CITY OF WEST LINN
MAPLETON WATER MAIN RELOCATION
PW-13-09

BENCHMARK

West Linn Benchmark Locations, NGS Survey Location
Station Name: SALAMO
Location: THE STATION IS LOCATED ABOUT 16.7 KM (10.4 MI) SOUTH OF PORTLAND, 2.7 KM (1.7 MI) WEST OF WEST LINN, 0.3 KM (0.2 MI) NORTHERLY OF PARKER ROAD, ON TOP OF A HILL, AT THE SOUTHEAST CORNER OF THE ROSEMONT RIDGE MIDDLE SCHOOL GROUNDS, IN T.2.S., R.1.E., W.M.
USGC Quad: CANBY (1985). PID: AJ8196. State/County: OR/CLACKAMAS
Station Name: SHERPHERD
Location: THE STATION IS LOCATED ABOUT 13.4 KM (8.3 MI) SOUTH OF PORTLAND, 2.7 KM (1.7 MI) SOUTH OF LAKE OSWEGO, ON STATE HIGHWAY 43, AT THE ENTRANCE OF MARYLHURST UNIVERSITY, IN T.2.S., R.1.E.W.M.
USGC Quad: LAKE OSWEGO (1984). PID: AJ8198. State/County: OR/CLACKAMAS

Vinicity Map

Site Location

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UTILITY PROVIDERS

WATER:	CITY OF WEST LINN	PUBLIC WORKS	503-656-6081
STORM:	CITY OF WEST LINN	PUBLIC WORKS	503-656-6081
SEWER:	CITY OF WEST LINN	PUBLIC WORKS	503-656-6081
POWER:	PGE	MIKE HIEB	503-570-4412
STREET LIGHTS:	PGE	LORI SWANSON	503-742-8322
GAS:	NW NATURAL	JUDITH RANDLE	503-226-4211x2357
CATV:	COMCAST	KENNETH WILLS	360-793-9981
PHONE:	QWEST	KENNETH SCIULLI	503-242-0304

LEGEND

- NEW WATER MAIN
- EXISTING WATER LINE
- ABANDON WATER LINE
- FUTURE LOT WATER LINE
- SANITARY SEWER LINE
- STORM LINE
- GAS LINE
- UNDERGROUND ELECTRIC
- POWER POLE
- OVERHEAD LINES
- TELEPHONE LINE
- FIBER OPTIC LINE
- CTV LINE
- NEW FIRE HYDRANT
- NEW WATER VALVE
- NEW WATER METER & BOX
- SANITARY SEWER MANHOLE
- EXISTING HYDRANT (TO BE REMOVED)

GENERAL NOTE

All work within the public right-of-way shall conform to the current City of West Public Works Design Standards, Standard Construction Specifications, and Standard Drawings.

GIS BASE MAP INFORMATION

Data Source: West Linn GIS
OGIC Disclaimer: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary date and information sources to ascertain the usability of the information.

ATTENTION

Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

REGISTERED PROFESSIONAL ENGINEER
87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

COVER SHEET

PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

REVISION

DATE	DESCRIPTION

COVER SHEET
SCALE:
CS

CITY OF WEST LINN
MAPLETON WATER MAIN RELOCATION
PW-13-09

GENERAL NOTES:

1. All construction shall conform to the latest City of West Linn Public Works Standard Construction Specifications and Standard Drawings. The ODOT standard specifications for construction will apply for measurement and payment.
2. This set of plans has been reviewed for compliance with City of West Linn requirements prior to issuance for construction. However such review shall not prevent the City Engineer from requiring correction of errors or omissions in plans found to be in violation of any law or ordinance.
3. The City Engineer does not warrant any quantities shown on these plans.
4. The Engineering Division, Inspection Section shall be notified twenty-four (24) hours prior to any construction work by telephone at 503-722-5501. Any work concealed without inspection shall be subject to removal and replacement at the Contractor's expense.
5. Any approved set of plans must be available on the job site at all times. The contractor's representative (capable of communicating with the City's representatives) shall be on the job at all times the work is being pursued.
6. The Contractor is responsible to provide emergency telephone numbers to the City of West Linn at time of receiving Project Notice to Proceed and have personnel available 24-hours a day to respond to emergencies. If the City is required to respond and make emergency repairs on behalf of the Contractor, the Contractor is responsible to reimburse the City for all costs incurred.
7. It is understood that there will be interfering utilities, service laterals, and other underground pipes, drains or structures encountered on underground projects that are not shown or are shown incorrectly on the plans and/or have not been previously discovered in the field. Contractor agrees this is a normal and usual occurrence in the construction of underground improvements. Furthermore, bidders understand and agree that work in some cases must be done in close proximity to said utilities and underground pipes, drains, and structures which may require a change in operations and may cause sloughing of the trench, additional traffic control, additional pavement and backfill costs, and time. The contractor agrees that a reasonable number of these occurrences are usual and ordinary on underground projects and are reflected in the bid and plan of operation.
8. It is the responsibility of the contractor to obtain any and all other permits and meet any requirements set forth by other agencies or utilities which have jurisdiction at the contractors expense.

