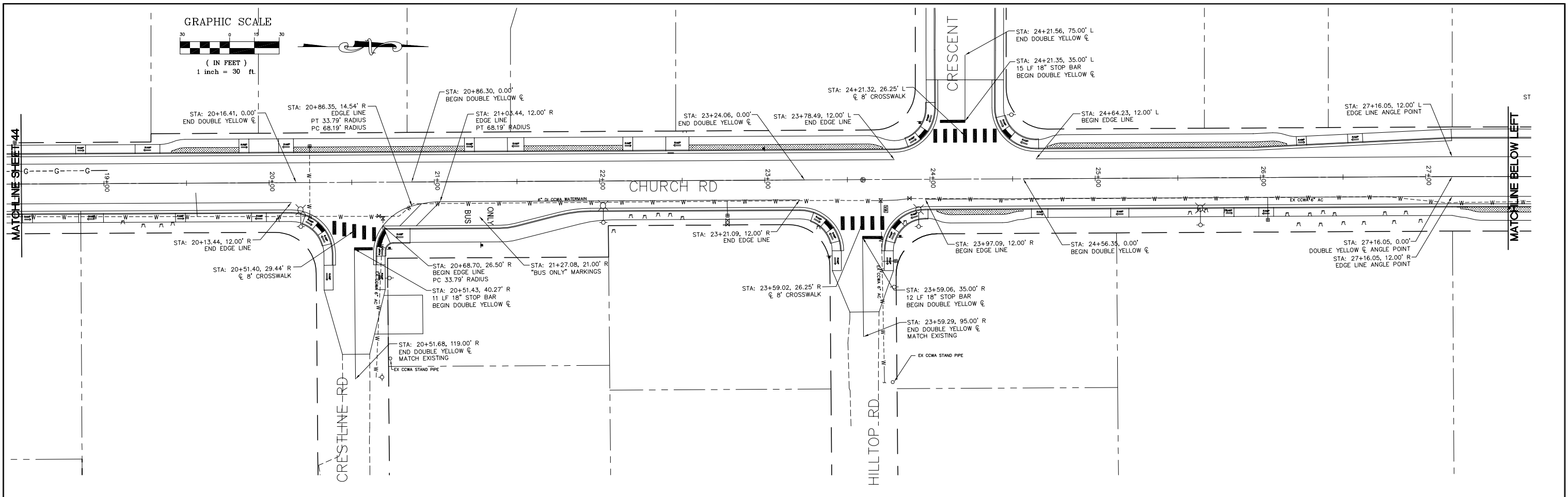
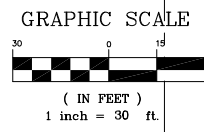
NO.	DATE	REVISION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CHANNELIZATION PLAN

JOB# / DWG
07037 CHAN
SCALE
H: 1" = 30' v: N/A

DATE
3-5-14
SHEET
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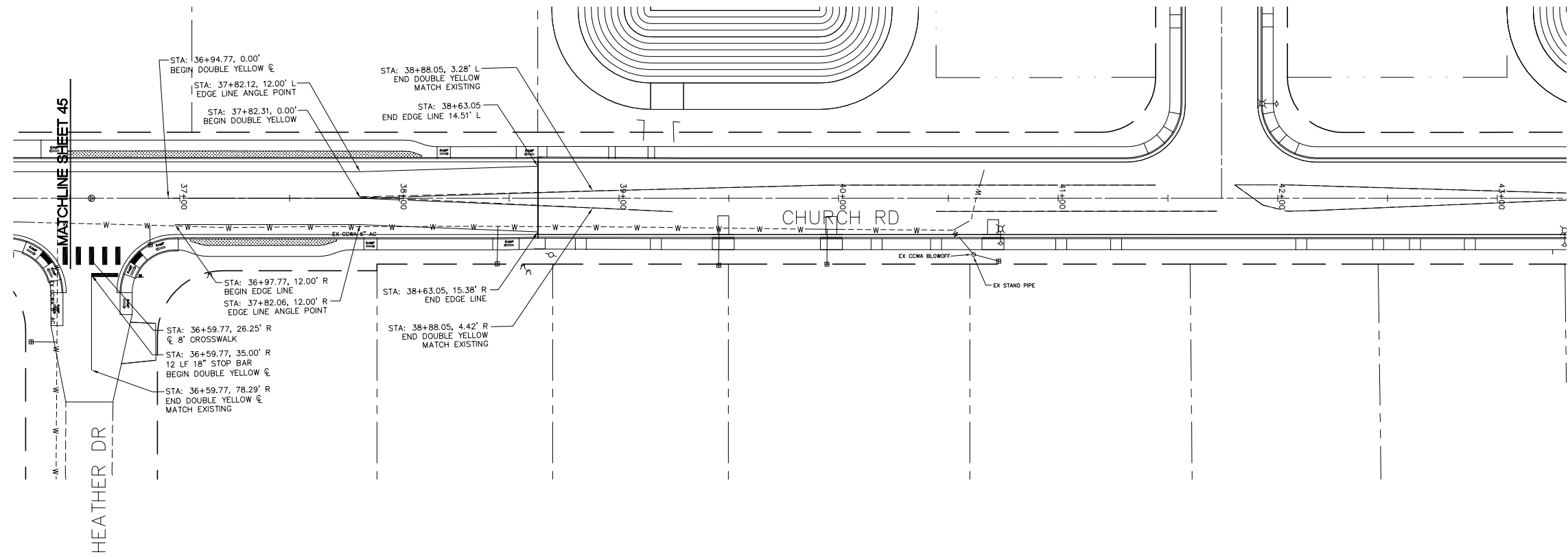
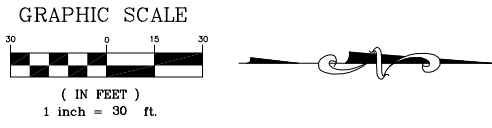
NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CHANNELIZATION PLAN

JOB# / DWG 07037 CHAN	DATE 3-5-14
SCALE H:1"=30' V:N/A	SHEET 45 of 63

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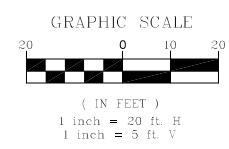
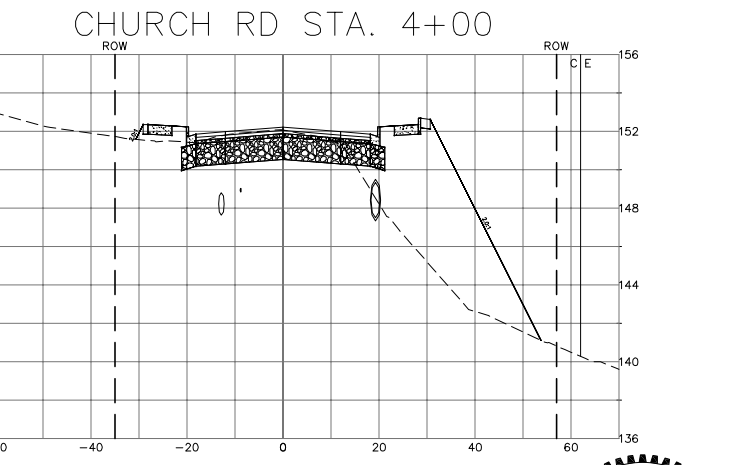
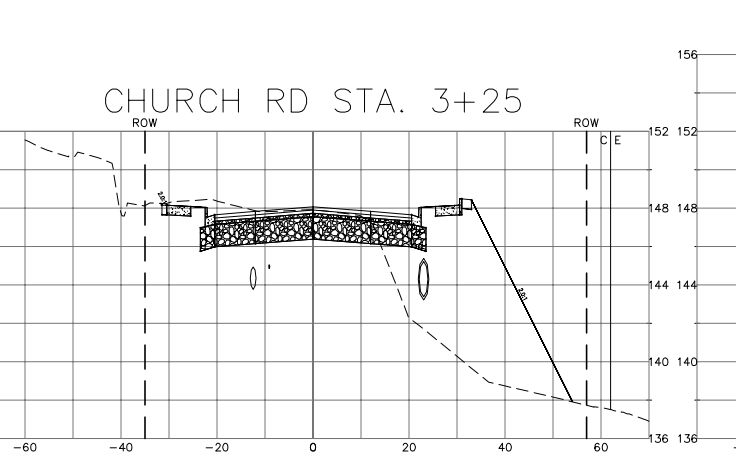
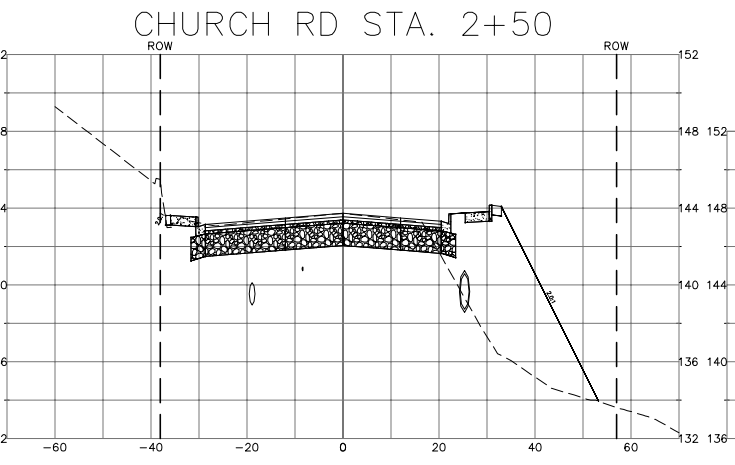
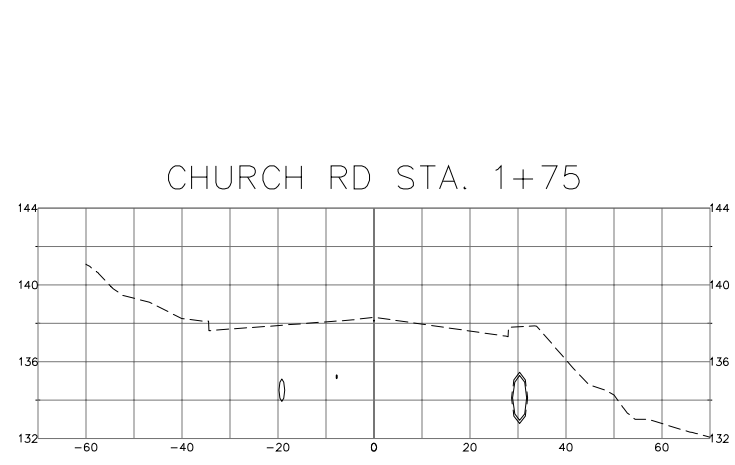
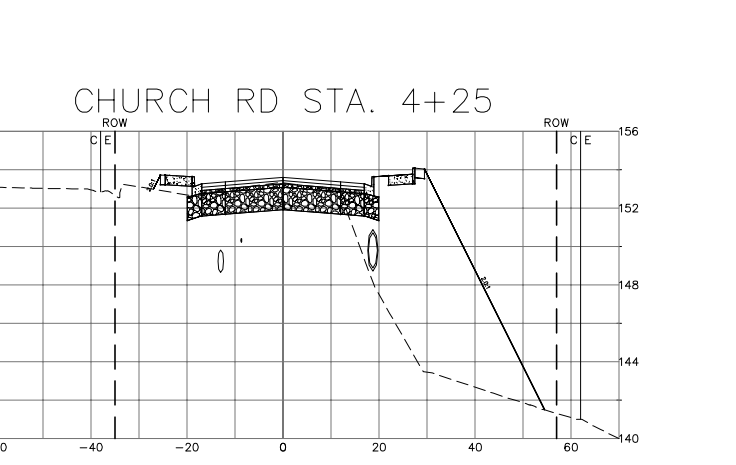
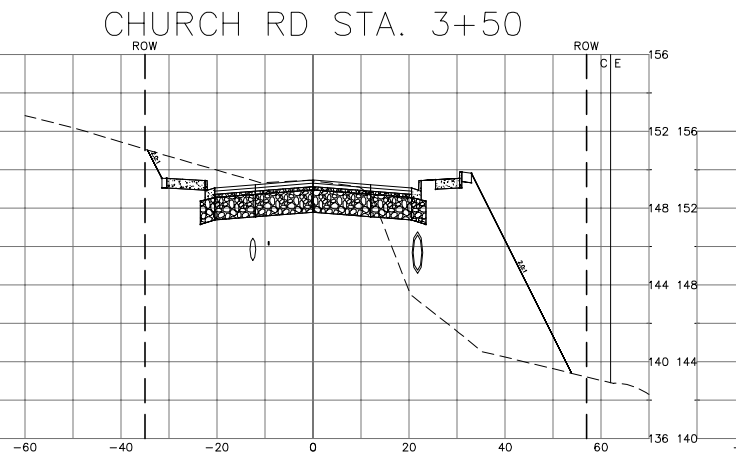
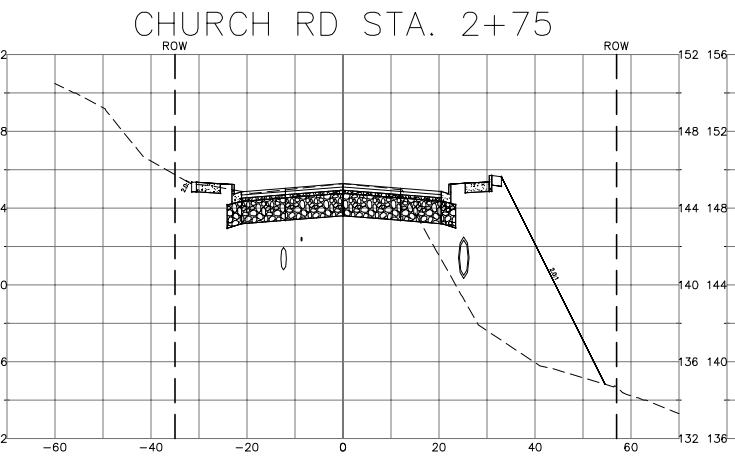
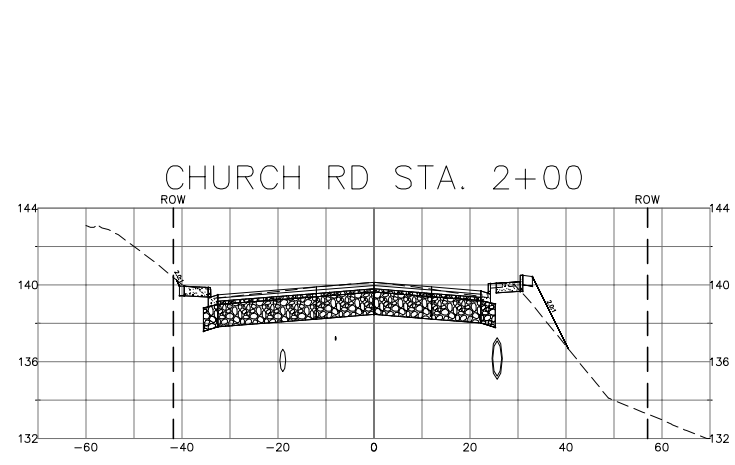
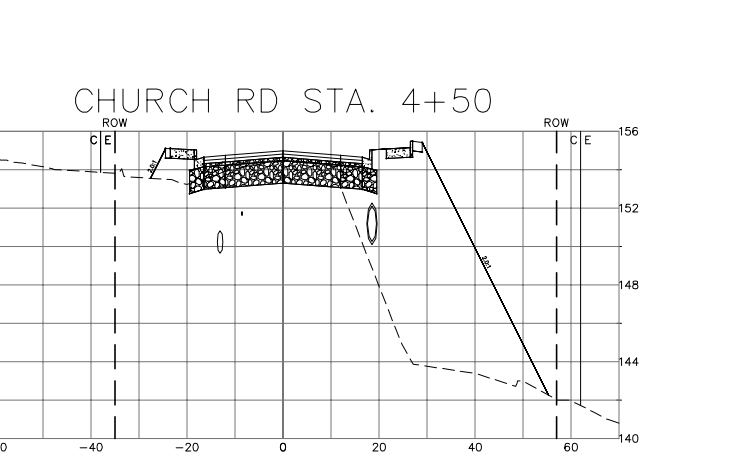
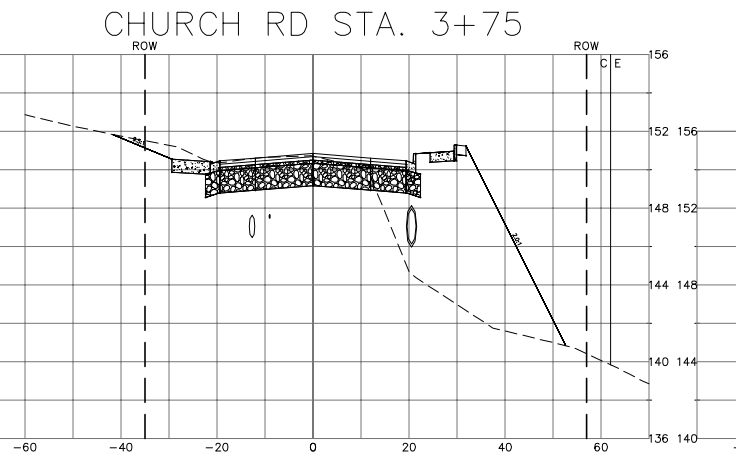
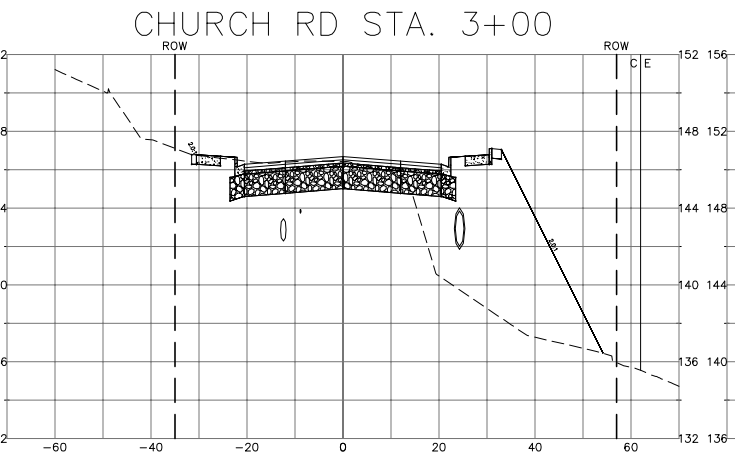
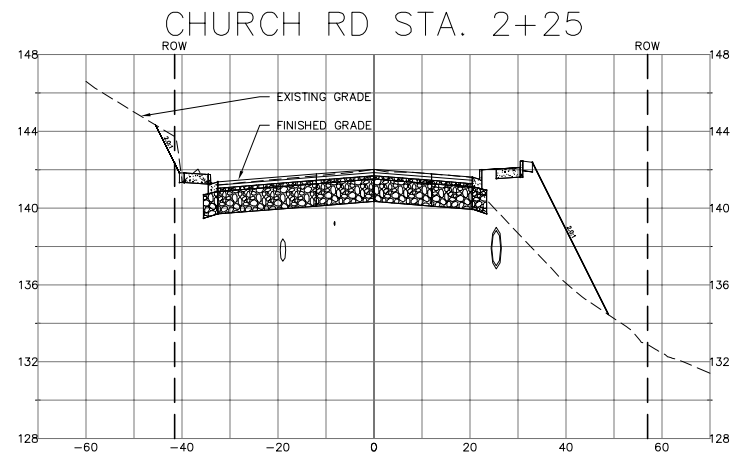
NO.	DATE	REVISION	BY

