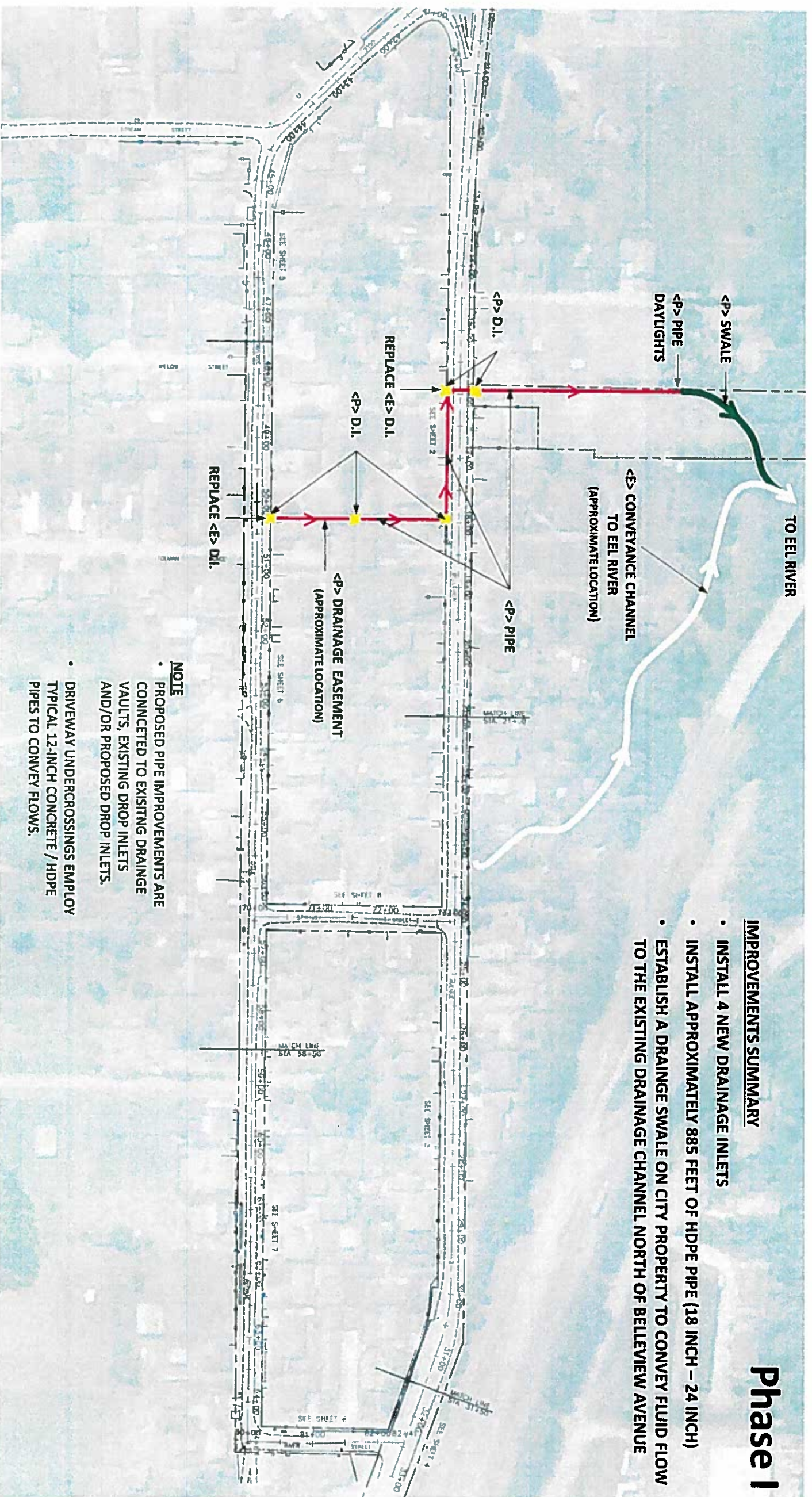


30% DESIGN

Phase I

IMPROVEMENTS SUMMARY

- INSTALL 4 NEW DRAINAGE INLETS
- INSTALL APPROXIMATELY 885 FEET OF HDPE PIPE (18 INCH – 24 INCH)
- ESTABLISH A DRAINAGE SWALE ON CITY PROPERTY TO CONVEY FLUID FLOW TO THE EXISTING DRAINAGE CHANNEL NORTH OF BELLEVUE AVENUE



- NOTE**
- PROPOSED PIPE IMPROVEMENTS ARE CONNECTED TO EXISTING DRAINAGE VAULTS, EXISTING DROP INLETS AND/OR PROPOSED DROP INLETS.
 - DRIVEWAY UNDERCROSSINGS EMPLOY TYPICAL 12-INCH CONCRETE / HDPE PIPES TO CONVEY FLOWS.

PRELIMINARY DESIGN – NOT FOR CONSTRUCTION

LEGEND

---	RIGHT OF WAY / PROPERTY LINE
---	EDGE OF PAVEMENT
---	PAVEMENT CENTERLINE
---	FENCES
---	DRIVEWAYS
---	DRAINAGE SWALES
---	DRAINAGE INLETS
---	WATER VALVES
---	SEWER MANHOLE
---	BRUSH / VEGETATION / TREES
---	DRAINAGE IMPROVEMENT
---	PIPE IMPROVEMENT

OVERALL SITE
NOT TO SCALE



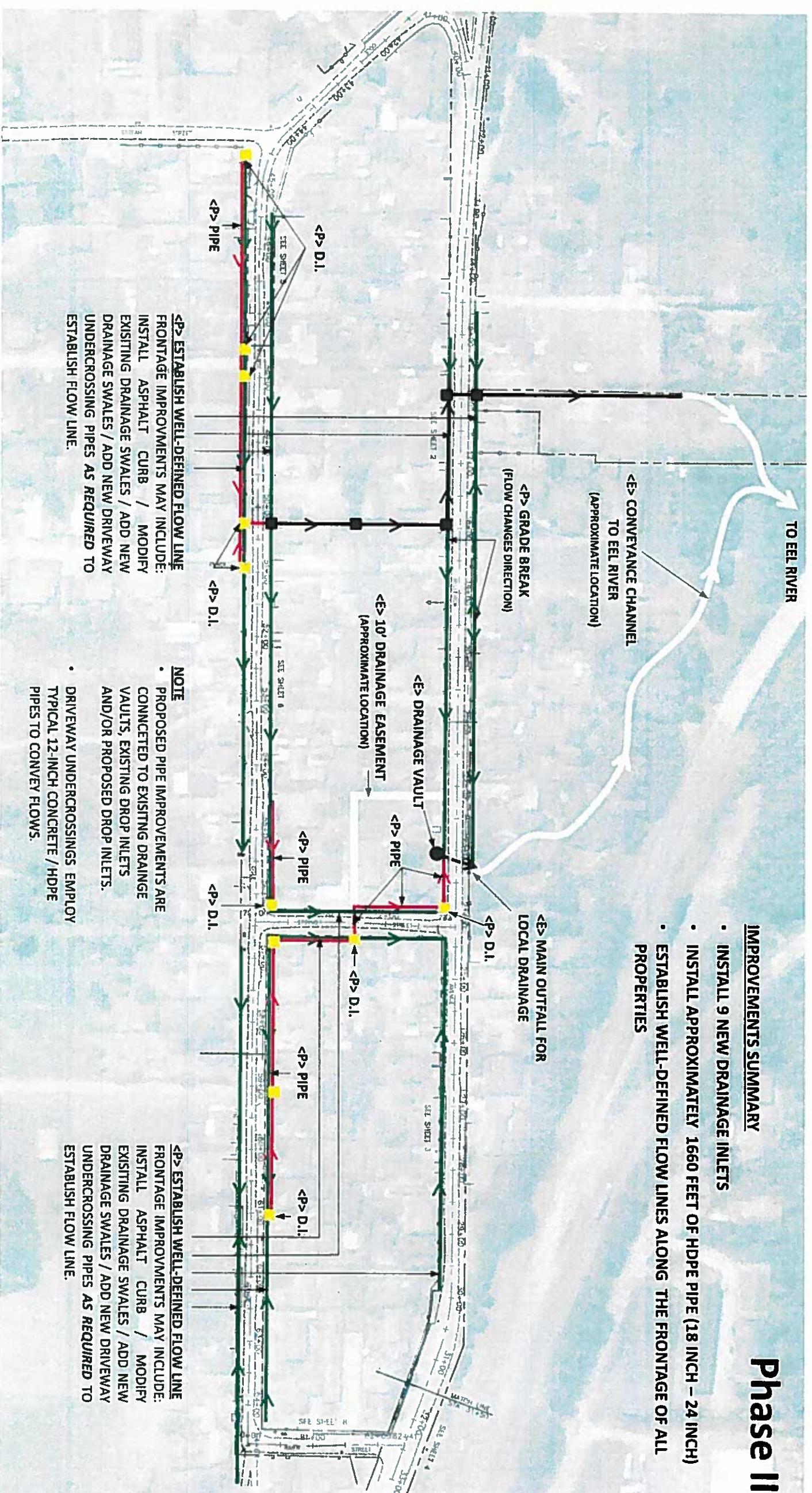
<p>STORM WATER SYSTEM DESIGN</p> <p>30% DESIGN – PHASE I</p>	<p>WHITCHURCH ENGINEERING, INC.</p> <p>810 9th Street Fortuna, California 95540</p> <p>Phone (707) 425-6726</p>	<table border="1"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>																														