WATER NOTES:

1. Water and sanitary sewer line crossings shall conform with the Oregon Administrative Regulation 333-061-0050(9).
2. When a water main is installed under a stream or other watercourse, a minimum cover of 30 inches shall be provided over the pipe. Where the watercourse is more than 15 feet wide, the pipe shall be of special construction with flexible watertight joints, valves shall be provided on both sides of the crossing so that the section can be isolated for testing or repair, and test cocks shall be provided at the valves.
3. The existing water lines to be taken out of service are marked on the drawings. These lines are to remain in service until the new lines are properly installed and tested, and water services have been connected. Approval from the City Engineer shall be obtained before any line is abandoned. The existing lines shall then be abandoned and their actual location and abandoned designation recorded on all record drawings. Unless called for otherwise, the abandoned lines will remain in the ground. the ends of all pipes which are abandoned shall be plugged with concrete or other methods approved by the City Engineer.
4. The contractor shall remove all existing valve boxes, meter boxes, hydrants and other fittings required to properly perform the scope of work, or as shown in the drawings. All such materials shall be transported to an area designated by the City and stockpiled. Materials shall be removed and handled in such a manner which will prevent damage. All other existing valves, meters and hydrants not used in the new system or not specified for removal will be removed by the city after the new system is in operation. Salvaged material shall remain the property of the City.
5. The abandoned existing pipe is to remain in the ground, unless otherwise specified. The contractor shall apply black bag the same day to all existing hydrants when permanently disconnected from service.
6. When working with a/c pipe, the contractor shall take all precautions necessary to reduce airborne asbestos during construction. See technical provision #1.
7. Pipe bedding and trench backfill are incidental to pipe.
8. It is the responsibility of the contractor to schedule water and sewer testing with the City inspector, per West Linn Standards.
9. All ductile iron pipe to be polyethylene encased. Install polyethylene encasement according to the AWWA C105 and the manufacturer's recommendations.
10. The top 6" of the trench shall be backfilled with controlled low strength material, Class E backfill, per ODOT Section 00442. Trench to be backfilled with 6" controlled low strength material at the end of each day.
11. All water services shall be installed with a 2" schedule 40 PVC sleeve extending 10 feet beyond and across future LOT water line. PVC sleeve shall be installed with no additional compensation and is part of the water service pay item. PVC sleeve shall be sealed water tight against copper service at ends of sleeve with electricians seal putty.

TRAFFIC CONTROL GENERAL NOTES:

1. No road closure shall be allowed without City Engineer's prior approval as delegated by the City Manager.
2. The Contractor shall provide traffic control plan for City Approval
3. Traffic control shall conform to the ODOT Temporary Traffic Control Handbook and MUTCD. The Contractor shall submit a Traffic Control Plan to the City of West Linn Engineering Division for review and acceptance a minimum of 48-hours prior to construction. A copy of the accepted Traffic Control Plan must remain on the job site at all times.
4. Limit the length of the construction zone on Mapleton Dr. to 150 feet.
5. Provide pedestrian access at all times to all trails in MSY Park from the end of Mapleton Drive.
6. Construction vehicles shall only make right turns in or out of Mapleton Drive at the intersection of Mapleton Drive and Highway 43 (no left turns allowed.)
7. Maintain vehicular, bicycle, pedestrian and emergency vehicle access to area homes throughout construction.
8. Construction vehicles may not use Nixon Avenue.