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2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CHANNELIZATION PLAN

JOB# / DWG 07037	CHAN	DATE 3-5-14
SCALE H: 1" = 30'	V: N/A	SHEET 46 of 63

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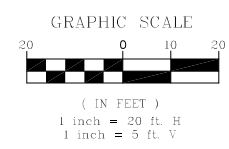
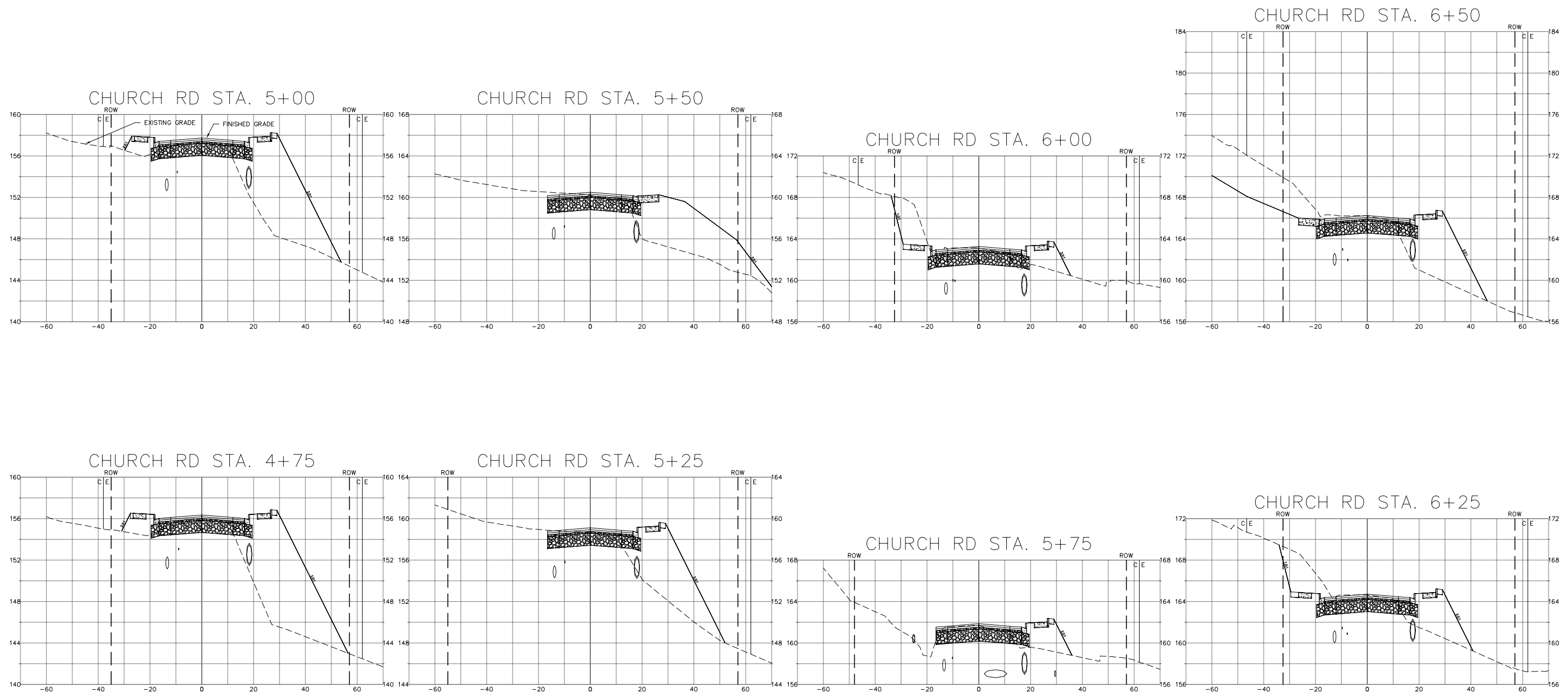
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

JOB# / DWG
07037 ALIGN_PROFILE
SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
SHEET
47 of 63

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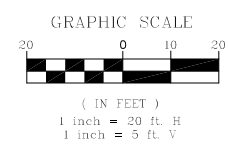
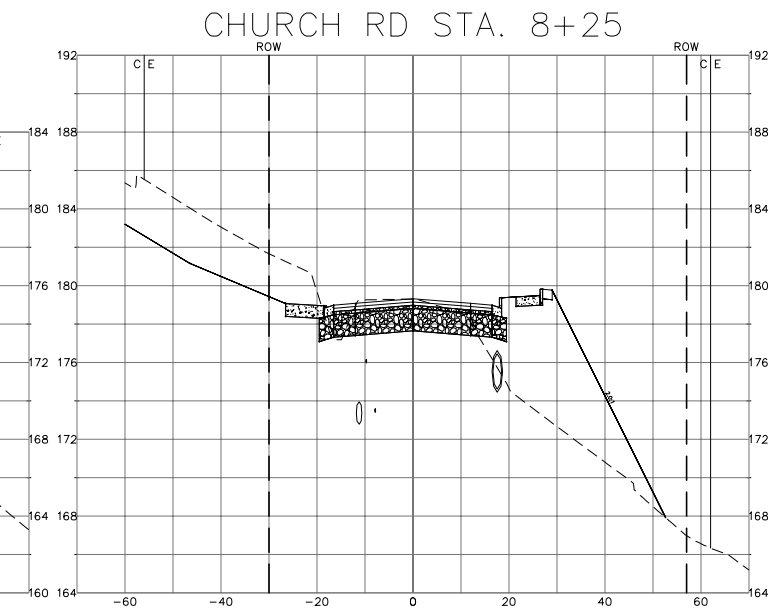
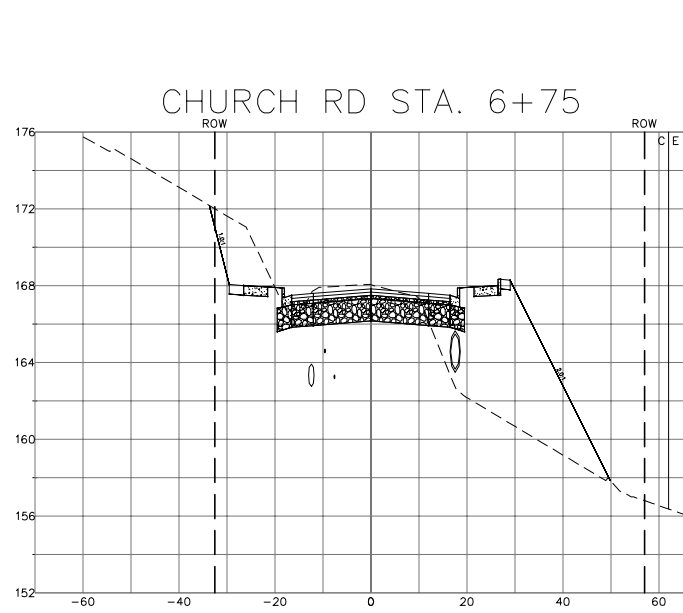
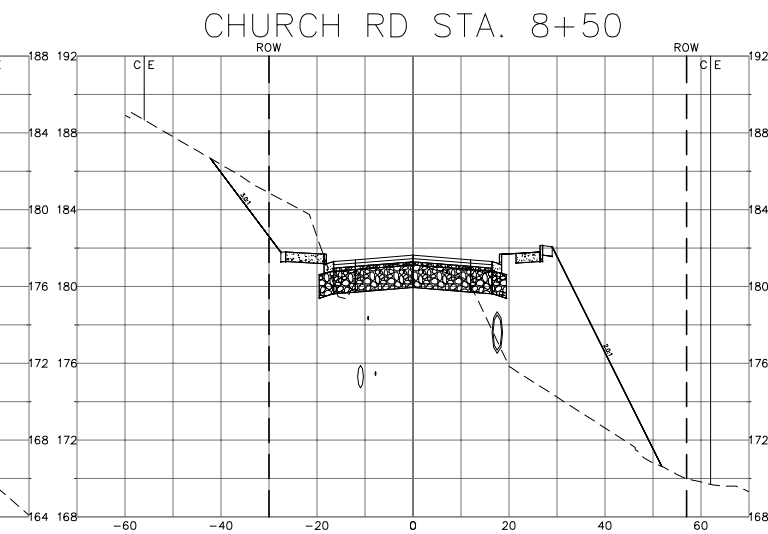
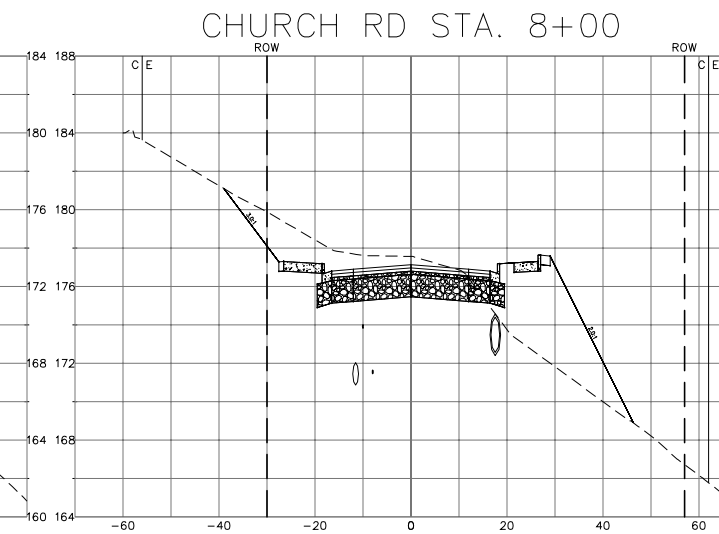
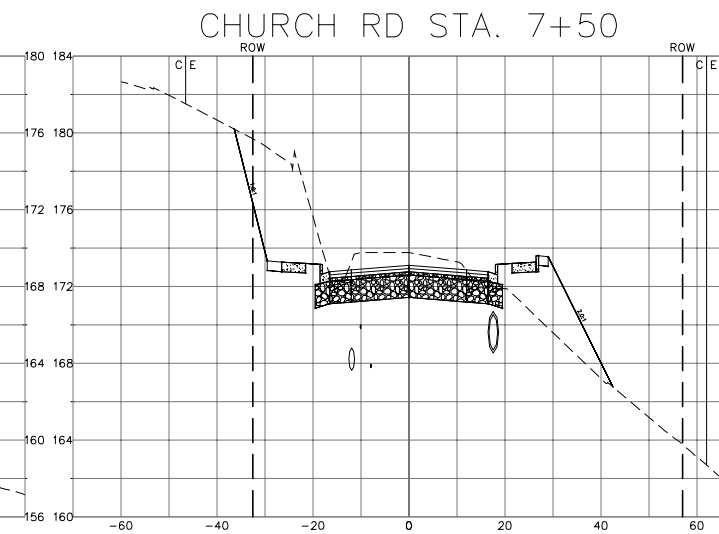
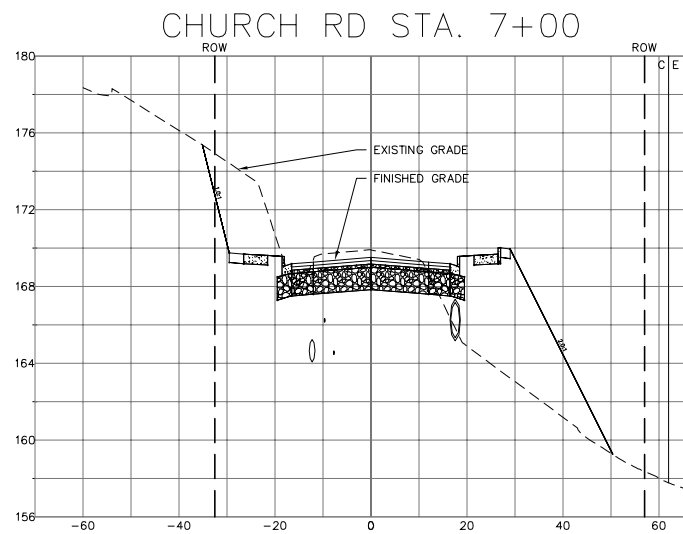
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 FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

JOB# / DWG
07037 ALIGN_PROFILE
 SCALE
H:1"=20' V:1"=5'

DATE
3-5-14
 SHEET
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NO.	DATE	REVISION	BY

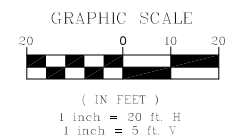
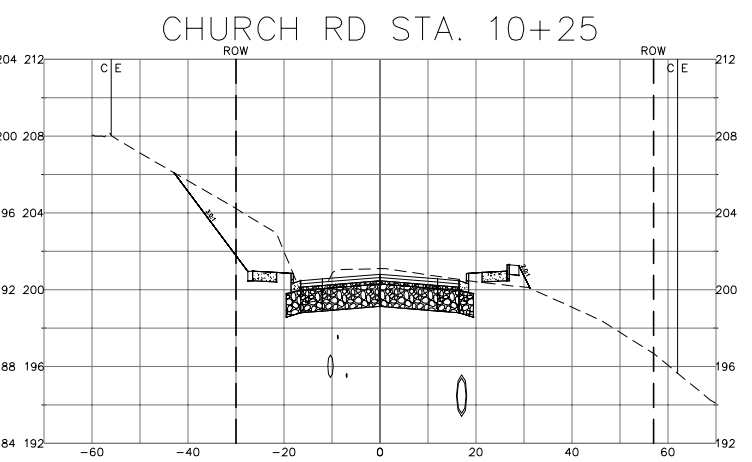
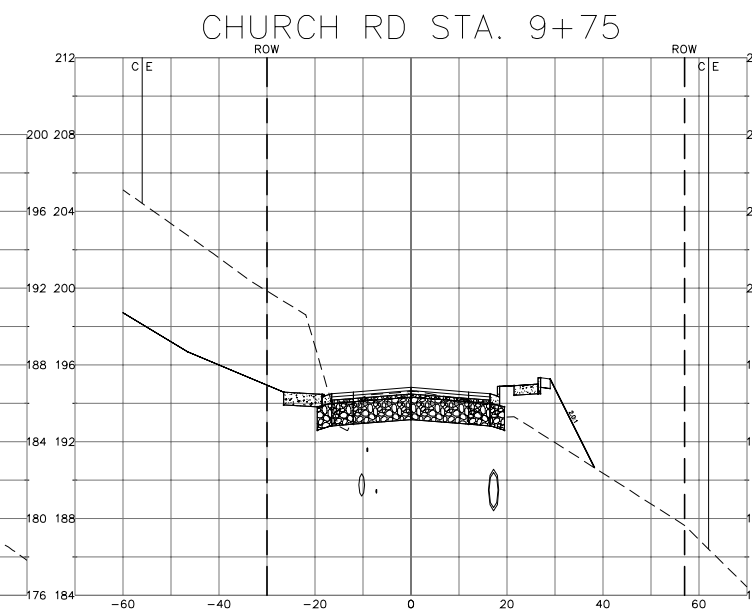
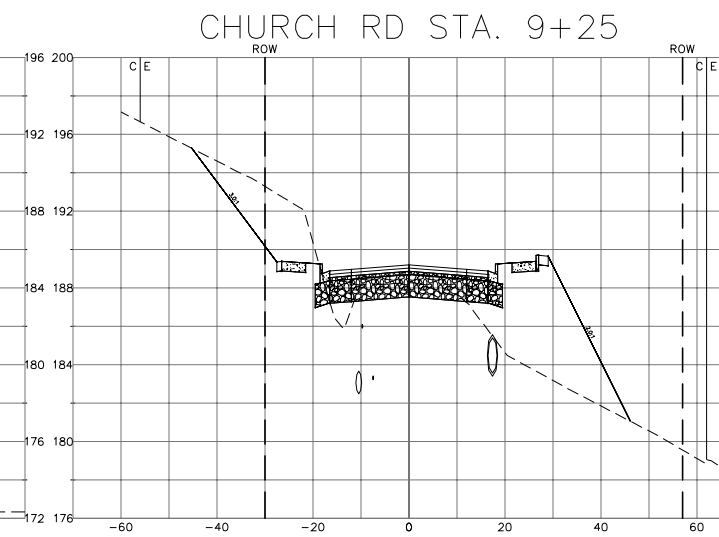
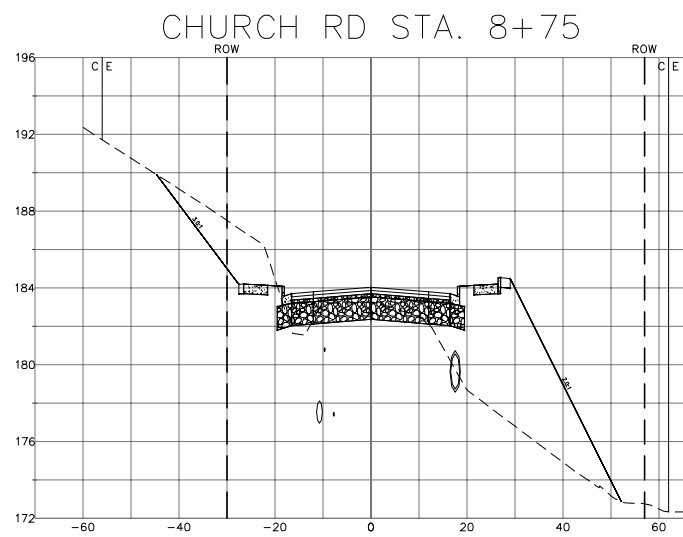
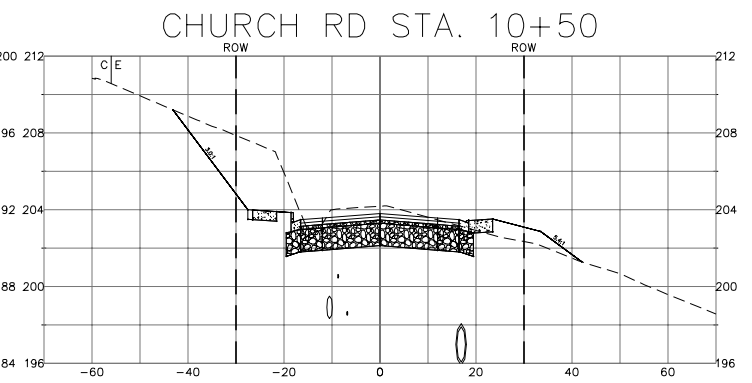
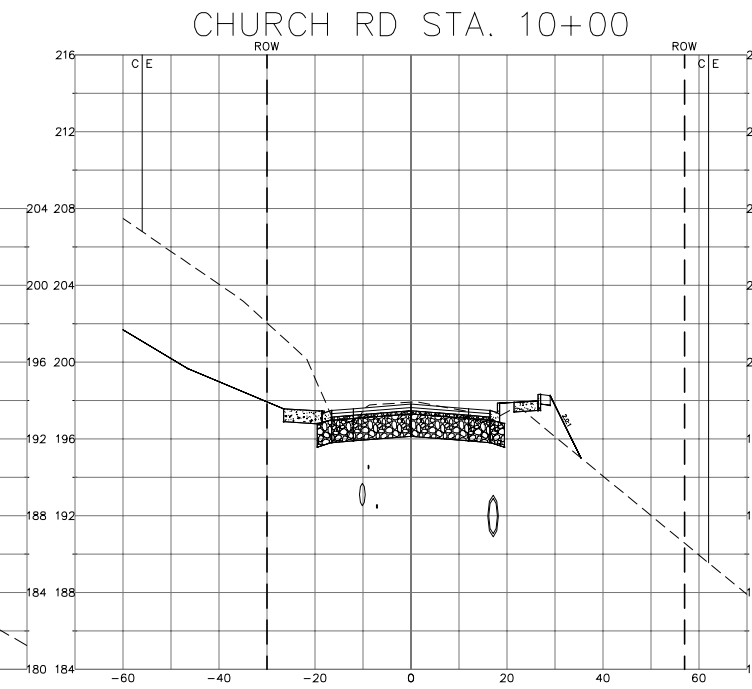
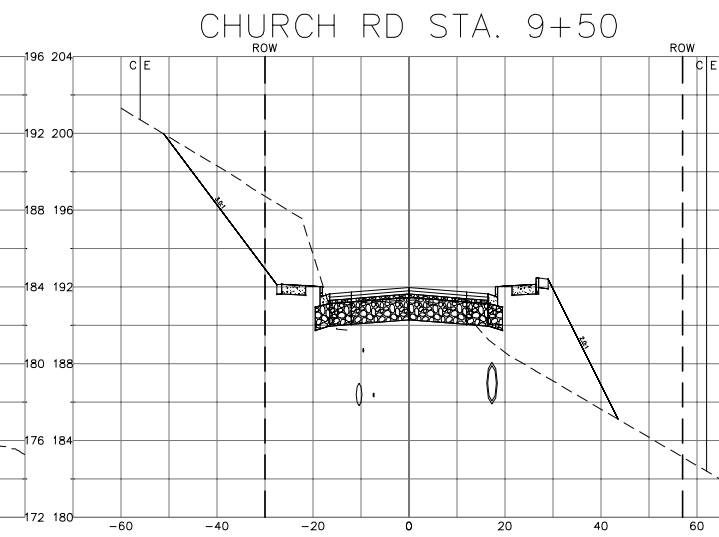
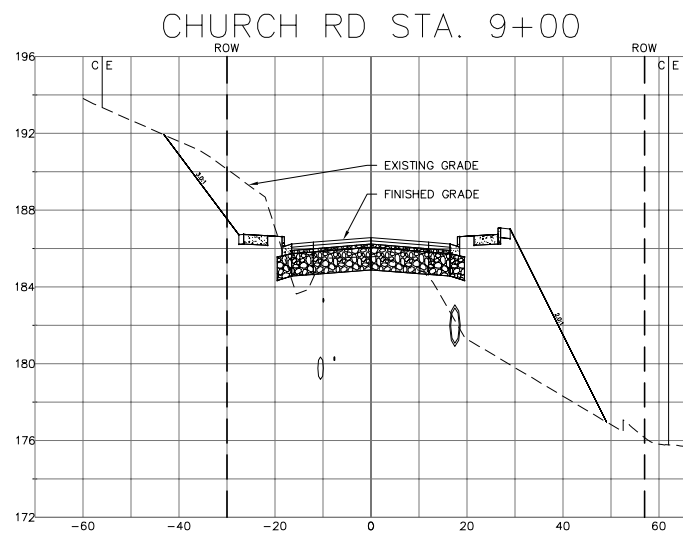
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