30% DESIGN

Phase II

IMPROVEMENTS SUMMARY

- INSTALL 9 NEW DRAINAGE INLETS
- INSTALL APPROXIMATELY 1660 FEET OF HDPE PIPE (18 INCH – 24 INCH)
- ESTABLISH WELL-DEFINED FLOW LINES ALONG THE FRONTAGE OF ALL PROPERTIES



<P> ESTABLISH WELL-DEFINED FLOW LINE
FRONTAGE IMPROVEMENTS MAY INCLUDE:
INSTALL ASPHALT CURB / MODIFY
EXISTING DRAINAGE SWALES / ADD NEW
DRAINAGE SWALES / ADD NEW DRIVEWAY
UNDERCROSSING PIPES AS REQUIRED TO
ESTABLISH FLOW LINE.

NOTE

- PROPOSED PIPE IMPROVEMENTS ARE CONNECTED TO EXISTING DRAINAGE VAULTS, EXISTING DROP INLETS AND/OR PROPOSED DROP INLETS.
- DRIVEWAY UNDERCROSSINGS EMPLOY TYPICAL 12-INCH CONCRETE / HDPE PIPES TO CONVEY FLOWS.

<P> ESTABLISH WELL-DEFINED FLOW LINE
FRONTAGE IMPROVEMENTS MAY INCLUDE:
INSTALL ASPHALT CURB / MODIFY
EXISTING DRAINAGE SWALES / ADD NEW
DRAINAGE SWALES / ADD NEW DRIVEWAY
UNDERCROSSING PIPES AS REQUIRED TO
ESTABLISH FLOW LINE.

PRELIMINARY DESIGN – NOT FOR CONSTRUCTION

LEGEND

- RIGHT OF WAY / PROPERTY LINE
- EDGE OF PAVEMENT
- PAVEMENT CENTERLINE
- FENCES
- DRIVEWAYS
- DRAINAGE SWALES
- DRAINAGE INLETS
- WATER VALVES
- SEWER MANHOLE
- BRUSH / VEGETATION / TREES
- DRAINAGE INLET IMPROVEMENT
- PIPE IMPROVEMENT
- ASPHALT CURB IMPROVEMENT / SWALE IMPROVEMENT / DRIVEWAY UNDERCROSSING PIPE IMPROVEMENT

OVERALL SITE

NOT TO SCALE



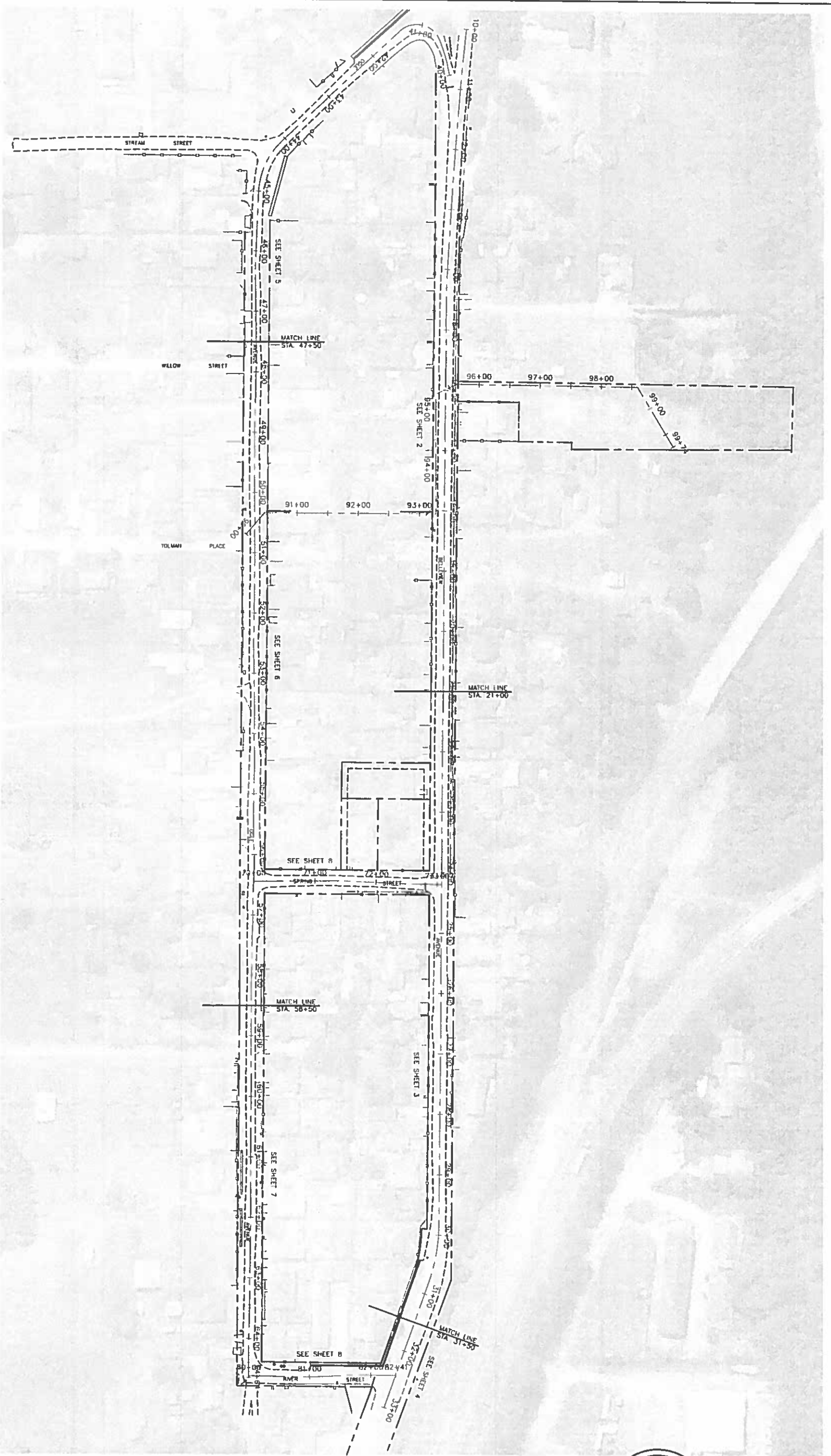
REV	DATE	BY

STORM WATER SYSTEM DESIGN

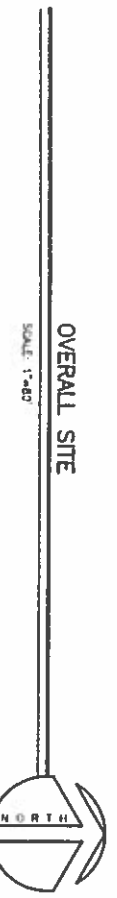
30% DESIGN – PHASE II

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 426-4926

DATE	25-NOV-20
DESIGN	
CHECK	
APP	
SCALE	
SHEET	1



- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - EDGE OF PAVEMENT
 - PAVED/UNPAVED CENTERLINE
 - FENCES
 - DRIVEWAYS
 - DRIVEWAY STAKES
 - DRIVEWAY ALLEYS
 - WATER VALVES
 - WATER MAINHOLE
 - BRUSH/VEGETATION
 - TREES