CONSTRUCTION NOTES:

1. Contractor shall provide erosion control best management practices per City of West Linn Standards. Provide catch basin protection and continual sweeping so that no mud, sediment , or rock is left on the streets, with no additional compensation.
2. The contractor is responsible for all construction surveying and construction staking for the project with no additional compensation.
3. Water used for construction must be filled at the designated fire hydrant located in front of second driveway entrance at the Willamette Market Place on 8th Avenue - West of 10th St and South of I-205. No hydrant meters will be provided, except for when testing the water main.
4. Controlled low strength materials, Class E backfill, **shall not exceed** a 28-day compressive strength of 150 PSI. Material that exceeds shall be removed and replaced at no additional cost.
5. Construction staging for this project will be located on the LOT Water Treatment Plant property . Exact location to be determined.
6. Contractor shall provide ingress and egress to residential driveways with limited delay.
7. Minimize reverse direction travel and use broadband, ambient-senseing backup alarms on all equipment requiring backup indicators as permissible by OSHA requirements.
8. Use properly sized and maintained mufflers, engine intake silencers, and engine enclosures (for cranes, excavators, generators, etc.). Equipment shall be equipped with a "residential" or "critical" grade silencer if possible.
9. Provide off-street / off-site parking for construction workers during construction. Some on-site parking for construction supervisor, inspector and project management staff will be acceptable.
10. Waterline to be installed in phases:
    Phase 1: Station 14+55 to 49+70
    Phase 2: Station 10+00 to 12+60
    Phase 3: Station 12+60 to 14+55
11. Working Hours:
    7:00 AM - 5:00 PM Monday - Friday
    9:00 AM - 5:00 PM Saturday - Sunday & Holidays

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
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FAX: (503) 656-4106

REGISTERED PROFESSIONAL ENGINEER
87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

GENERAL NOTES

PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

REVISION

DATE	DESCRIPTION

GENERAL NOTES
SCALE:
GN

WATERLINE QUANTITY SUMMARY

Pay Item Number	DESCRIPTION	A.1.1	A.1.2	A.1.3	A.1.4	A.1.5	A.1.6	A.1.7	A.1.8	A.1.9	TOTAL	
1	MOBILIZATION/ DEMOBILIZATION											LS
2	TRAFFIC CONTROL											LS
3	HYDRANT REMOVAL	1				1		1	1	1	5	LF
4/5	4" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT									260	260	LF
6/7	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	10	7		8	10	20	10	75	75	150	LF
8/9	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	415	400	200	400	500	520	500	500	210	3645	LF
10	12" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	85									85	EA
11	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	6	8	2	9	19	11	8	5	6	74	EA
12	4" GATE VALVE, VB &C, FLG x MJ, PER DETAIL WL-311									1	1	LF
14	8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	2		2		1	3	1	2		11	EA
15	12" BUTTERFLY VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	2									2	EA
18	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	1	1		1	1	2	1	1	1	9	EA
19	16" STEEL PIPE CASING			40							40	LF

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87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

QUANTITY SUMMARY

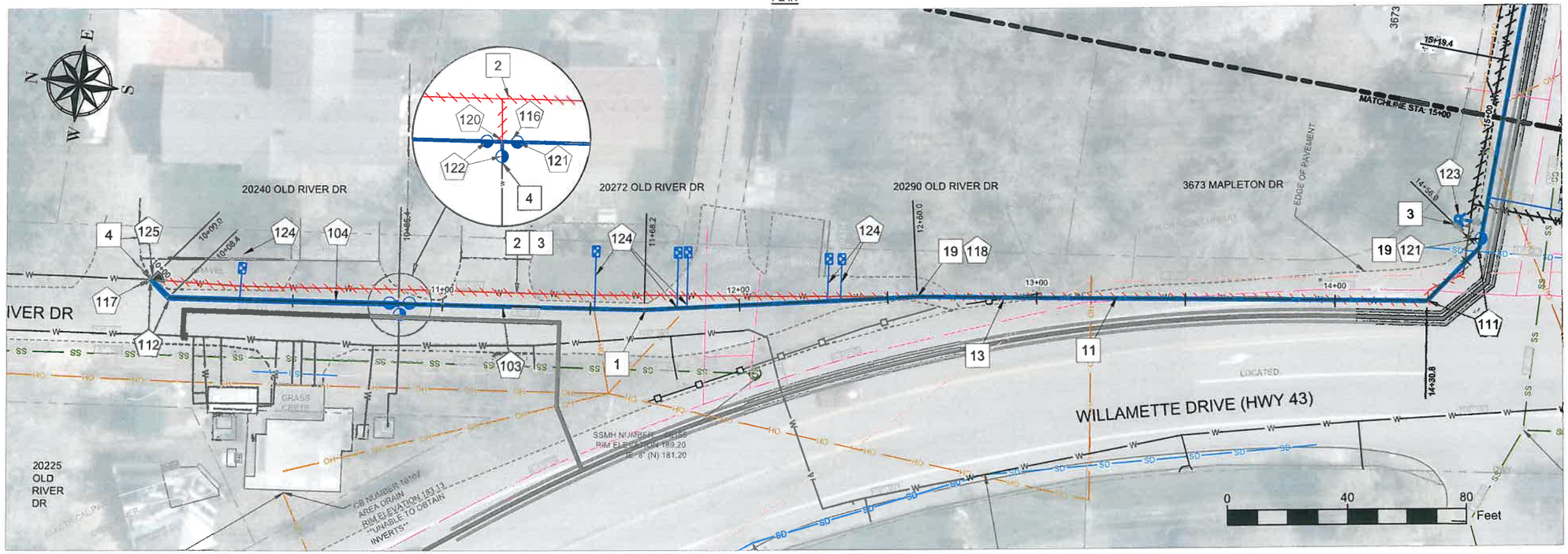
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