JOB# / DWG
07037 ALIGN_PROFILE
SCALE
H: 1" = 20' V: 1" = 5'

DATE
3-5-14
SHEET
of 63

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NO.	DATE	REVISION	BY

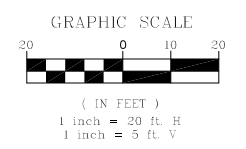
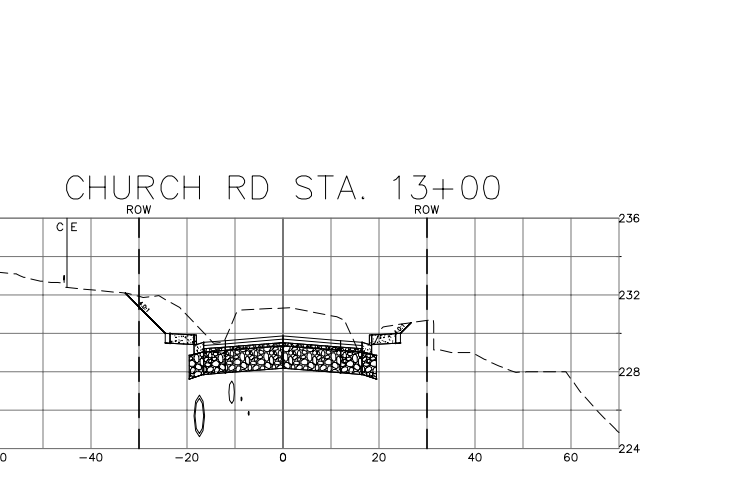
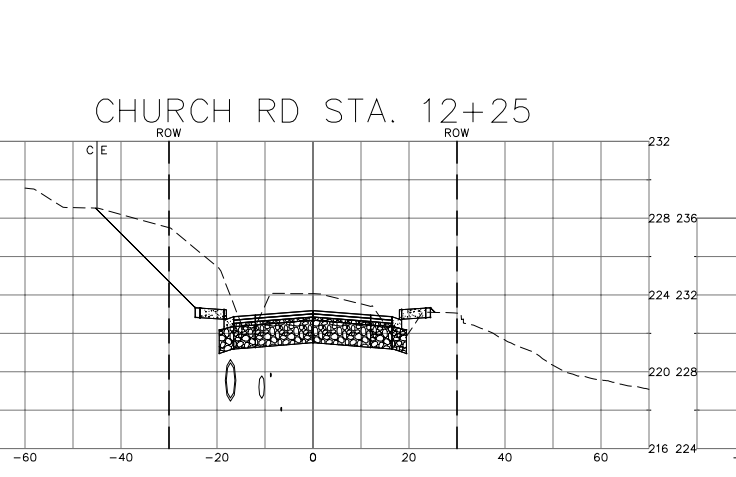
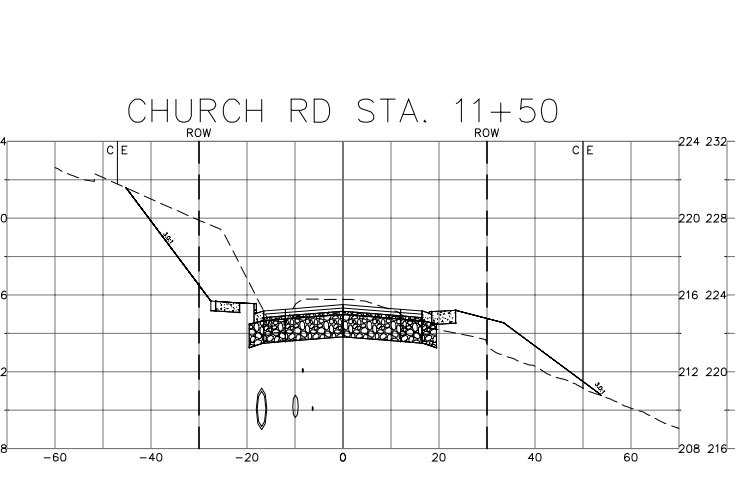
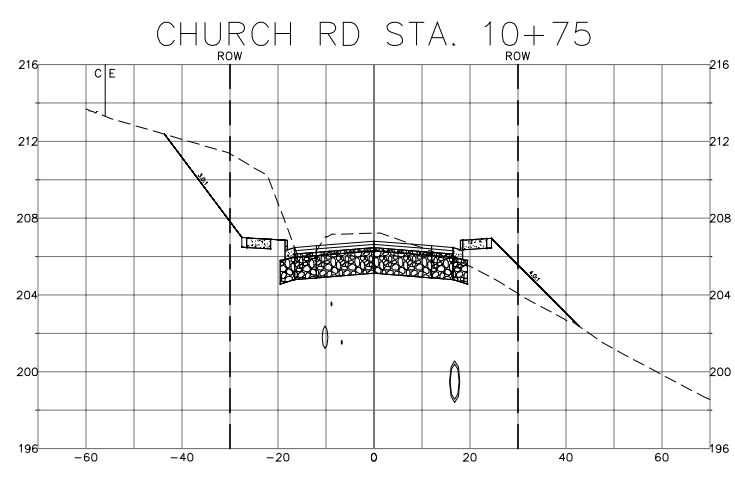
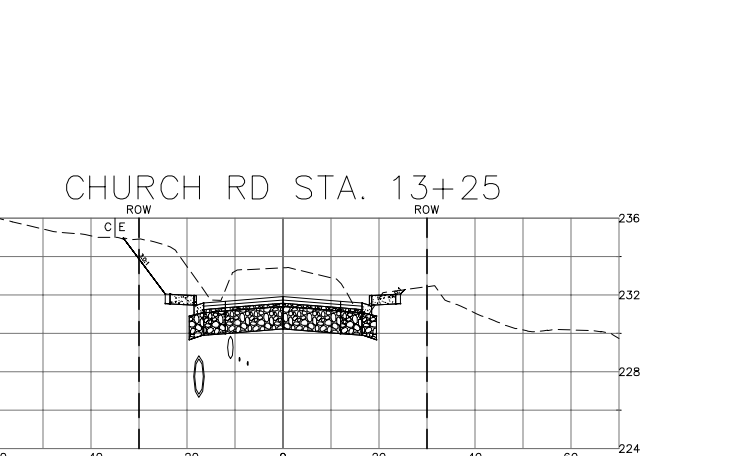
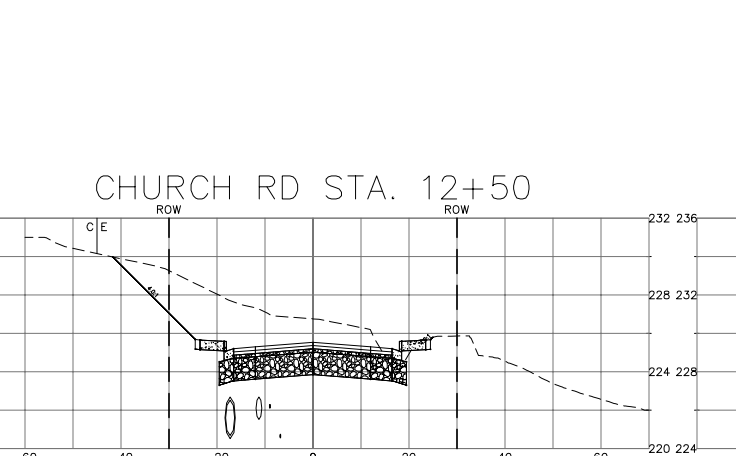
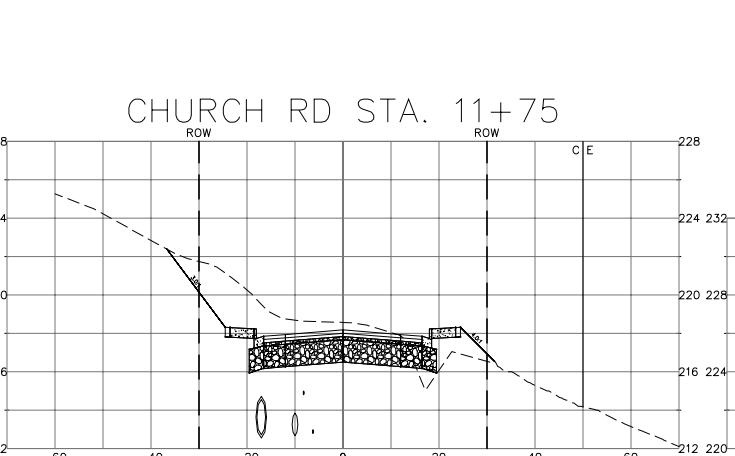
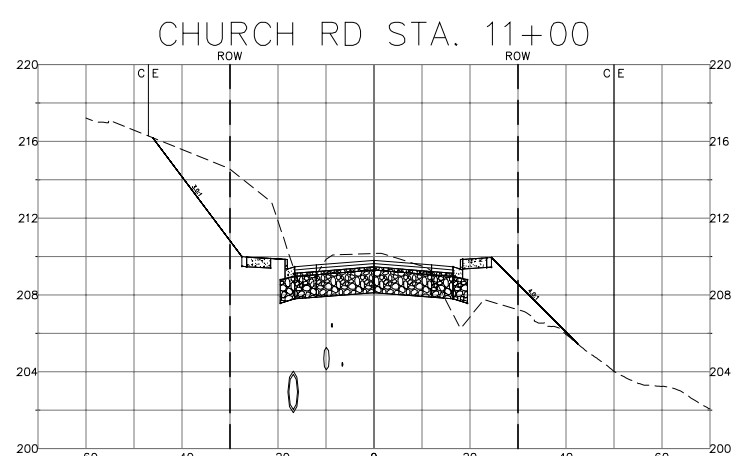
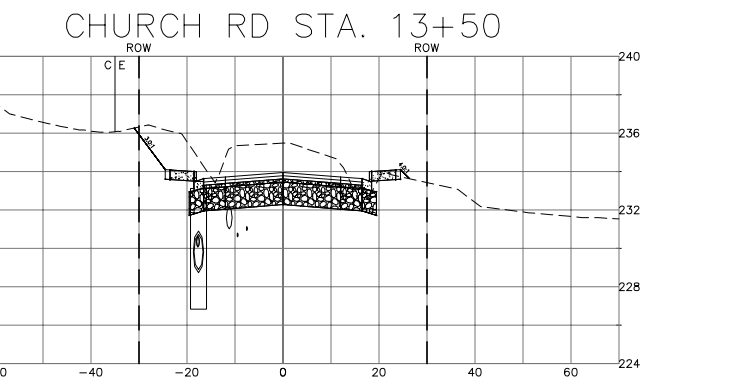
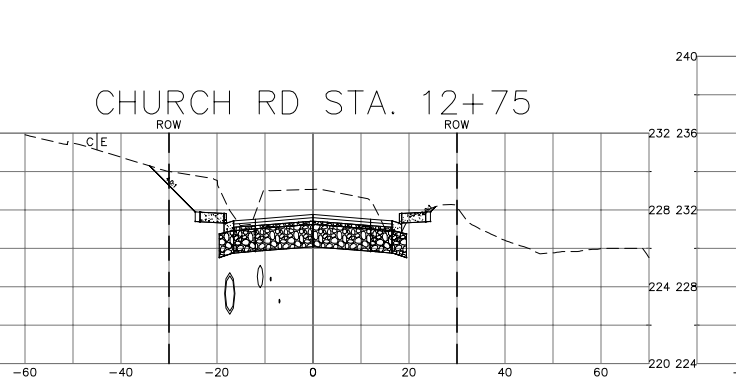
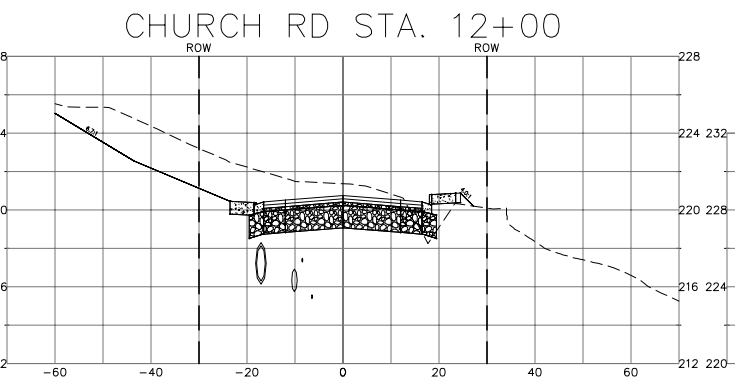
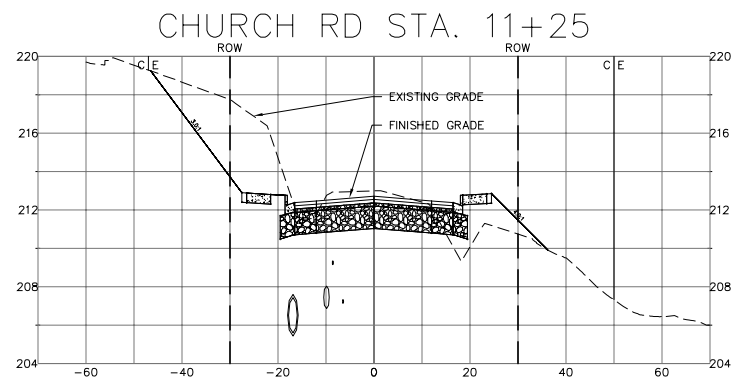
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

JOB# / DWG
07037 ALIGN_PROFILE
SCALE
H: 1"=20' V: 1"=5'