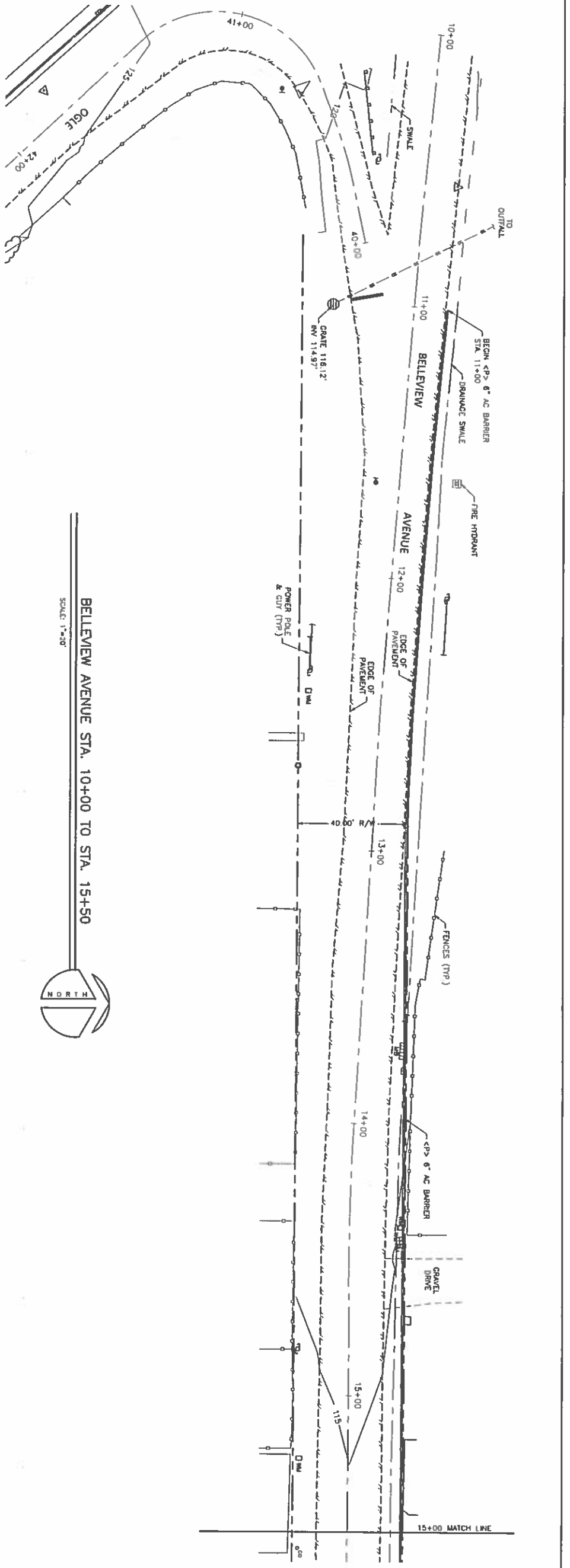
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PRELIMINARY

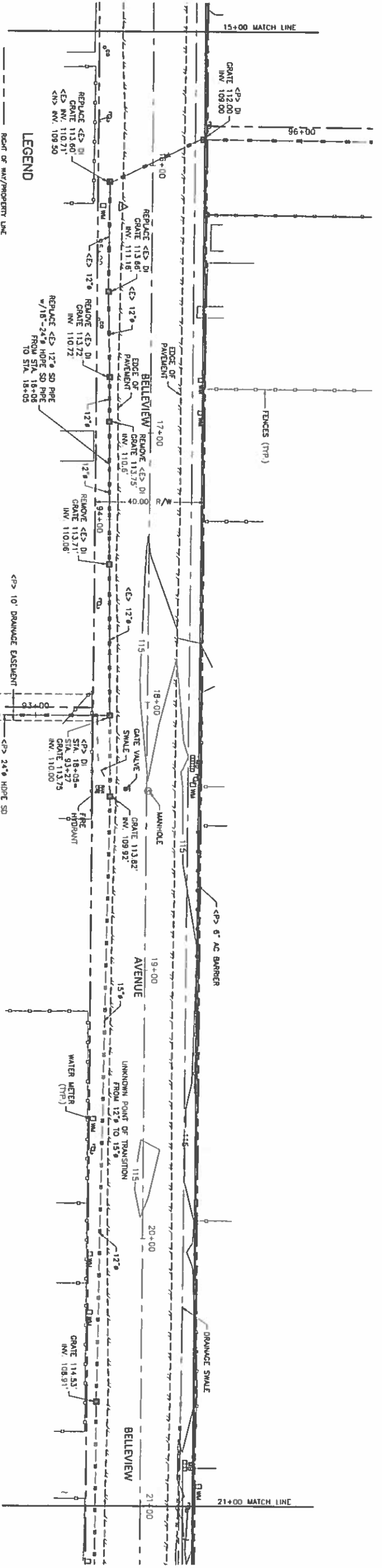
THESE PLANS ARE ORIGINALLY PRINTED ON 22"x34" PAPER



Date OCT 16 '15	Design DAR	Drawn DAR	Job COR-4-22	Sheet 1	HYDROLOGY STUDY BELLEVIEW & OGLE AVENUES Rio Dell CA APN: VARIES EXISTING OVERALL SITE For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562	WHITCHURCH ENGINEERING, INC. 610 9th Street Fortuna, California 95540 Phone (707) 725-6926	REVISIONS BY



BELLEVUE AVENUE STA. 10+00 TO STA. 15+50
SCALE: 1"=20'



BELLEVUE AVENUE STA. 15+50 TO STA. 21+00
SCALE: 1"=20'



- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - EDGE OF PAVEMENT
 - PAVEMENT CENTERLINE
 - FENCES
 - DRIVEWAYS
 - DRAINAGE SWALES
 - STORM DRAIN LINE
 - DRAINAGE ALIETS
 - WATER VALVES
 - SEWER MANHOLE
 - BRUSH/VEGETATION
 - TREES

PRELIMINARY


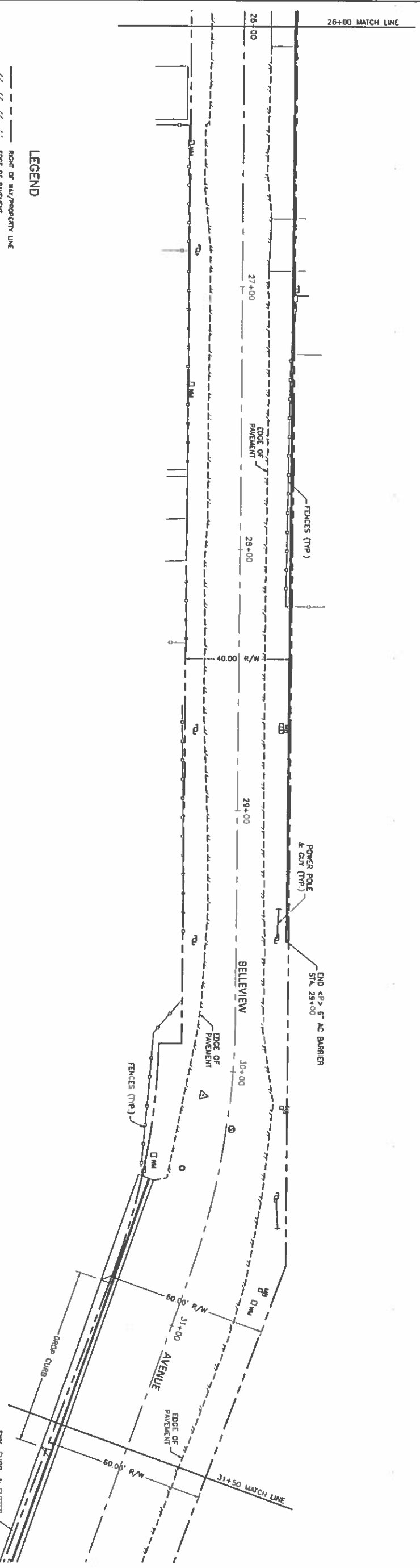
THESE PLANS ARE ORIGINALLY
PRINTED ON 22"x34" PAPER

1"=20'


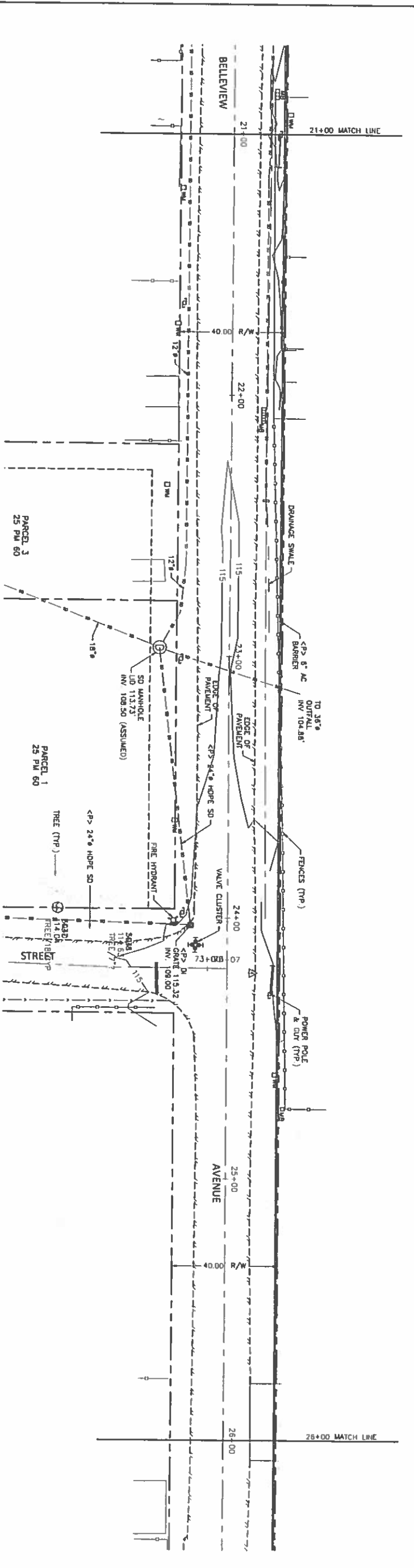
Design: DAB Drawn: DAB Job: COR1402 Sheet: 2	Date: OCT 16 1955 Scale: AS NOTED	HYDROLOGY STUDY BELLEVUE & OGLE AVENUES Rio Dell CA. APN. VARIES BELLEVUE AVENUE STA. 10+00 TO STA. 21+00 For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562	WHITCHURCH ENGINEERING, INC. 610 9th Street Fortuna, California 95540 Phone (707) 725-6926	REVISIONS BY															
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- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - - - - - EDGE OF PAVEMENT
 - - - - - PAVEMENT CENTERLINE
 - - - - - FENCES
 - - - - - DRAINAGE SWALES
 - - - - - STORM DRAIN LINE
 - - - - - DRAINAGE ALLEYS
 - - - - - WATER WAVERS
 - SEWER MANHOLE
 - BRUSH/VEGETATION
 - TREES

BELLEVIEW AVENUE STA. 26+00 TO STA. 31+50
SCALE: 1"=20'

BELLEVIEW AVENUE STA. 21+00 TO STA. 26+00
SCALE: 1"=20'

PRELIMINARY

THESE PLANS ARE ORIGINALLY PRINTED ON 27"x34" PAPER.

1 INCH

Project	HYDROLOGY STUDY BELLEVIEW & OGLE AVENUES
Date	OCT 16 '15
Scale	AS NOTED
Design	DAR
Drawn	DAR
Job	COR1402
Sheet	3

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540 Phone (707) 725-6926

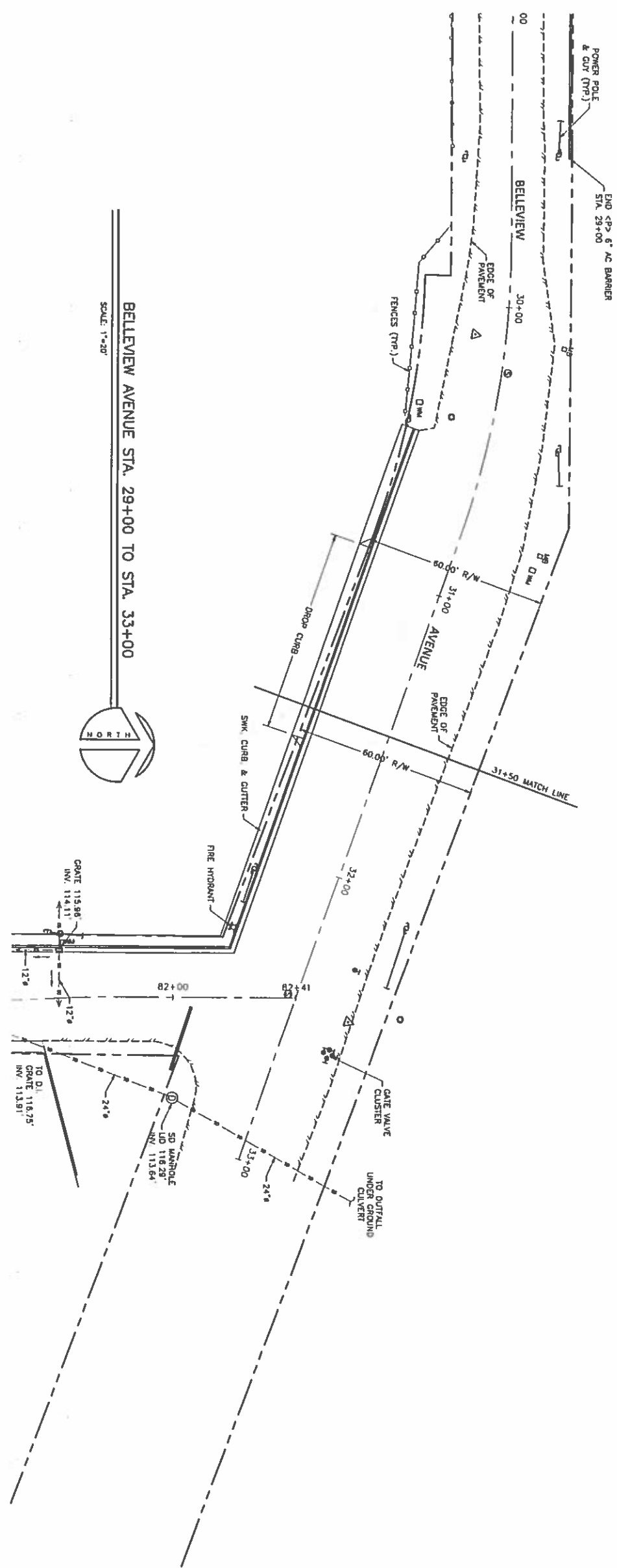
Rio Dell CA. APN: VARIES

BELLEVIEW AVENUE STA. 21+00 TO STA. 31+50

For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562

REVISIONS	BY

- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - - - - - EDGE OF PAVEMENT
 - - - - - PAVEMENT CENTERLINE
 - - - - - FENCES
 - - - - - DRAINAGE
 - - - - - DRAINAGE SWALES
 - - - - - STORM DRAIN LINE
 - - - - - DRAINAGE ALLEYS
 - - - - - WATER VALVES
 - - - - - SEWER MANHOLE
 - - - - - BRUSH/VEGETATION
 - - - - - TREES