DATE
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SHEET
50 of 63

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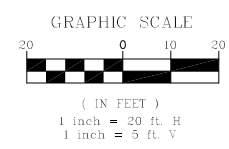
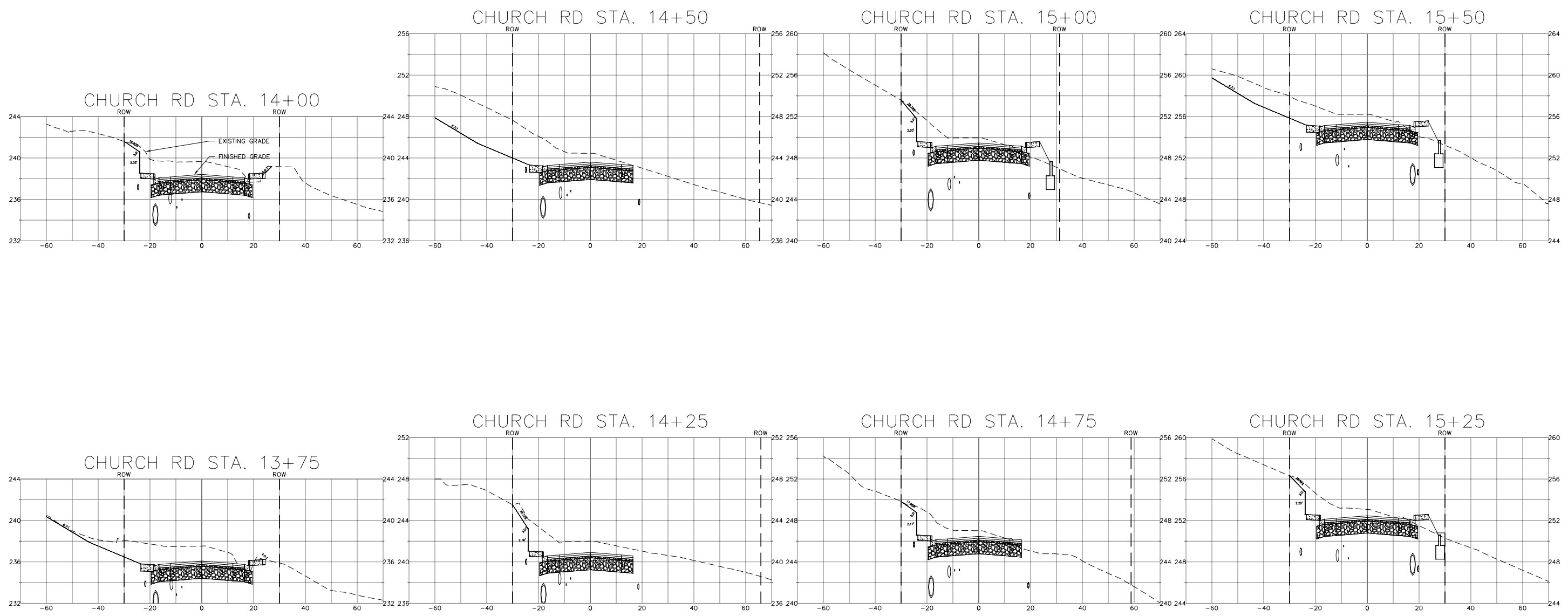
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CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

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DATE 3-5-14
SHEET 51 of 63

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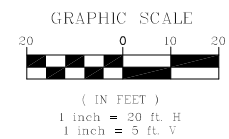
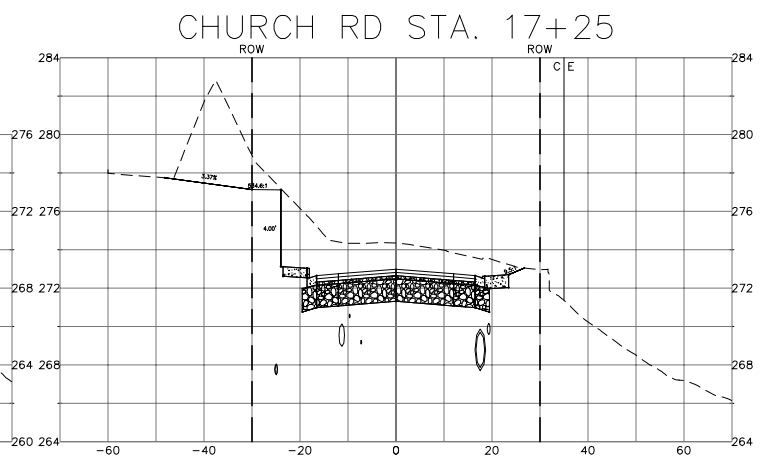
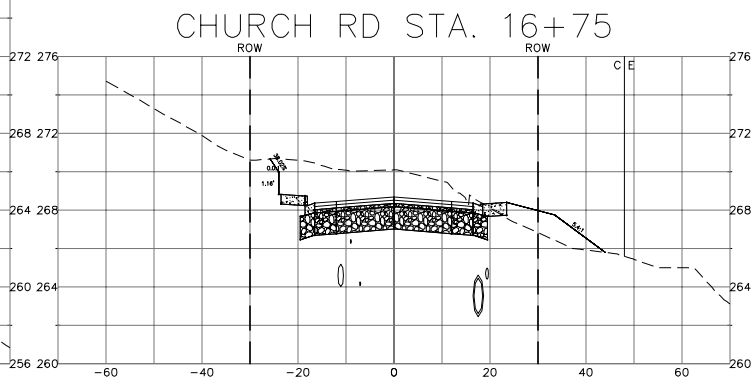
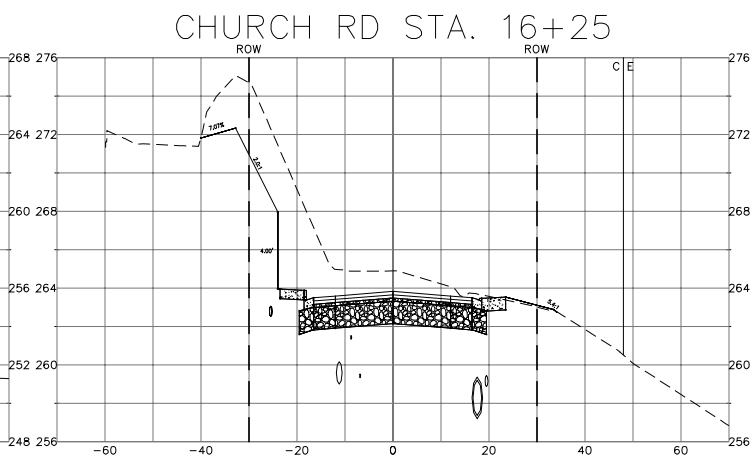
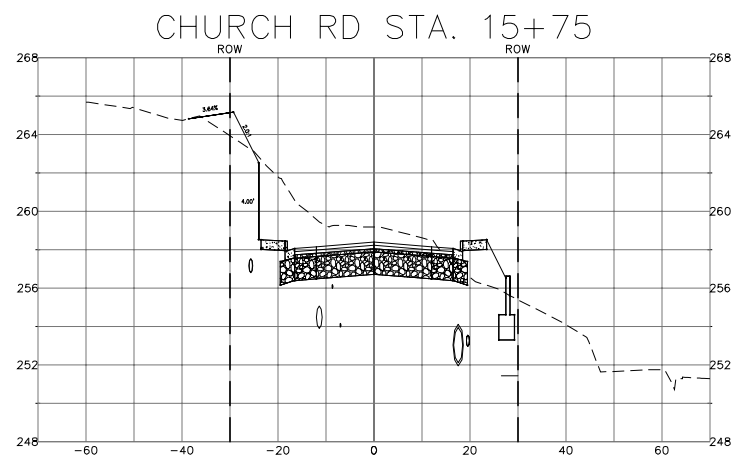
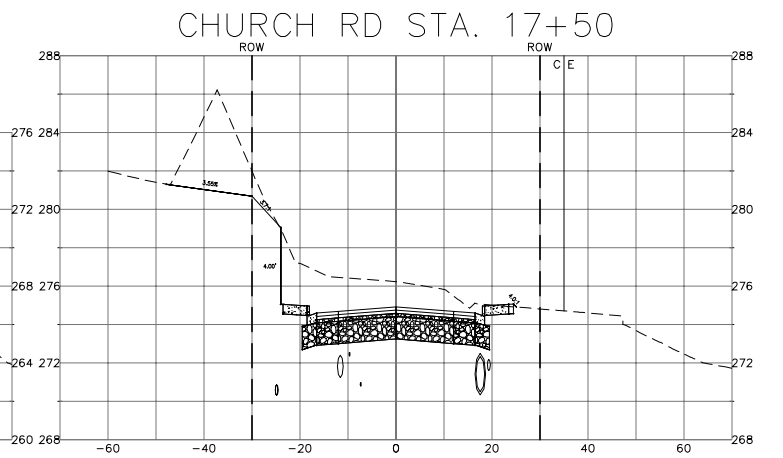
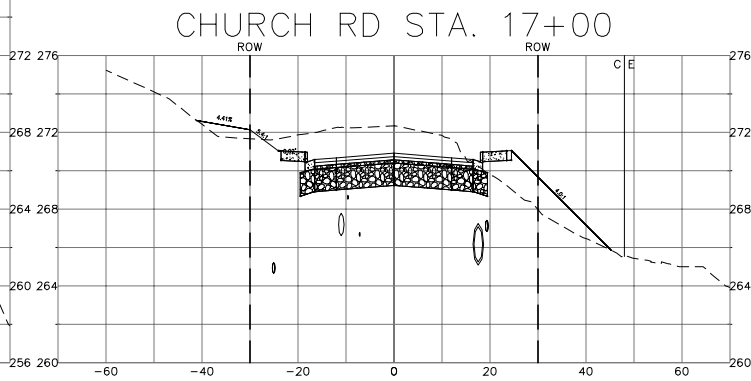
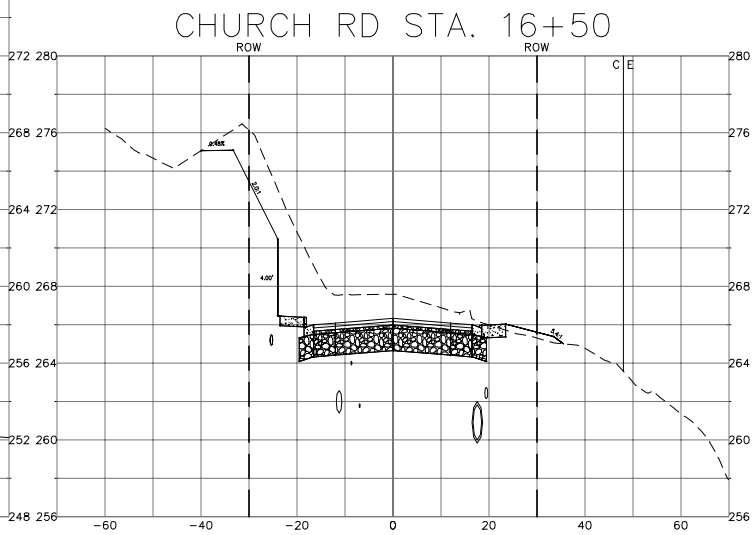
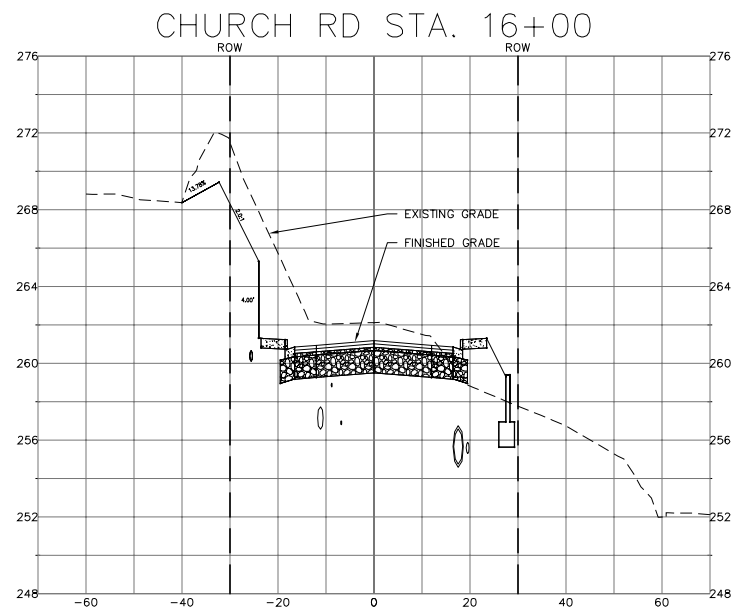
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CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

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H: 1"=20' V: 1"=5'

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SHEET
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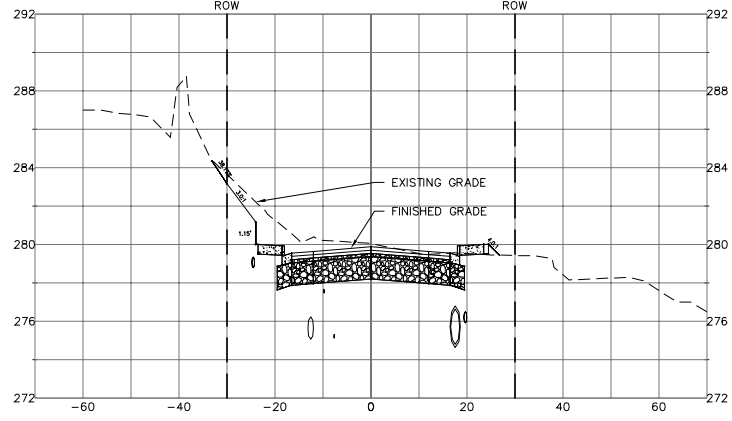
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FERDALE, WA 98248

CHURCH ROAD
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CROSS SECTIONS

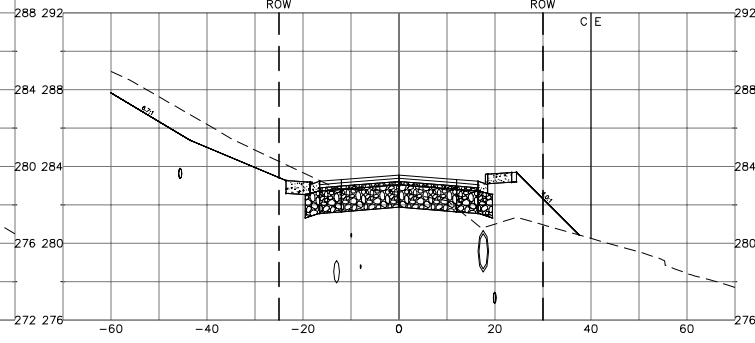
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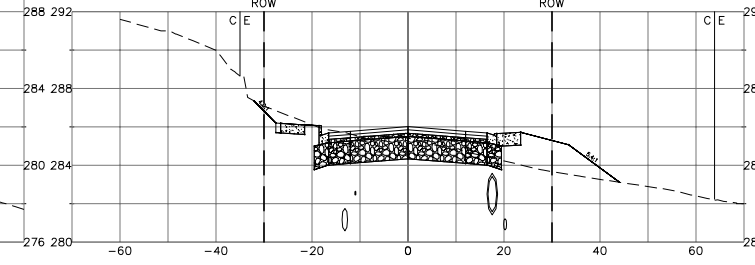
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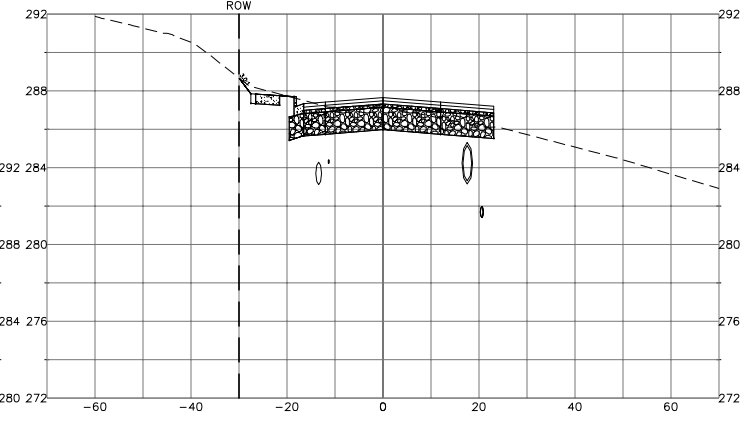
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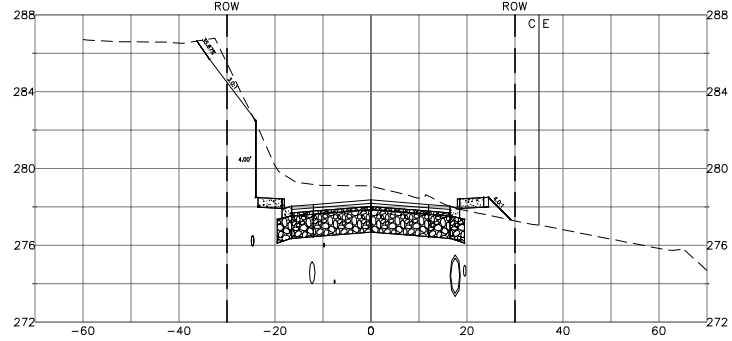
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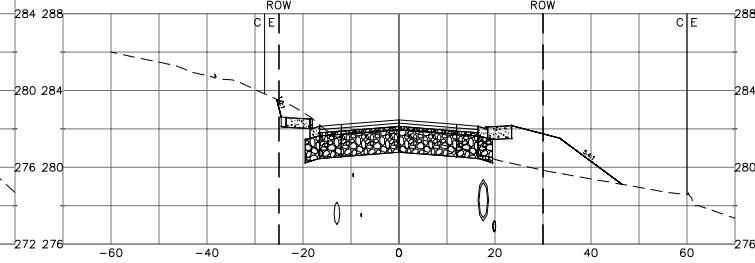
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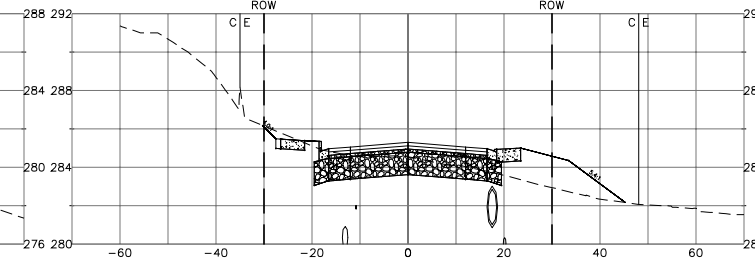
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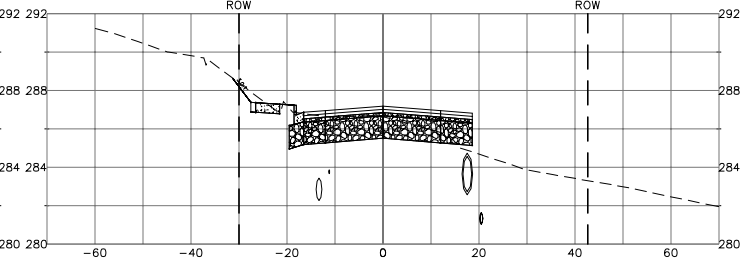
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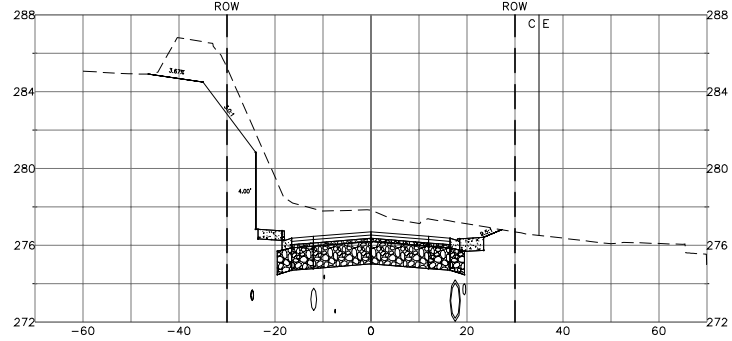
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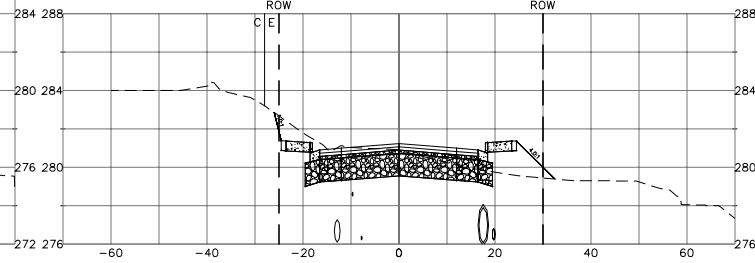
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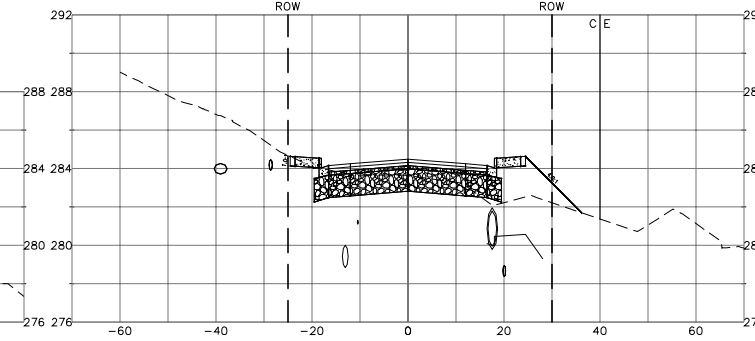
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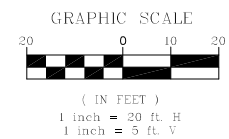
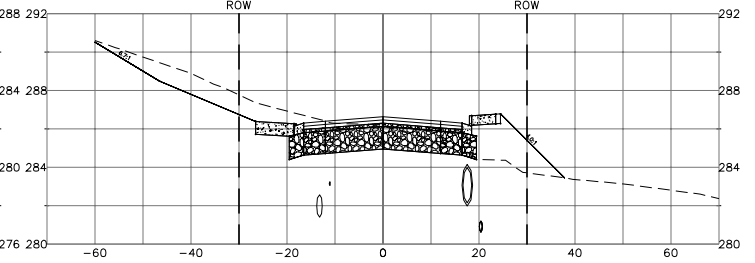
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CHURCH RD STA. 19+25