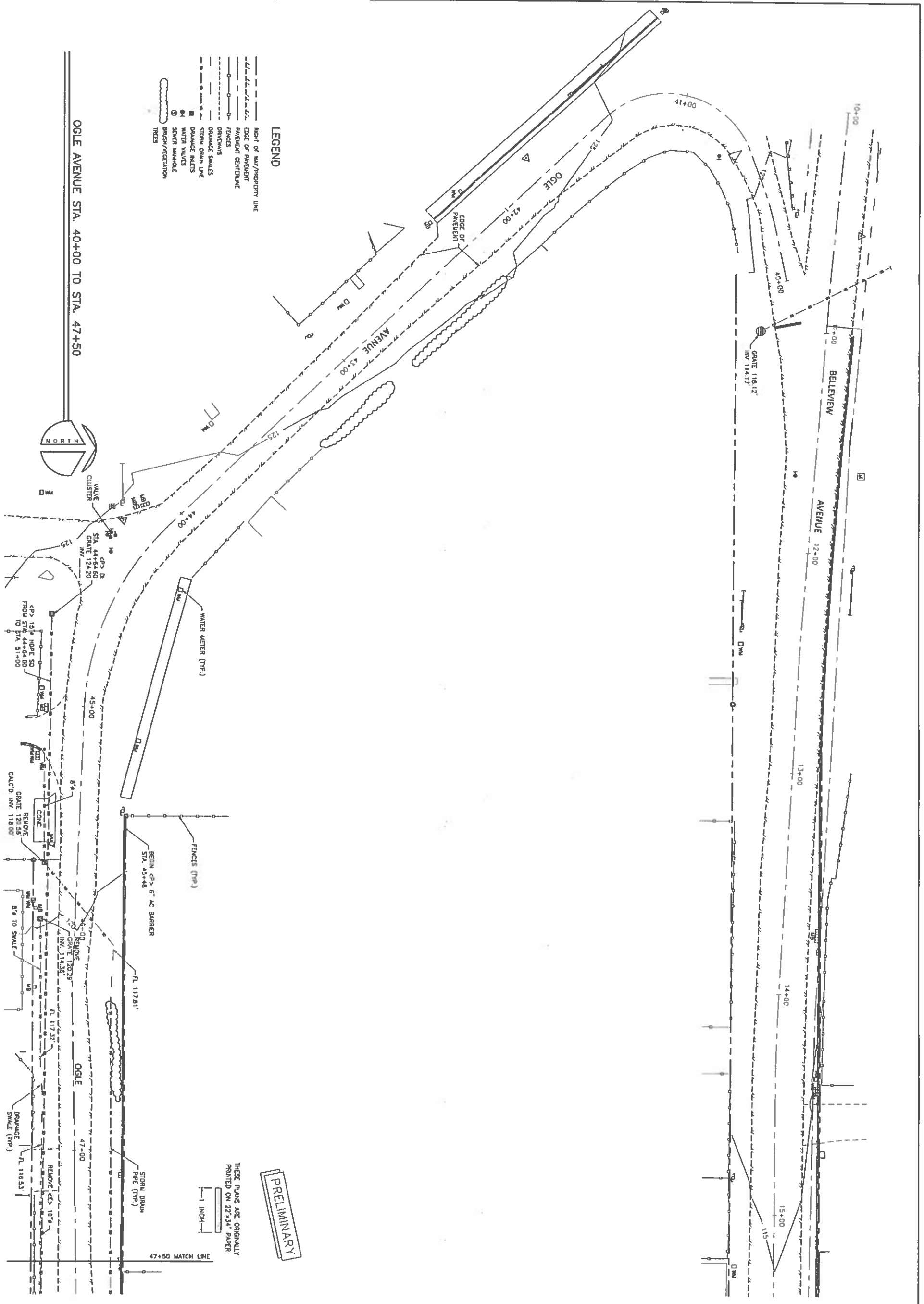


PRELIMINARY

THESE PLANS ARE ORIGINALLY
PRINTED ON 22"x34" PAPER.

1 INCH

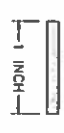
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- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - - - - - EDGE OF PAVEMENT
 - - - - - PAVEMENT CENTERLINE
 - - - - - FENCES
 - - - - - DRAINAGE
 - - - - - DRAINAGE SHAFTS
 - - - - - STORM DRAIN LINE
 - - - - - DRAINAGE INLETS
 - - - - - WATER VALVES
 - - - - - SEWER MAIN/PILE
 - - - - - BRUSH/VEGETATION
 - - - - - TREES

PRELIMINARY

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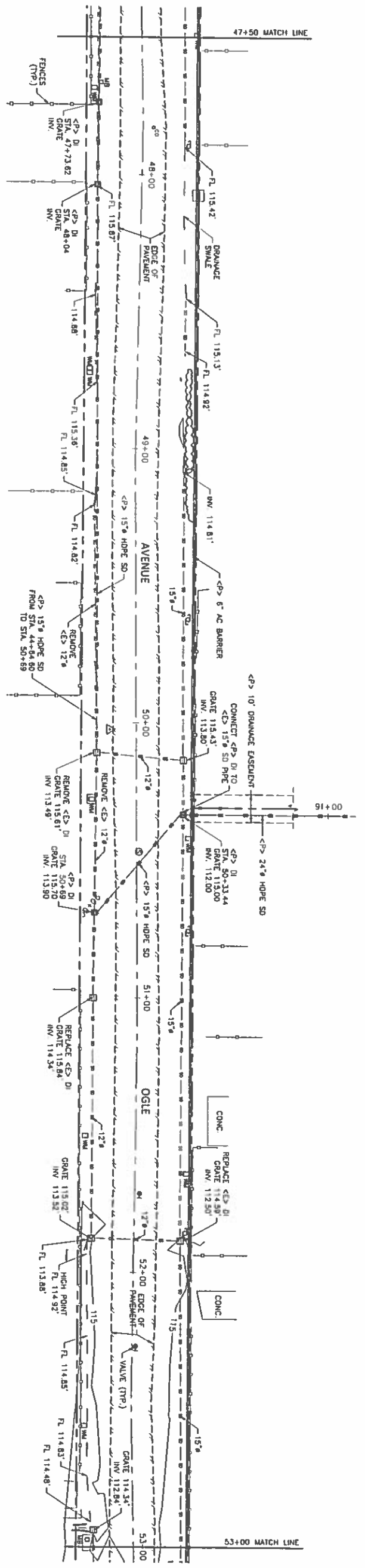


HYDROLOGY STUDY
BELLEVIEW & OGLE AVENUES
 Rio Dell CA. APN: VARIES
OGLE AVENUE
STA. 40+00 TO STA. 47+50
 For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562