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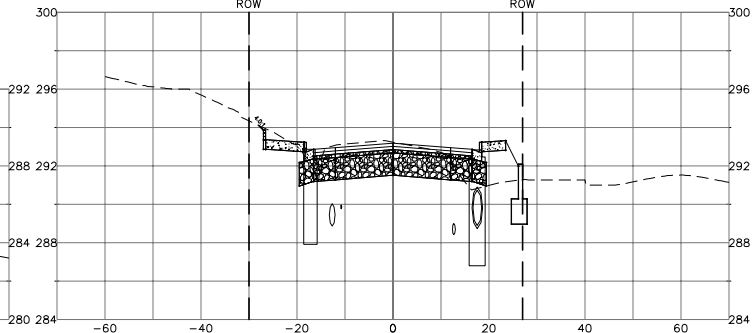
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STREET IMPROVEMENTS
CROSS SECTIONS

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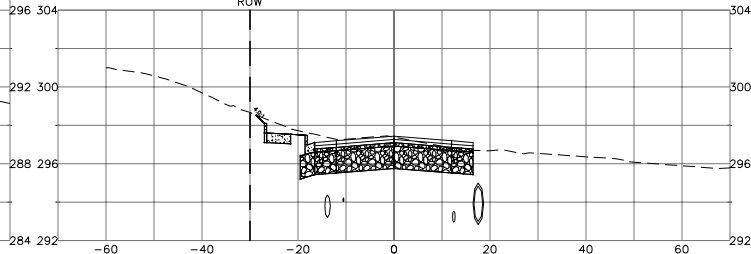
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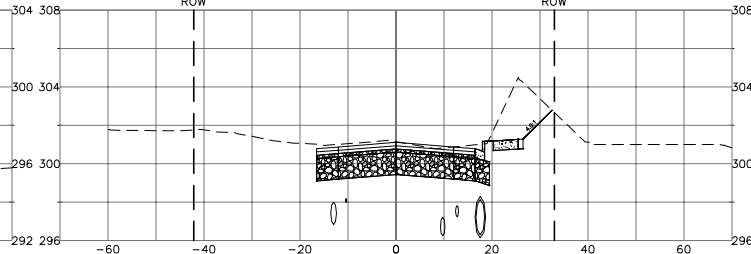
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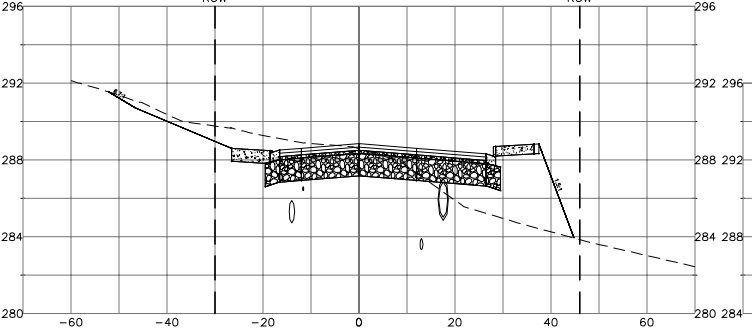
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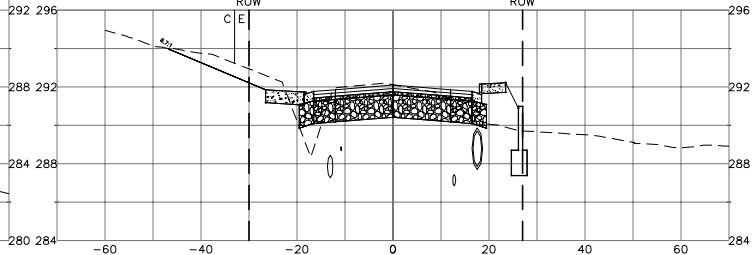
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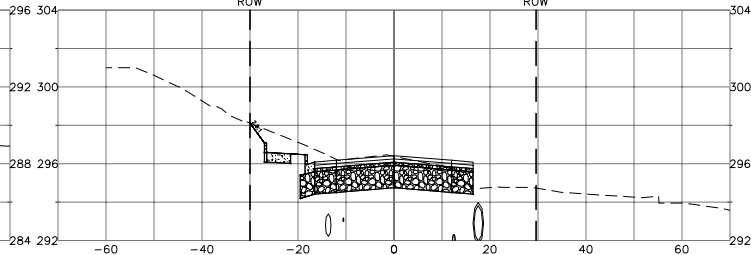
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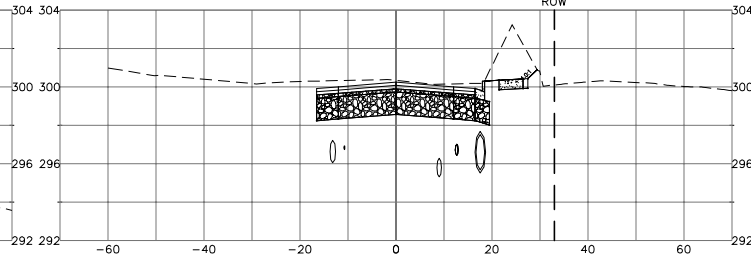
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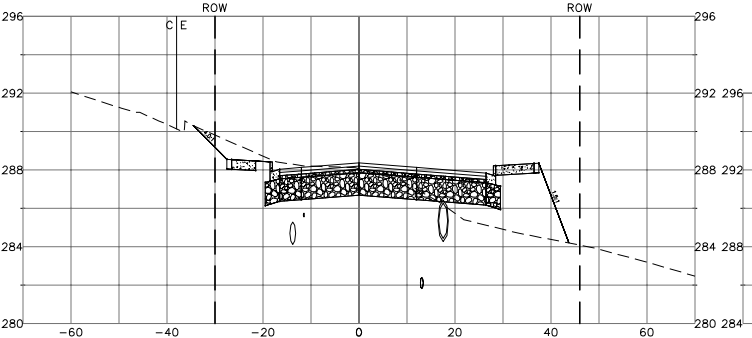
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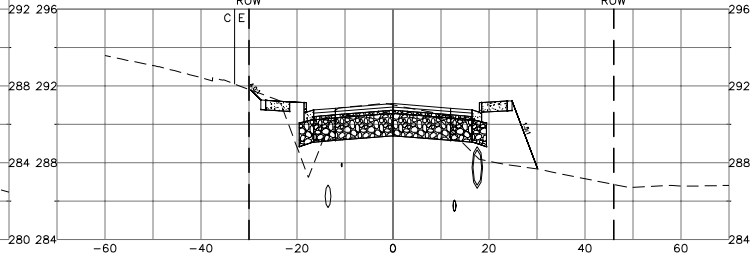
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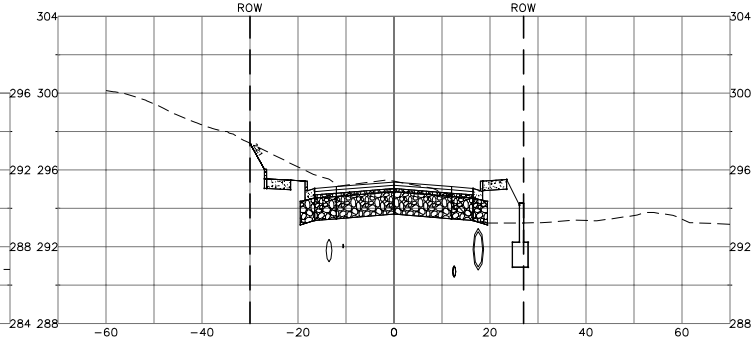
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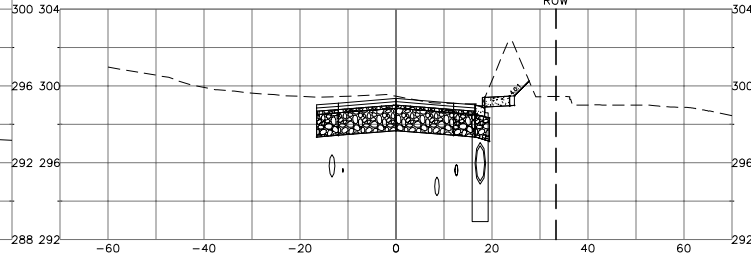
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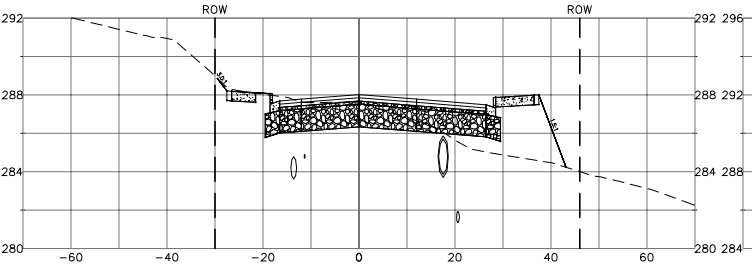
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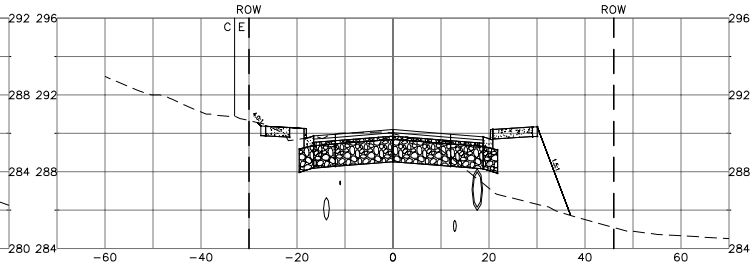
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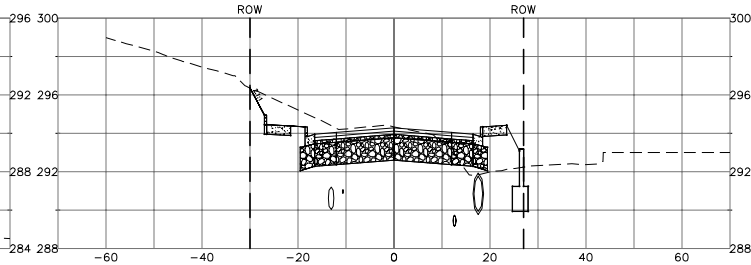
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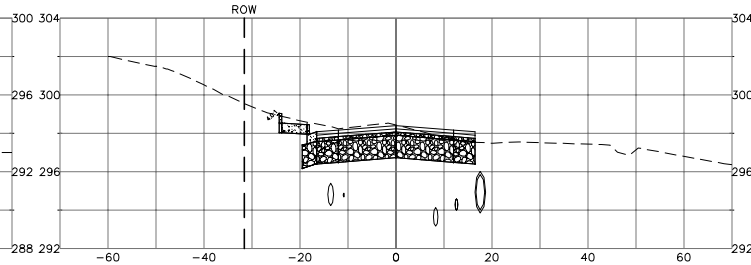
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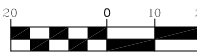
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GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft. H
1 inch = 5 ft. V



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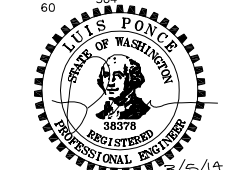
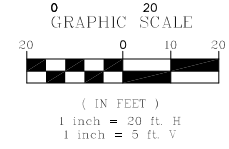
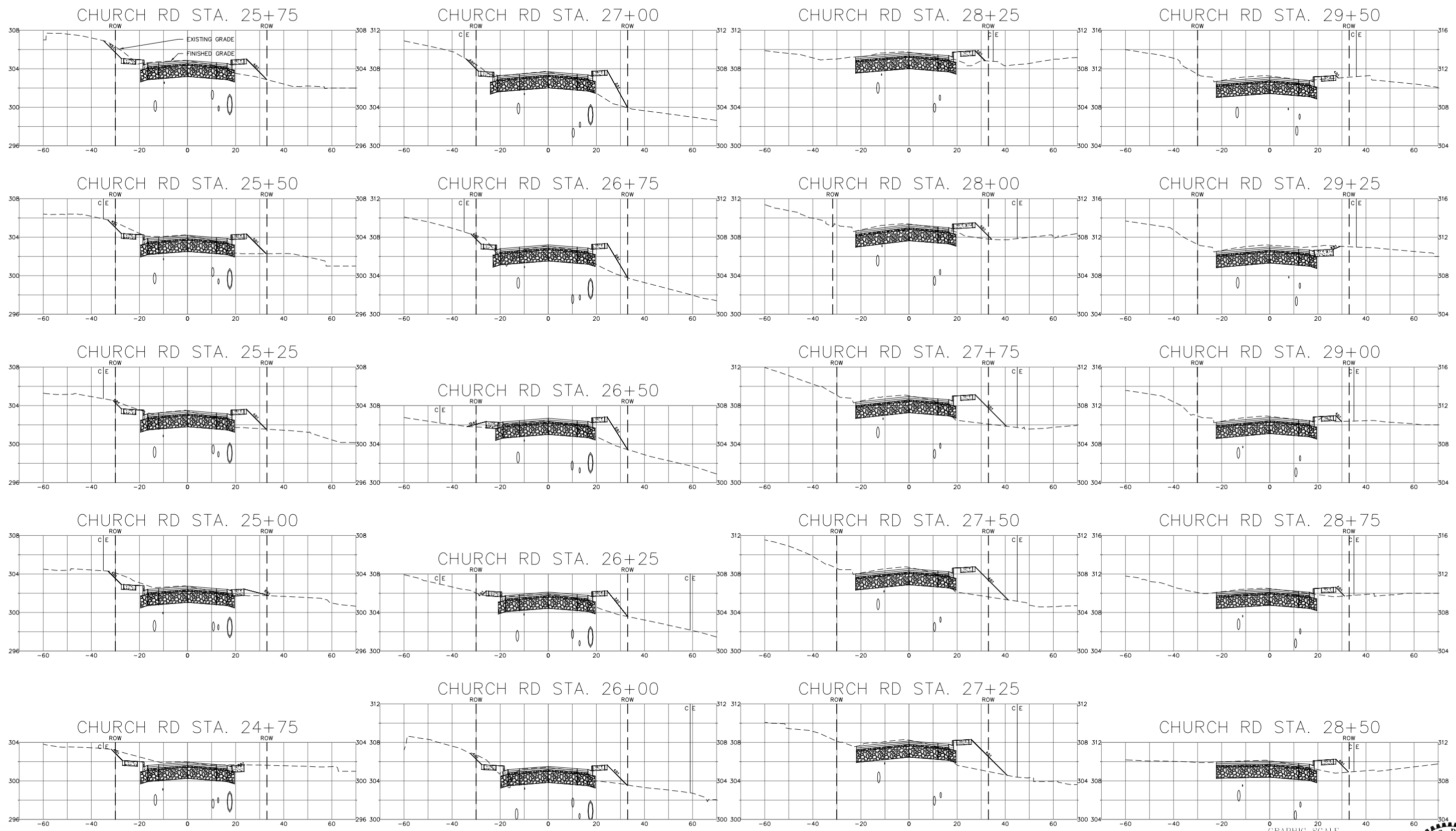
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CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