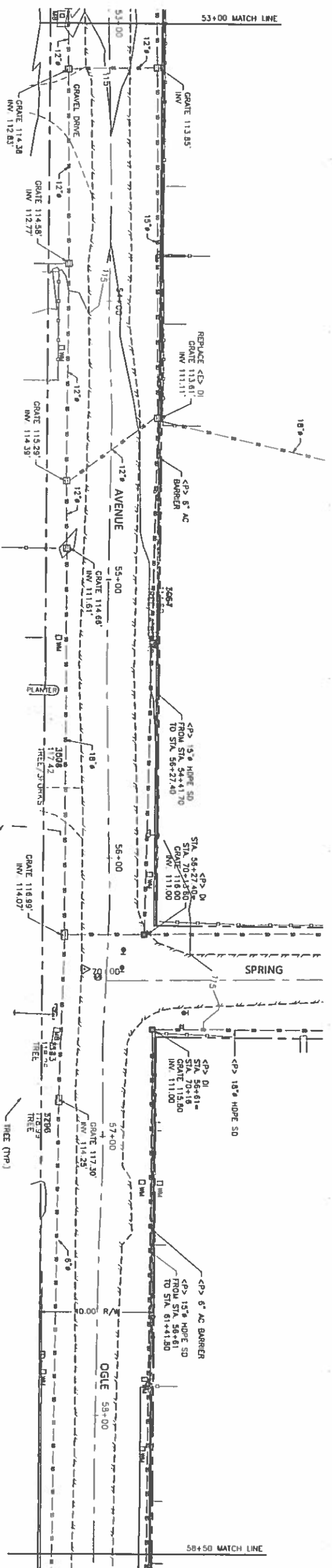
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 Phone (707) 725-6928

REVISIONS	BY

Date OCT 16 '15
 Scale AS NOTED
 Design DAR
 Drawn DAR
 Job COR1402
 Sheet 5



OGLE AVENUE STA. 47+50 TO STA. 53+00
SCALE 1"=20'



OGLE AVENUE STA. 53+00 TO STA. 58+50
SCALE 1"=20'

LEGEND

- RIGHT OF WAY/PROPERTY LINE
- - - - - EDGE OF PAVEMENT
- - - - - PAVEMENT CENTERLINE
- - - - - FENCES
- - - - - DRAINAGS
- - - - - DRAINAGE SWALES
- - - - - STORM DRAIN LINE
- - - - - DRAINAGE ALLEYS
- - - - - WATER WAVES
- - - - - SPUR MANHOLE
- - - - - BRUSH/VEGETATION
- - - - - TREES



PRELIMINARY

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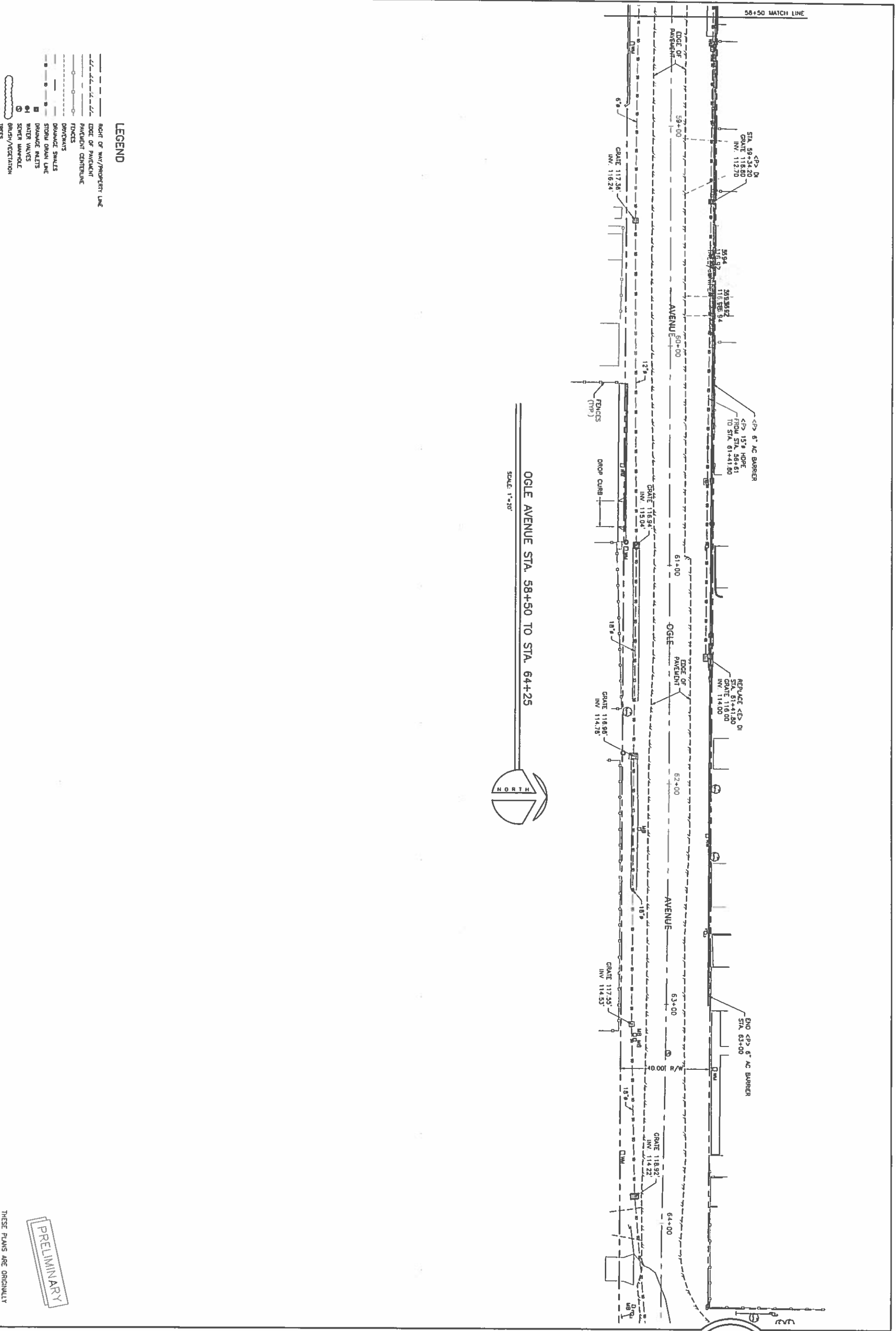
1 INCH

REVISIONS	BY

HYDROLOGY STUDY BELLEVUE & OGLE AVENUES		
Rio Dell CA.	APN: VARIES	
OGLE AVENUE STA. 47+50 TO STA. 58+50		
For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562		

	WHITCHURCH ENGINEERING, INC.	Phone (707) 725-6926
810 9th Street Fortuna, California 95540		

Date	OCT 16 '15
Scale	AS NOTED
Design	DAR
Drawn	DAR
Job	COR14-02
Sheet	6



LEGEND

- RIGHT OF WAY/PROPERTY LINE
- - - - - EDGE OF PAVEMENT
- - - - - PAVEMENT CENTERLINE
- - - - - FENCES
- - - - - DRAINWAYS
- - - - - DRAINAGE SWALES
- - - - - STORM DRAIN LINE
- - - - - DRAINAGE INLETS
- WATER VALVES
- SEWER MANHOLE
- BRUSH/VEGETATION TRAPS

OGLE AVENUE STA. 58+50 TO STA. 64+25
SCALE: 1"=20'



REVISIONS	BY

HYDROLOGY STUDY
BELLEVIEW & OGLE AVENUES
APN: VARIES
RIO DELL CA.