JOB# / DWG
07037 ALIGN_PROFILE
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H:1"=20' V:1"=5'

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3-5-14
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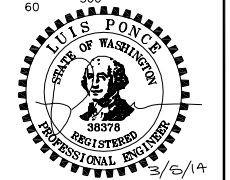
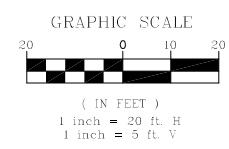
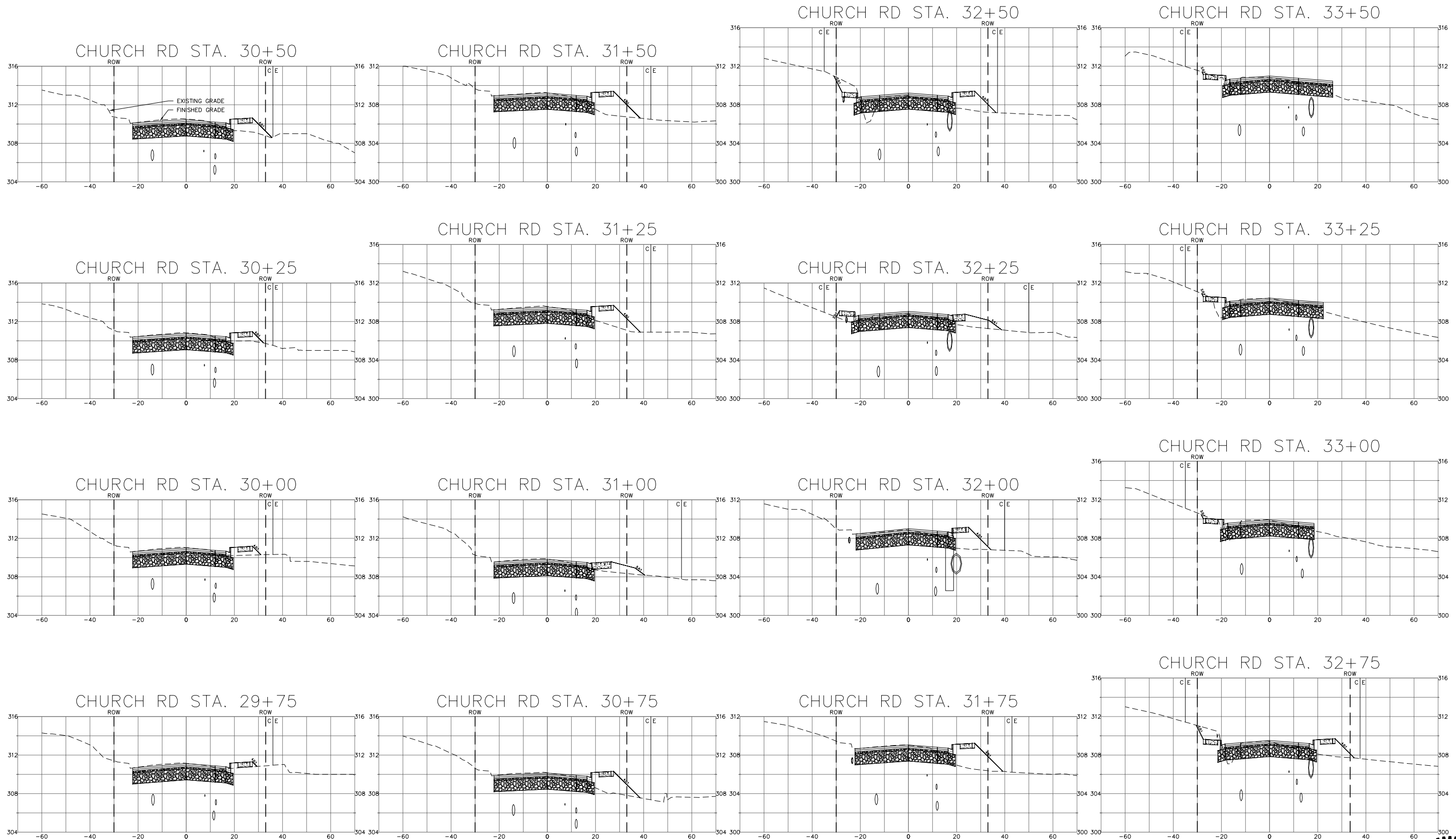
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CHURCH ROAD
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CROSS SECTIONS

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H: 1"=20' V: 1"=5'

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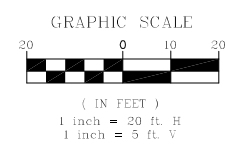
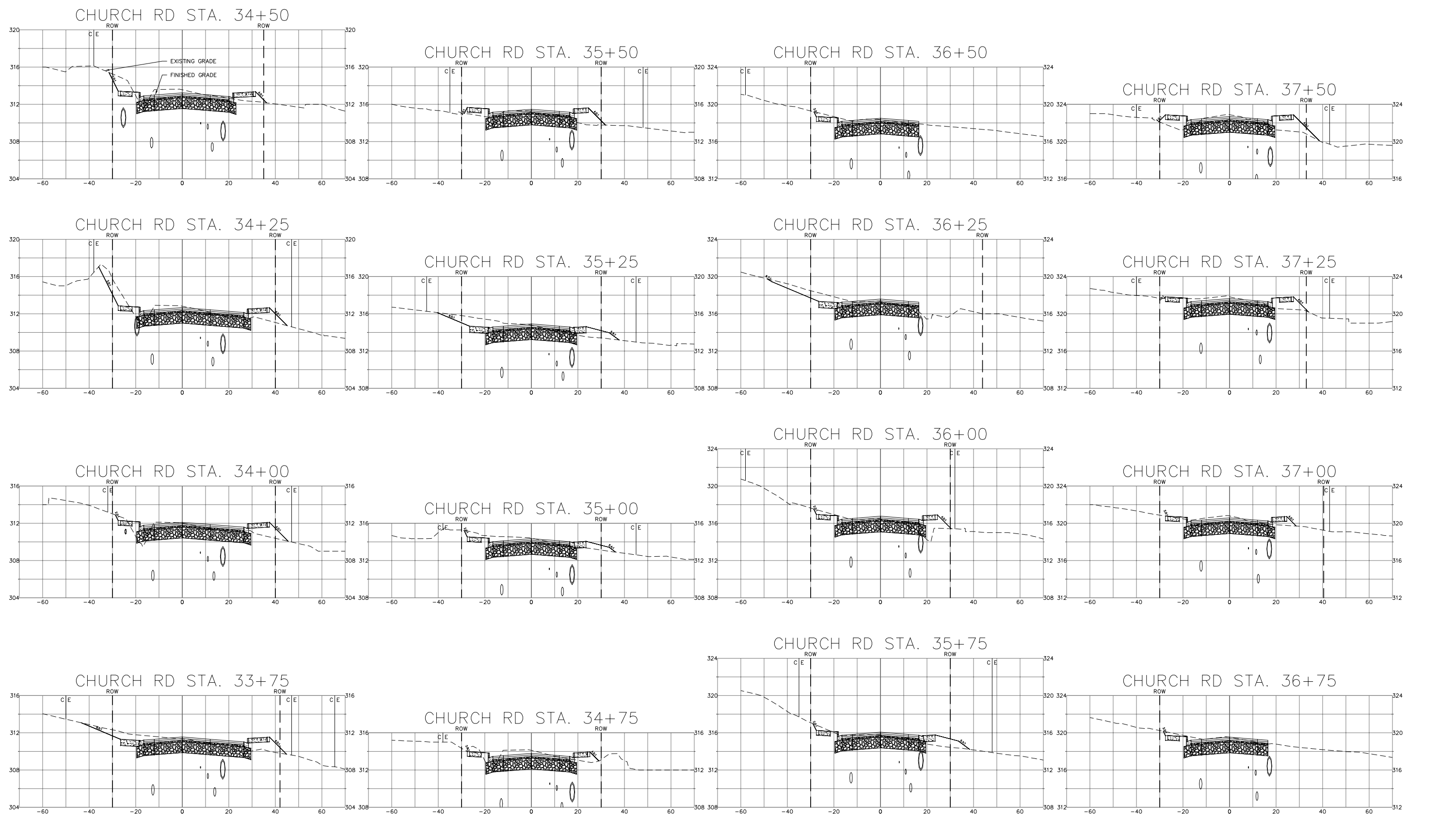
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 FERDALE, WA 98248


CHURCH ROAD
STREET IMPROVEMENTS
CROSS SECTIONS

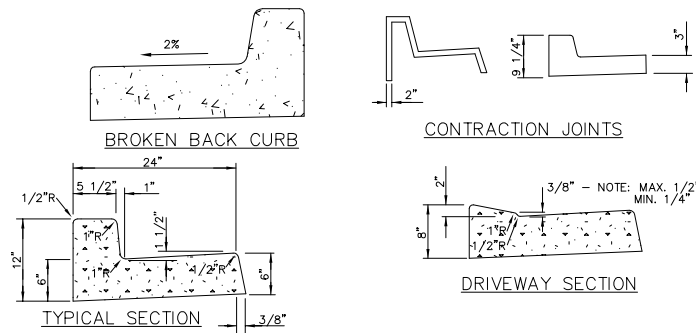
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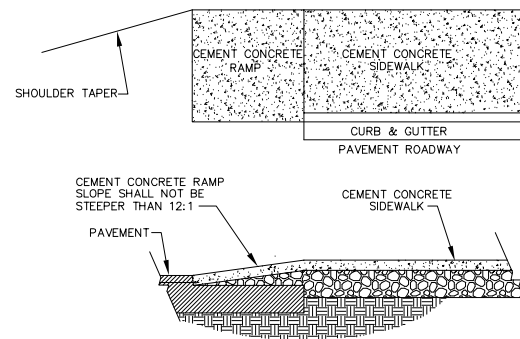
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								SCALE H: 1"=20' V: 1"=5'	SHEET 58 of 63



NOTES:
CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10' C/C. JOINTS 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.
3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS AND COLD JOINTS OR A MAX. OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF THE GUTTER.
CURB DRAINS SHALL BE CONSTRUCTED OF 2" PVC PIPE OR OTHER MATERIAL SUBJECT TO APPROVAL OF THE ENGINEER, CUT TO LENGTH TO PASS FROM THE BACK OF CURB THROUGH THE CURB TO THE FACE OF THE CURB AT THE GUTTER LINE. SPACING WILL BE MAXIMUM OF 50 FEET, CENTER TO CENTER, AND/OR EACH SIDE OF THE DRIVEWAYS AND AT SUCH LOCATIONS AS DESIGNATED BY THE ENGINEER.

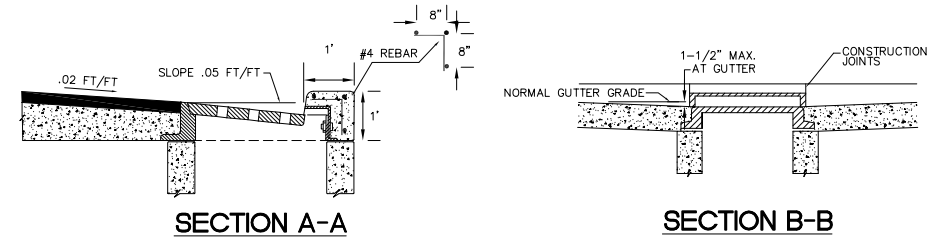
CURB AND GUTTER DETAILS

NTS



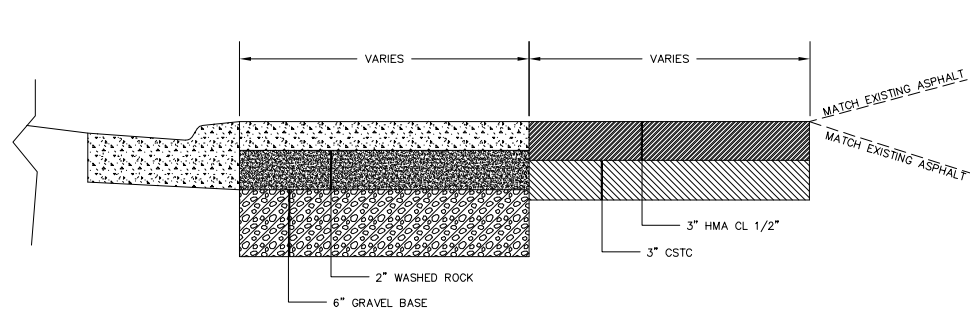
CEMENT CONCRETE SIDEWALK RAMP DETAIL

NTS



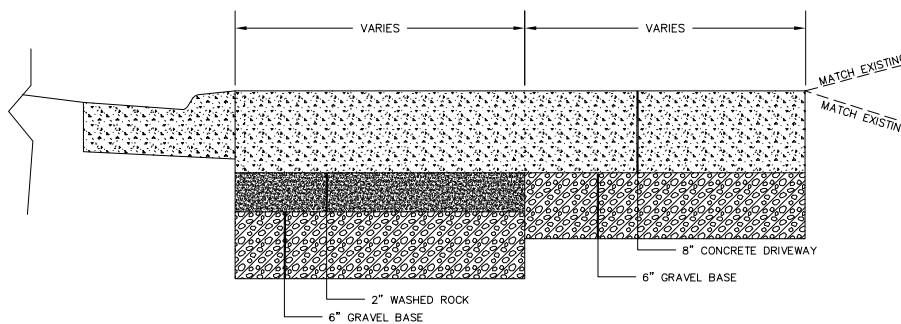
THRU CURB INLET DETAIL

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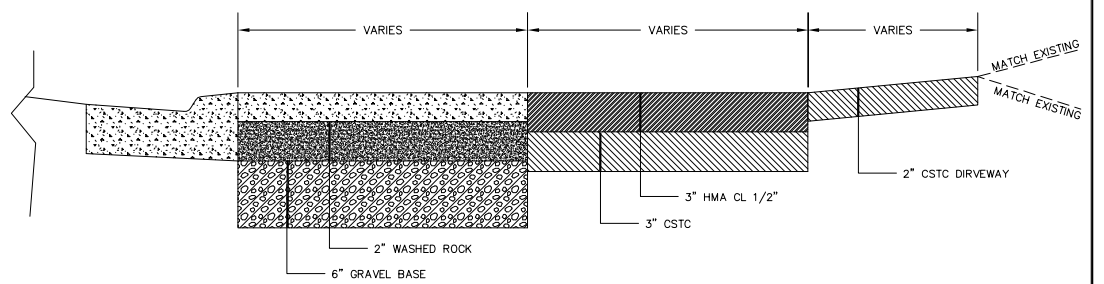
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PROPOSED CONCRETE DRIVEWAY SECTION

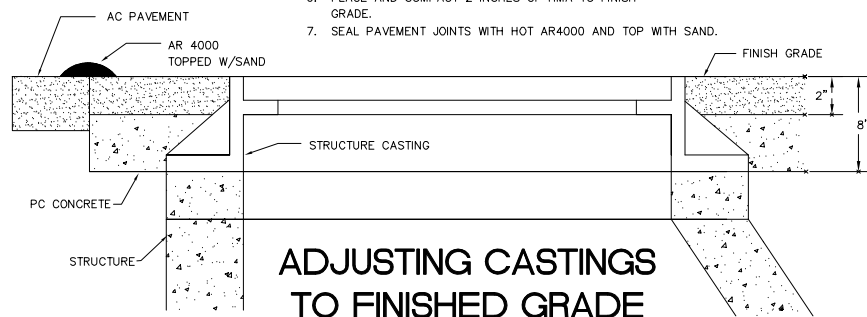
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PROPOSED ASPHALT APRON AND GRAVEL SECTION

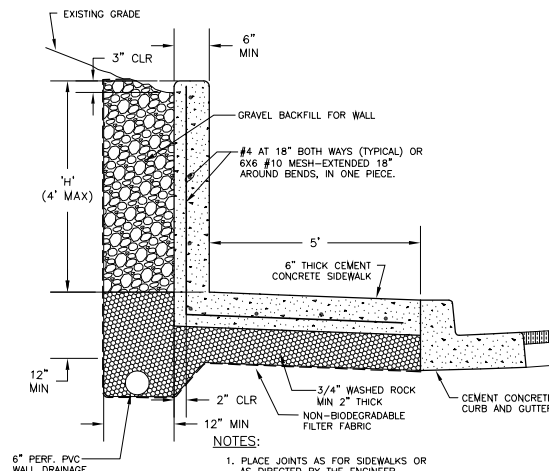
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- NOTES:
ALL FRAMES, COVERS AND VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE AFTER THE FINAL LIFT OF PAVING HAS BEEN COMPLETED. THE FOLLOWING PROCEDURE SHALL BE USED:
1. CUT THE ASPHALT IN AN EVEN CIRCLE AROUND THE STRUCTURE CASTING TO BE ADJUSTED.
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 HMA TO FINISH GRADE.
7. SEAL PAVEMENT JOINTS WITH HOT AR4000 AND TOP WITH SAND.



ADJUSTING CASTINGS TO FINISHED GRADE

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TYPE "A" MONOLITHIC RETAINING WALL AND SIDEWALK (TYP)

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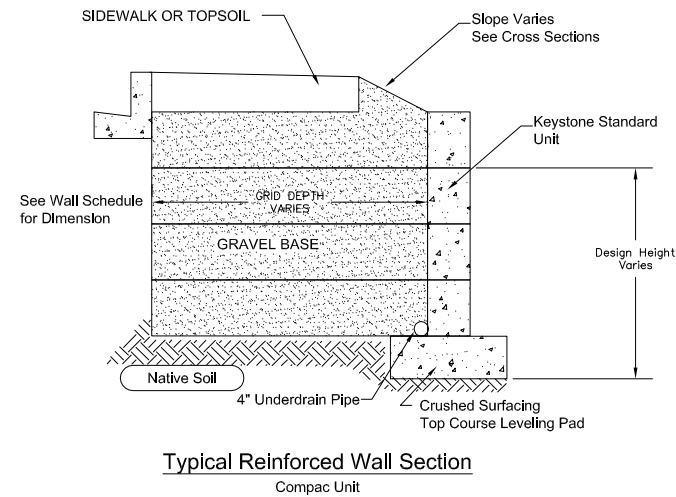
REICHHARDT & EBE ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 978 423 Front St., Ste 201 Lynden, Washington 98264
Ph (360) 354-3687 Fax (360) 354-0407

NO.	DATE	REVISION	BY

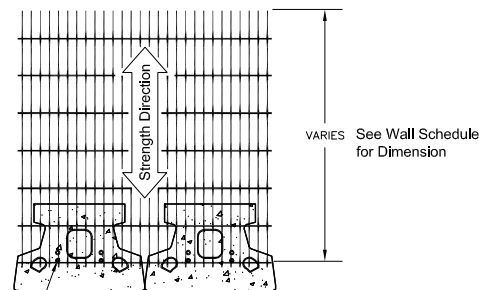
CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD STREET IMPROVEMENTS
DETAIL SHEET

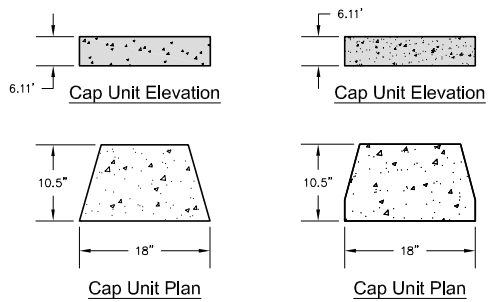
JOB# / DWG	DET	DATE
07037	DET	3-5-14
SCALE		SHEET
H:n/a	V:n/a	59 of 63



Typical Reinforced Wall Section
Compac Unit



Grid & Pin Connection

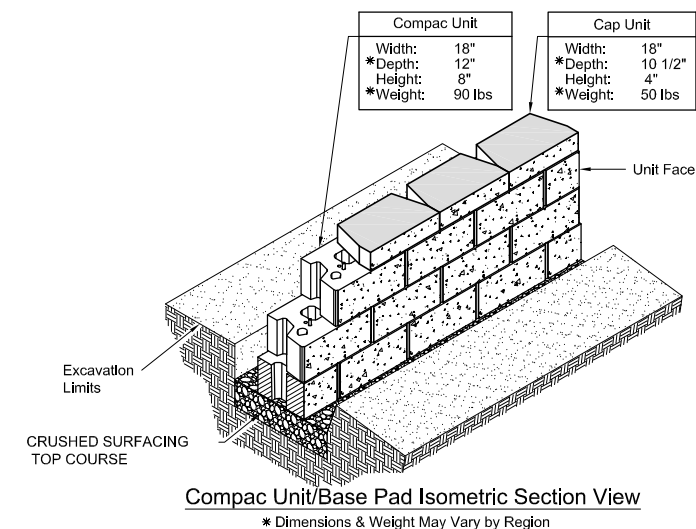


Universal Cap Unit Option
* Dimensions & Availability Will Vary by Region

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

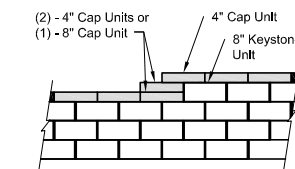
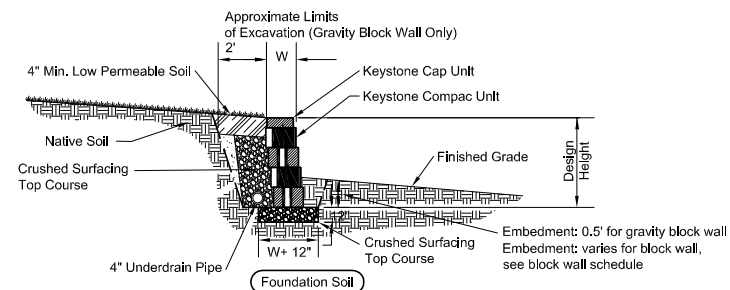
BLOCK WALL RETAINING WALL

NTS



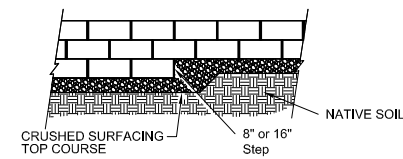
Compac Unit/Base Pad Isometric Section View

* Dimensions & Weight May Vary by Region

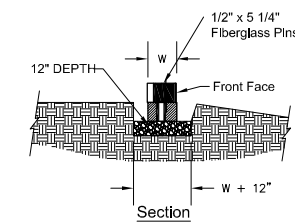


Note:
1. Secure all cap units with Keystone Kapseal or equal.

Top of Gravity and Block Wall Steps



Elevation TYPICAL GRAVITY AND BLOCK WALL



Leveling Pad Detail

TYPICAL GRAVITY AND BLOCK WALL

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DESIGNED BY LP/GKG
DRAWN BY LMC
CHECKED BY LP



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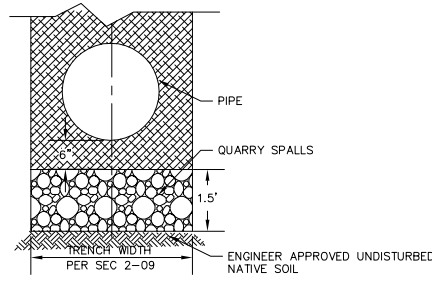
NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
DETAIL SHEET

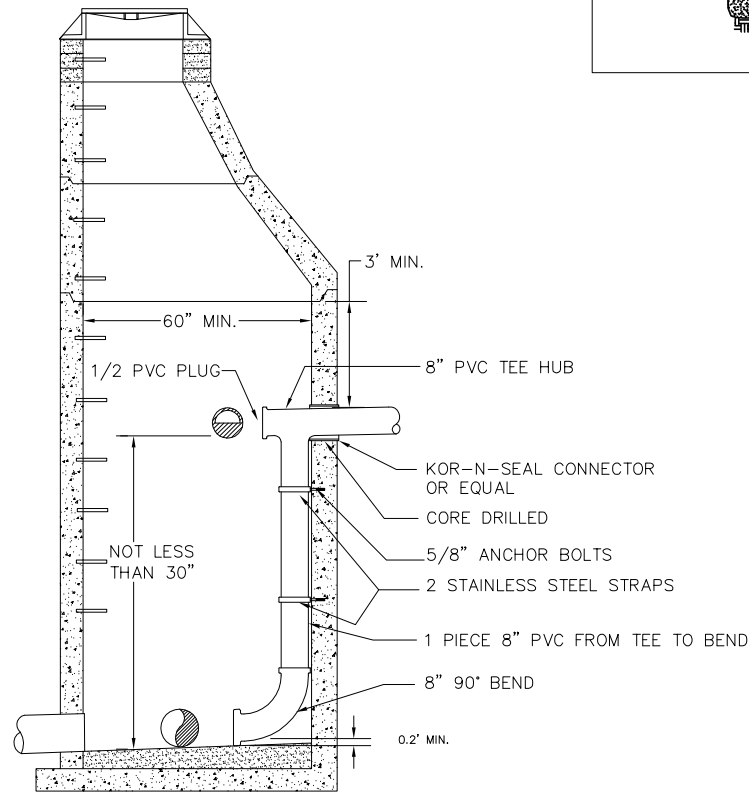
JOB# / DWG 07037	DET	DATE 3-5-14
SCALE H:n/a	V:n/a	SHEET 60 of 63

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REMOVAL OF UNSUITABLE MATERIAL INCLUDING HAUL
TYPICAL SECTION

NTS

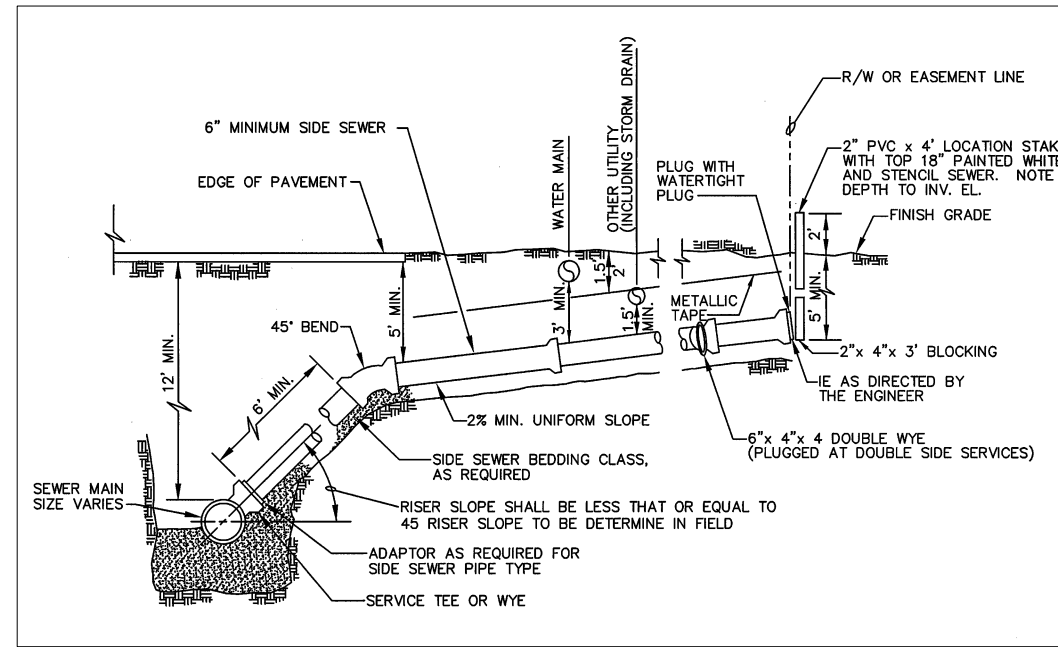


NOTES:

1. DROP TEE TO BE INSTALLED MINIMUM OF 3' BELOW CONE SECTION.
2. INSIDE DROP MANHOLE SHALL BE INSTALLED ONLY WHERE APPROVED BY THE CITY.
3. SIZE OF MANHOLE WILL INCREASE WITH LARGER DIAMETER PIPE AND SHALL BE APPROVED BY THE ENGINEER.
4. CHANNEL TO OUTLET.

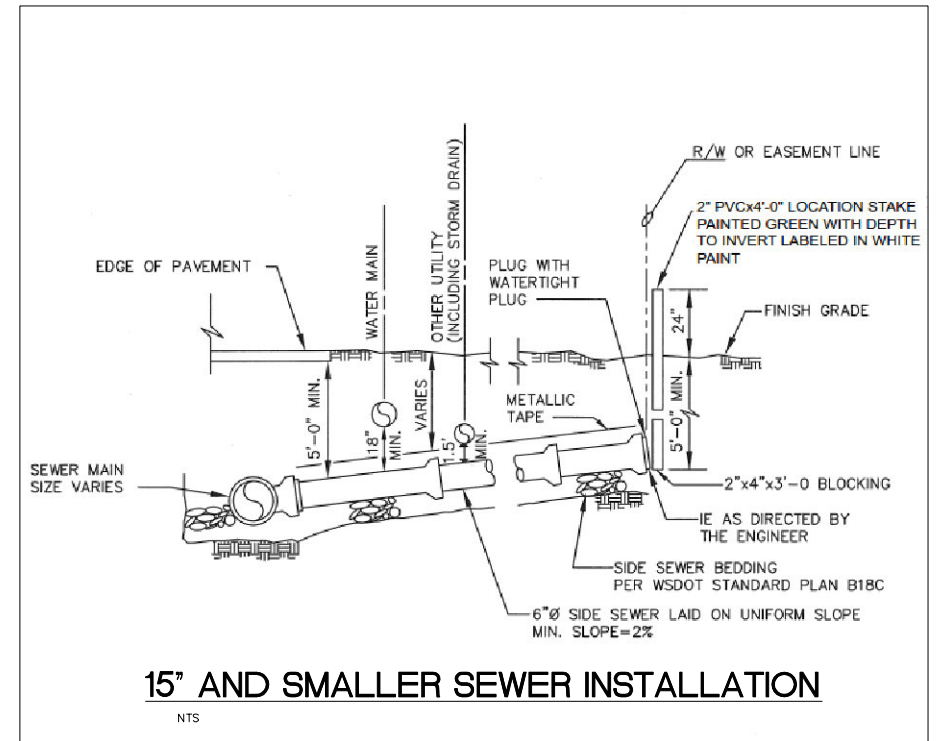
INSIDE DROP SEWER MANHOLE CONNECTION

NTS



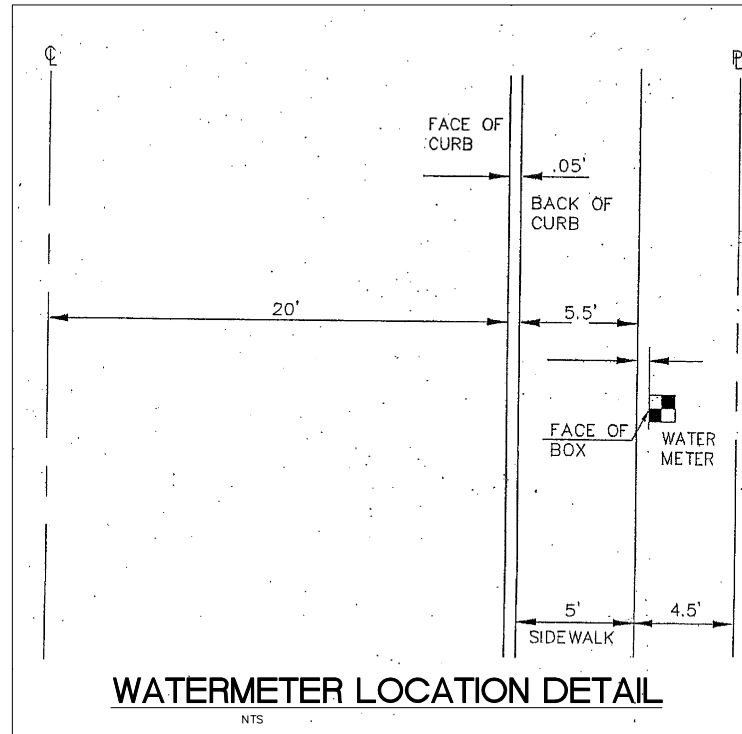
SANITARY SEWER SIDE SERVICE INSTALLATION, DEEP MAINS

NTS



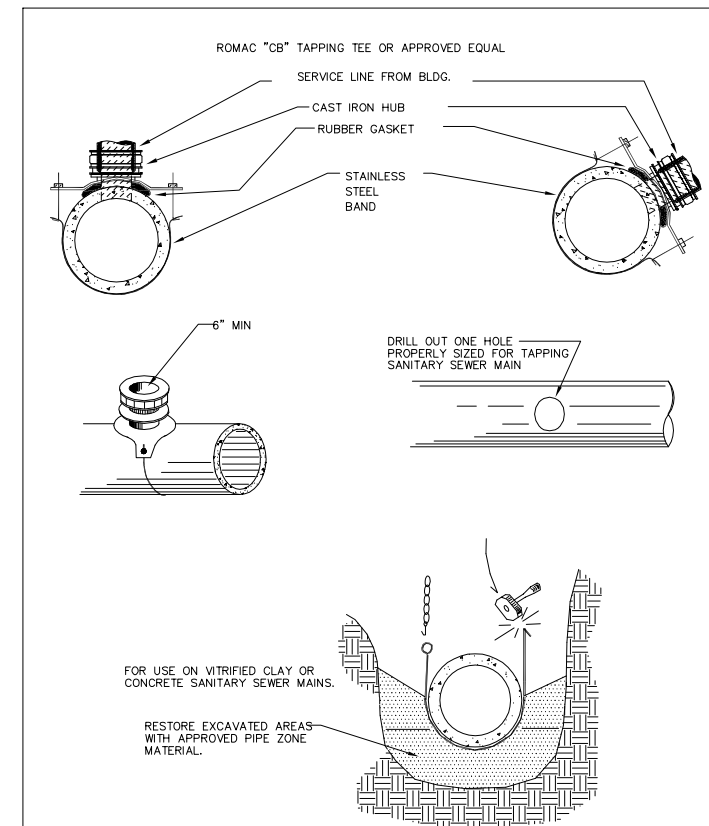
15" AND SMALLER SEWER INSTALLATION

NTS



WATERMETER LOCATION DETAIL

NTS



NOT TO SCALE

APPROVED _____
Public Works Director Date

CITY OF FERDALE
SANITARY SEWER
BANDED TAPPING TEE

DRAWING
SS-12



DESIGNED BY
LP/GKG
DRAWN BY
LMC
CHECKED BY
LP



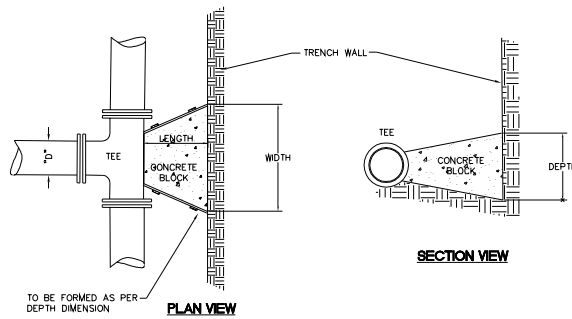
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PO Box 978 423 Front St., Ste 201
Lynden, Washington 98264 Ph (360) 354-3687
Fax (360) 354-0407

NO.	DATE	REVISION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

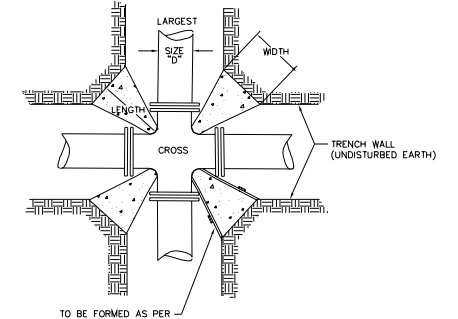
CHURCH ROAD
STREET IMPROVEMENTS
DETAIL SHEET