OGLE AVENUE
STA. 58+50 TO STA. 64+25

For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562

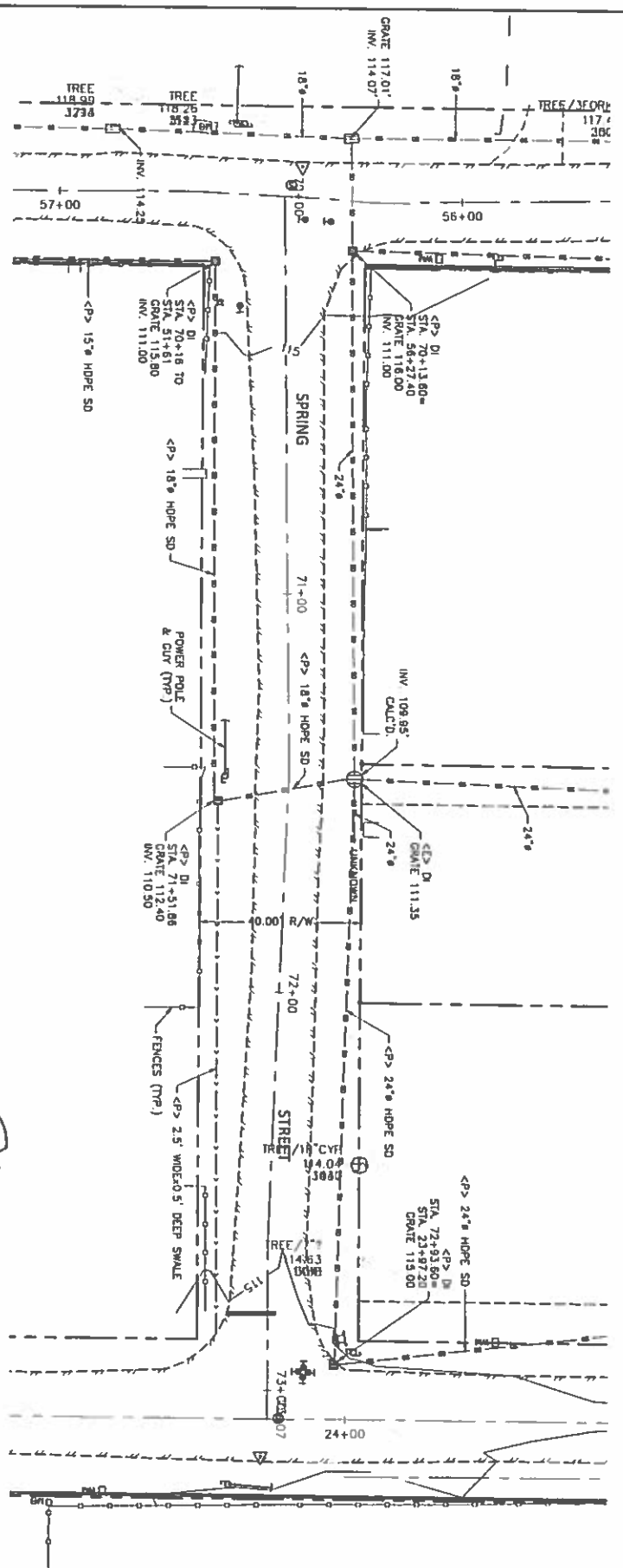
WHITCHURCH ENGINEERING, INC.
810 9th Street Fortuna, California 95540
Phone (707) 725-6928

PRELIMINARY

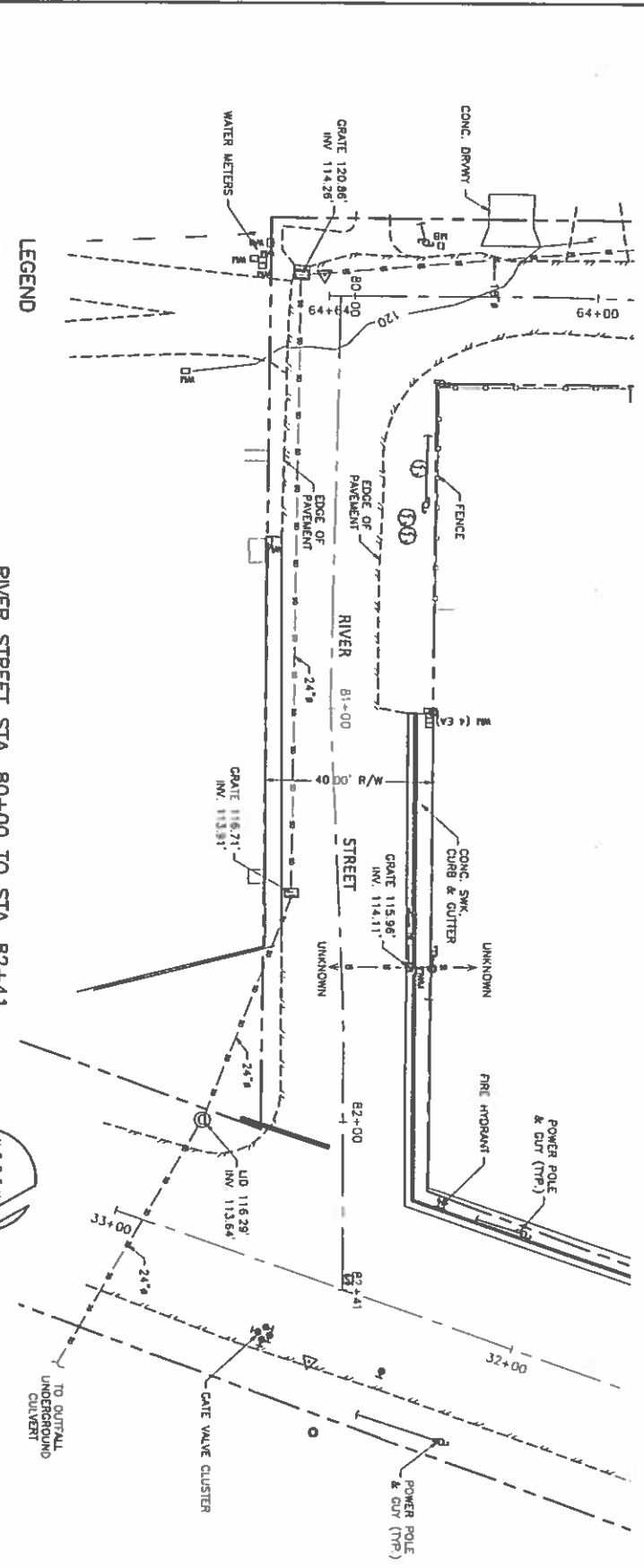
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1 INCH

Date	OCT 16 '15
Scale	AS NOTED
Design	DAR
Drawn	DAR
Job	COR1402
Sheet	7



SPRING STREET STA. 70+00 TO STA. 73+07
SCALE 1"=20'



RIVER STREET STA. 80+00 TO STA. 82+41
SCALE 1"=20'

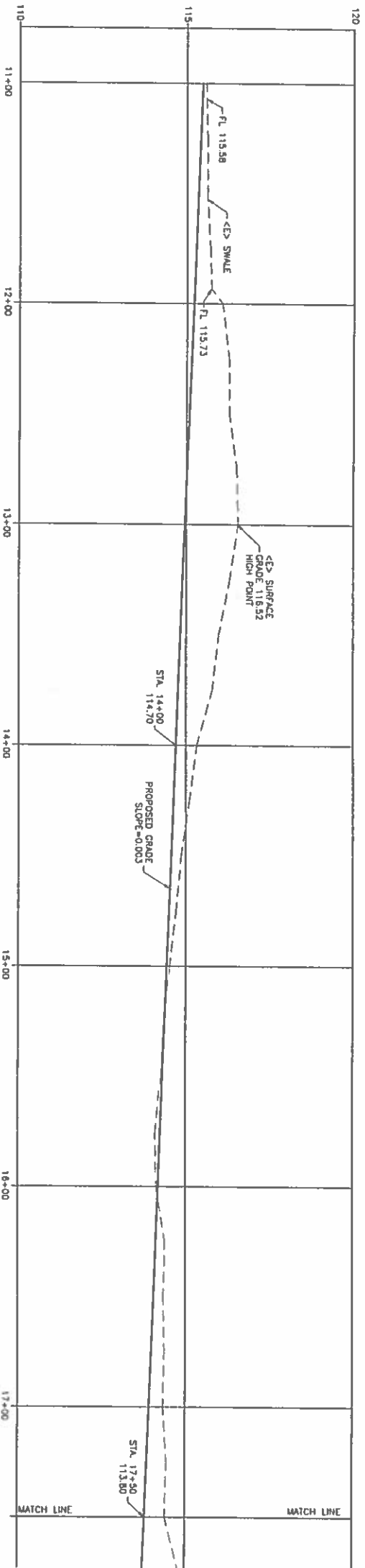
- LEGEND**
- RIGHT OF WAY/PROPERTY LINE
 - - - - - EDGE OF PAVEMENT
 - - - - - PAVEMENT CENTERLINE
 - - - - - FENCES
 - - - - - DRAINAGE SWALES
 - - - - - STORM DRAIN LINE
 - - - - - DRAINAGE MELTS
 - WATER VALVES
 - ⊕ SEWER MANHOLE
 - BRUSH/VEGETATION
 - TREES

PRELIMINARY

1" = 1" INCH

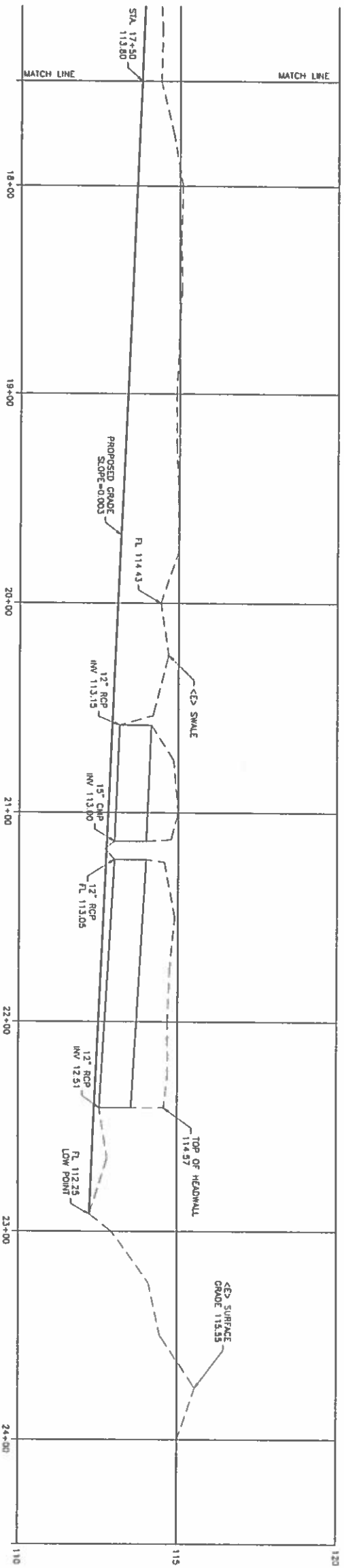
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<p>HYDROLOGY STUDY BELLEVUE & OGLE AVENUES</p> <p>Rio Dell CA APN: VARIES</p> <p>SPRING ST. STA. 70+00 TO STA. 73+07 RIVER ST. STA. 80+00 TO STA. 82+41</p> <p>For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562</p>	<p>WHITCHURCH ENGINEERING, INC. 810 9th Street Fortuna, California 95540 Phone (707) 725-6926</p>	<table border="1"> <tr> <th>REVISIONS</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS	BY								
REVISIONS	BY											
<p>Date: OCT 16 '15</p> <p>Scale: AS NOTED</p> <p>Design: DAR</p> <p>Drawn: DAR</p> <p>Job: COR1402</p> <p>Sheet: 8</p>	<p>8</p>	<p>44</p>										



BELLEVIEW AVE PROFILE • SWALE ±17' L STA. 11+00 TO STA. 17+50

SCALE: 1"=30' HORIZ
1"=2' VERT.



BELLEVIEW AVE PROFILE • SWALE ±17' L STA. 17+50 TO STA. 24+00

SCALE: 1"=30' HORIZ
1"=2' VERT.

REVISIONS	BY

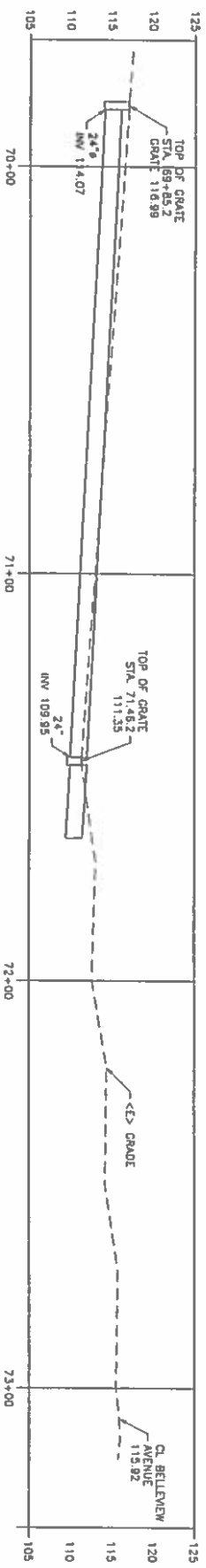
WHITCHURCH ENGINEERING, INC.
 610 9th Street Fortuna, California 95540 Phone (707) 725-6926

HYDROLOGY STUDY
 BELLEVIEW & OGLE AVENUES
 Rio Dell CA. APN: VARIES
BELLEVIEW AVE PROFILE STA. 11+00 TO STA. 24+00
 For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562

Date	OCT 16 '15
Scale	AS NOTED
Design	DAR
Drawn	DAR
Job	COR1402
Sheet	9

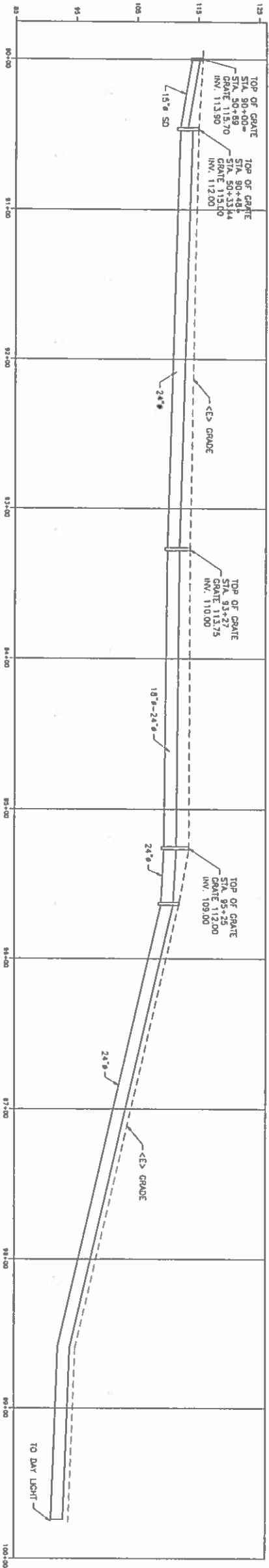
PRELIMINARY

THESE PLANS ARE ORIGINALLY
 PRINTED ON 22"x34" PAPER.
 1"=1" INCH



SPRING STREET PROFILE @ ±17' L STA. 69+85 TO STA. 73+25

SCALE: 1"=20' HORIZ.
1"=3' VERT.



PROFILE @ STA. 90+00 TO STA. 99+74

SCALE: 1"=40' HORIZ.
1"=10' VERT.

REVISIONS	BY

WHITCHURCH ENGINEERING, INC.
810 9th Street Fortuna, California 95540 Phone (707) 725-6926

HYDROLOGY STUDY
BELLEVIEW & OGLE AVENUES
Rio Dell CA. APN VARIES
SPRING STREET PROFILE STA. 70+00 TO STA. 73+25/DETAILS
For: City of Rio Dell 675 Wildwood Ave, Rio Dell CA. 95562

Date OCT 16 '15
Scale AS NOTED
Design DAR
Drawn DAR

PRELIMINARY

10

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1"=1 INCH