JOB# / DWG 07037	DET	DATE 3-5-14
SCALE H: n/a	V: n/a	SHEET 61 of 63



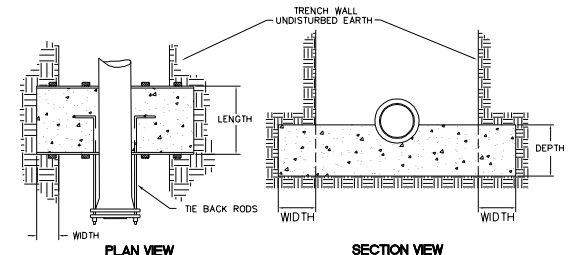
"D"	WIDTH	DEPTH	LENGTH	VOL.
6"	1'-6"	1'-6"	12"	3.0
8"	2'-0"	2'-0"	12"	4.5
10"	2'-6"	2'-6"	12"	7.0
12"	3'-0"	3'-0"	18"	14.0

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



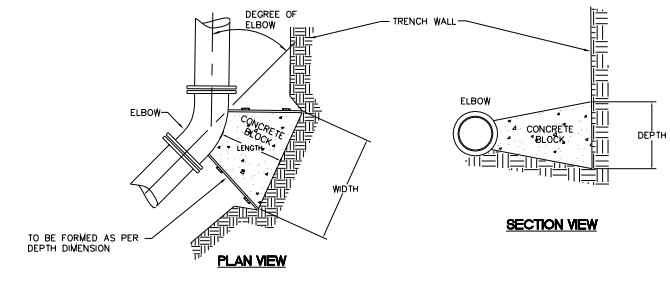
"D"	WIDTH	DEPTH	LENGTH	VOL.	X4 blocks/joint
6"	1'-0"	1'-0"	12"	0.63	2.50 cu ft
8"	1'-3"	1'-3"	12"	1.00	4.01 cu ft
10"	1'-6"	1'-6"	12"	1.63	6.50 cu ft
12"	1'-9"	1'-9"	18"	3.05	12.19 cu ft

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

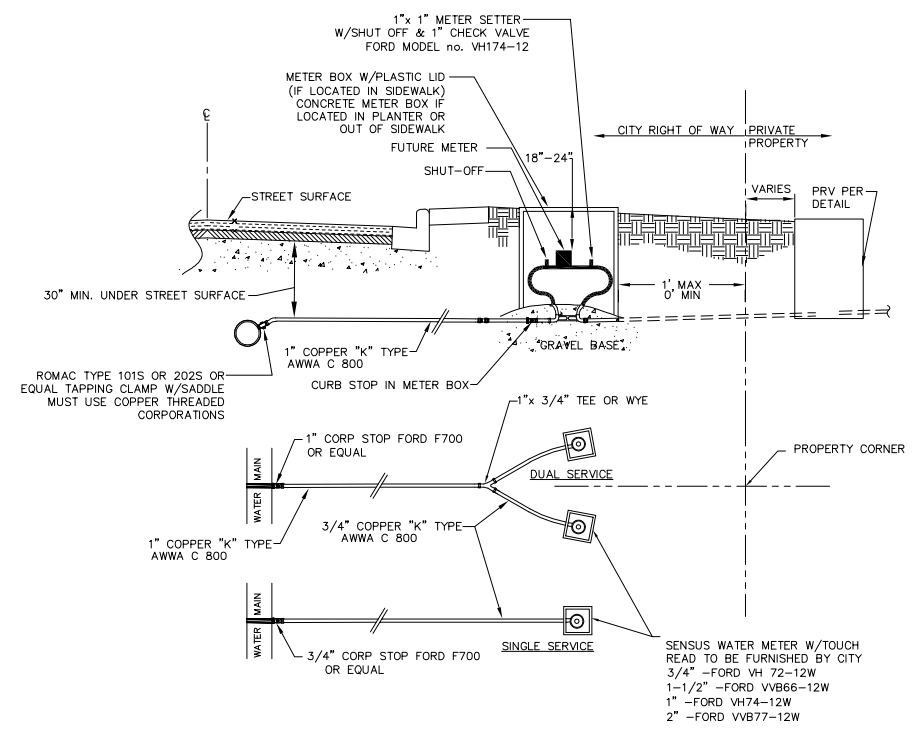


SIZE	LENGTH	11 1/4"			22 1/2"			45"			90"				
"D"	WIDTH	DEPTH	VOL.	"D"	WIDTH	DEPTH	VOL.	"D"	WIDTH	DEPTH	VOL.	"D"	WIDTH	DEPTH	VOL.
6"	12"	1'-0"	1'-0"	0.63	1'-0"	1'-0"	0.63	1'-6"	1'-6"	1'-25"	2'-3"	1'-6"	1'-6"	1'-6"	1.88
8"	12"	1'-3"	1'-3"	1.00	1'-3"	1'-3"	1.00	1'-9"	1'-9"	1'-75"	3'-0"	2'-0"	1'-6"	1'-6"	3.33
10"	12"	1'-6"	1'-6"	1.72	1'-9"	1'-6"	1.72	2'-3"	2'-3"	2'-88"	3'-6"	2'-6"	1'-6"	1'-6"	4.86
12"	18"	2'-0"	1'-9"	3.48	2'-0"	1'-9"	3.48	2'-9"	2'-6"	5'-98"	4'-0"	3'-0"	1'-0"	1'-0"	10.00

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

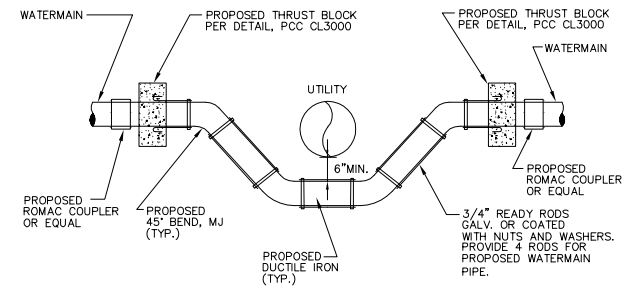
THRUST BLOCKING

NTS



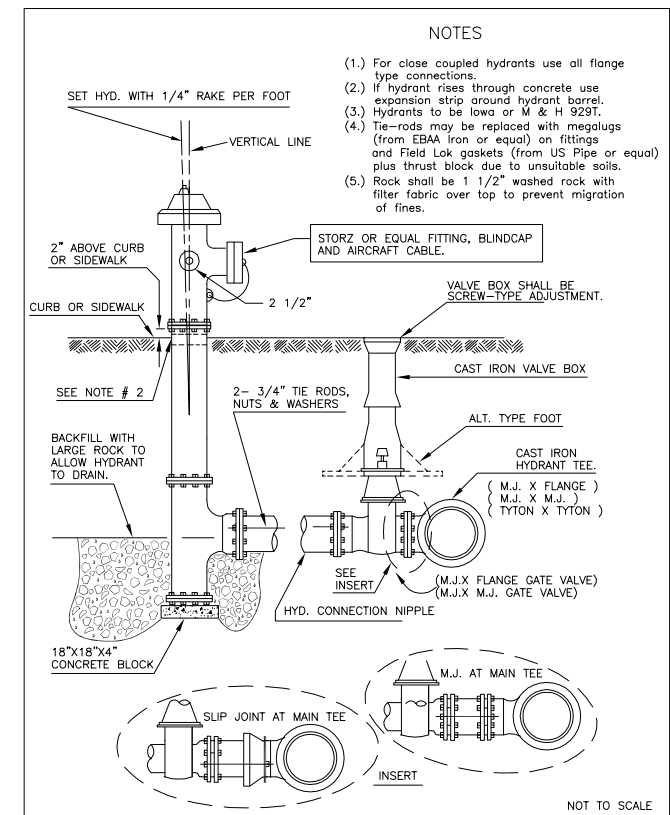
WATER SERVICE CONNECTION DETAIL

NTS



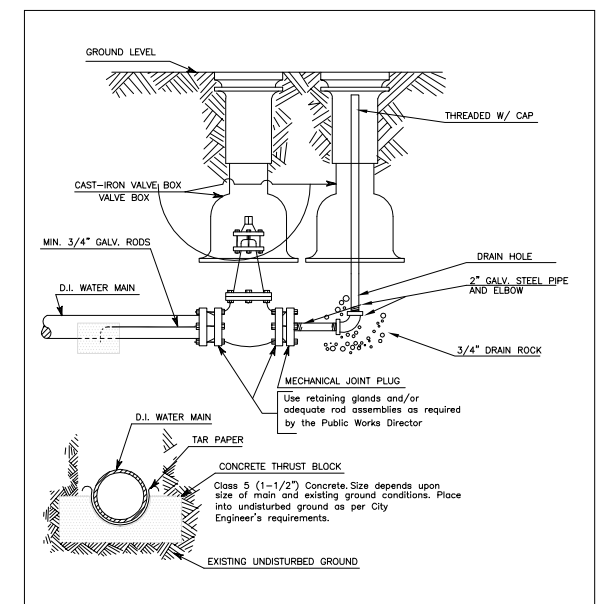
WATERMAIN STOVEPIPE

NTS



- 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 929T.
 - (4) Tie-rods may be replaced with megalugs (from EBAA 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 _____ DATE _____
 Public Works Director
 CITY OF FERDALE
 FIRE HYDRANT ASSEMBLY
 DRAWING W-1
 JULY 2001



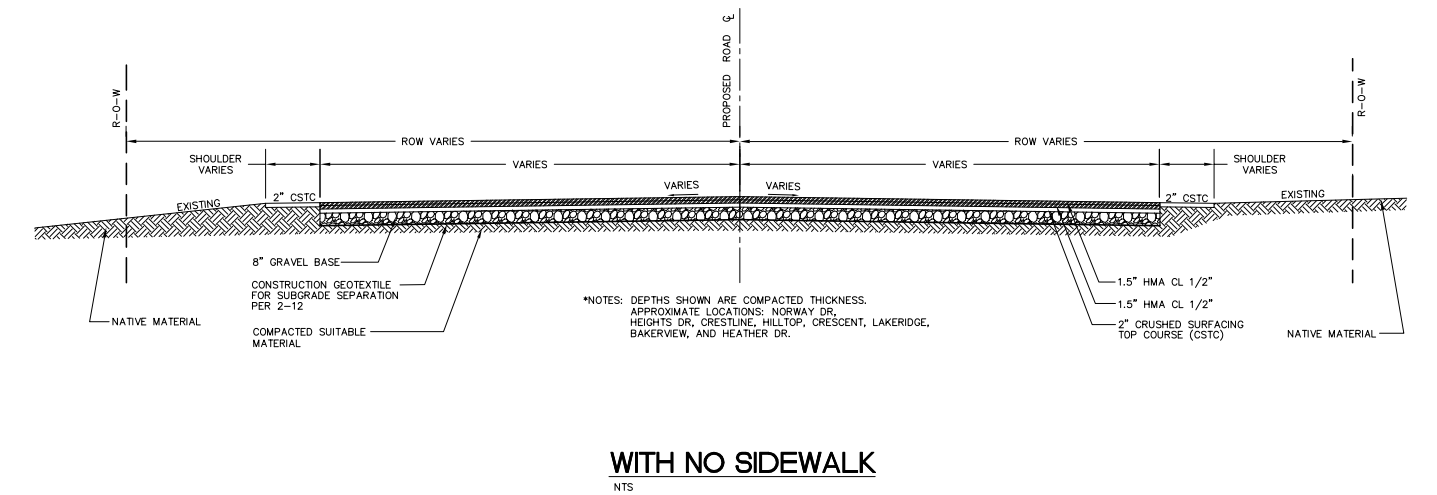
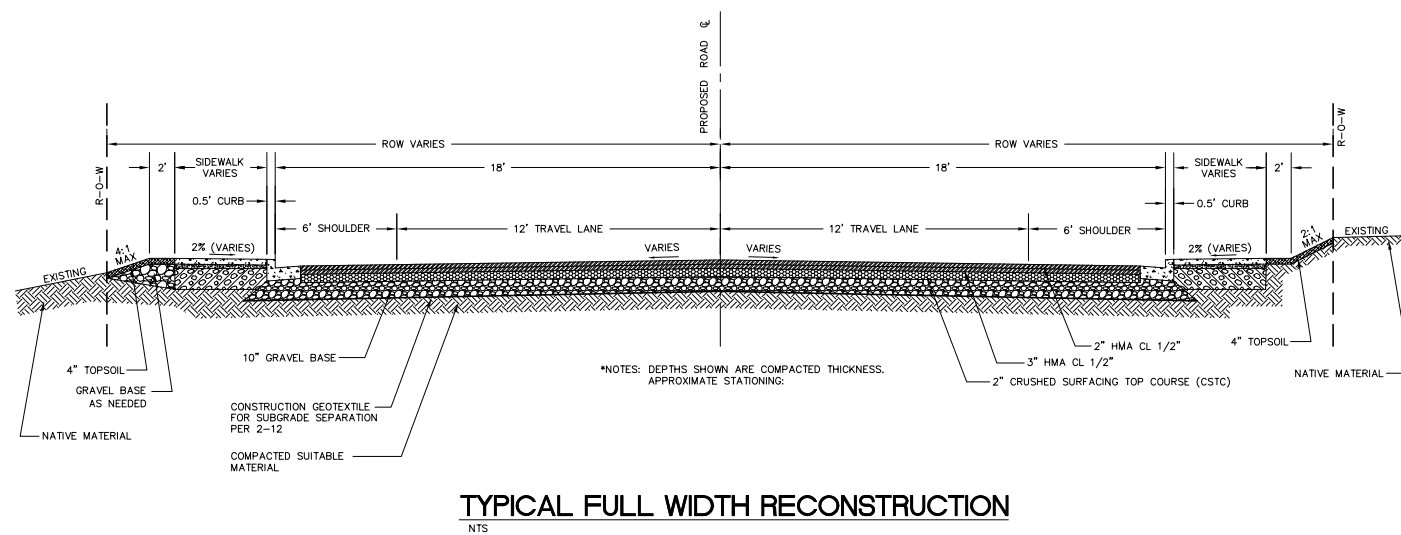
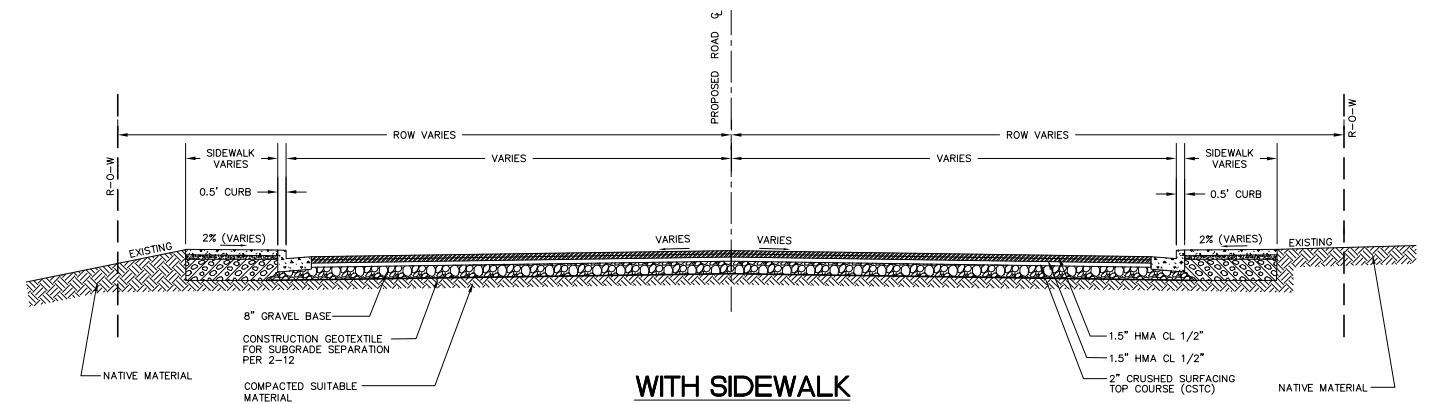
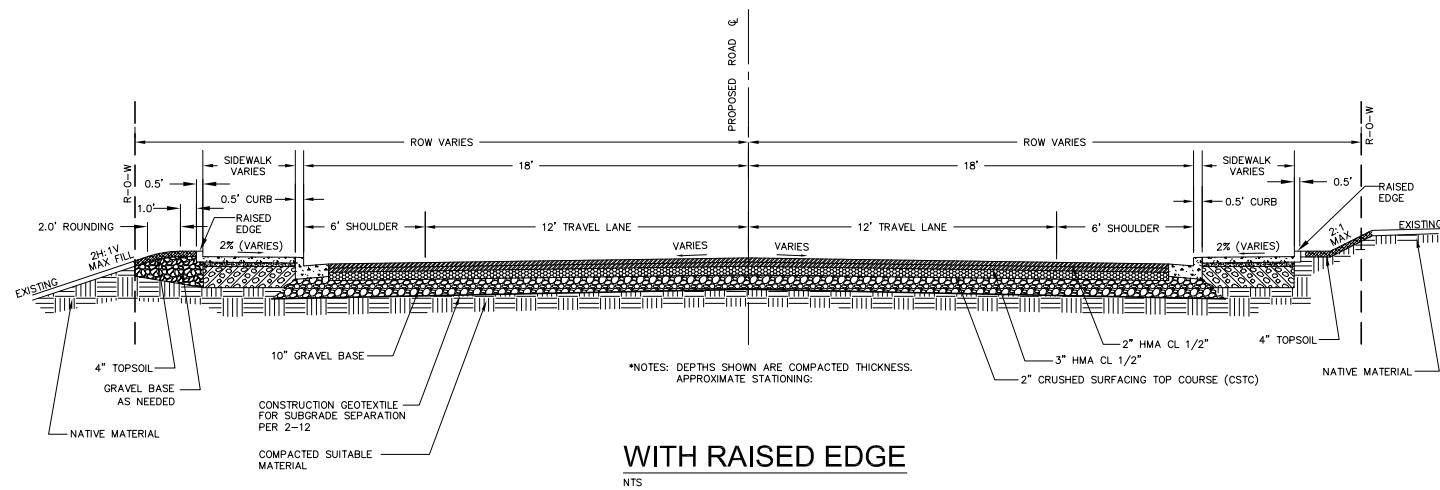
2" blow-off to be used where the main will be extended in the future.
 For mains with no further extension, refer to 2" blowoff, non-extendable main.

APPROVED _____ DATE _____
 Public Works Director
 CITY OF FERDALE
 2" BLOW-OFF
 WATER MAIN EXTENSION
 DRAWING W-9
 JULY 2001

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SIDE STREET TYPICAL SECTIONS



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LP/GKG
DRAWN BY
LMC
CHECKED BY
LP



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NO.	DATE	REVISION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

CHURCH ROAD
STREET IMPROVEMENTS
DETAIL SHEET

JOB# / DWG 07037	DET	DATE 3-5-14
SCALE H: n/a	V: n/a	SHEET 63 of 63