REVISION

DATE	DESCRIPTION
11/06/2013	Quantity Revision

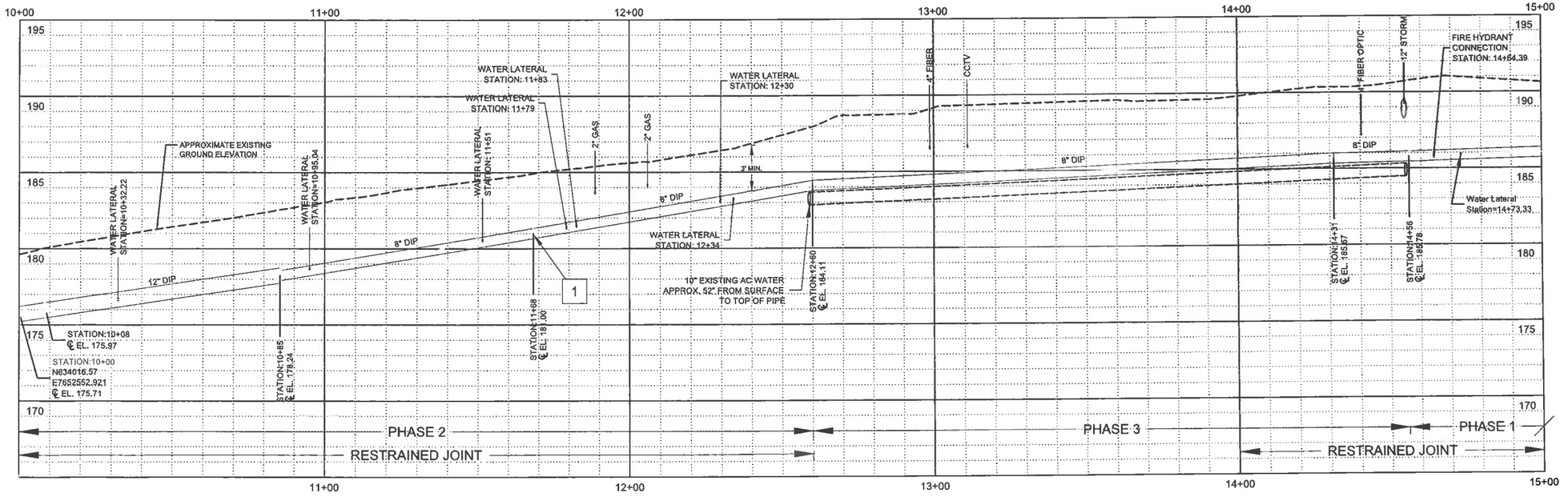
QUANTITY SUMMARY
SCALE:
QS

PLAN



OLD RIVER DR

PROFILE



GENERAL CONSTRUCTION NOTES

4	CONNECT NEW WATERLINE TO EXISTING WATERLINE
11	PHASE 3 - NEW 8" DIP TO BE INSTALL IN EXISTING 10" AC PIPE ALIGNMENT FROM STATIONING 12+60 TO 14+56. TO BE INSTALLED ONCE PHASE 2 FROM 10+00 TO 12+60 AND PHASE 1 FROM 14+55 TO 49+70 ARE IN SERVICE. EXISTING AC PIPE WILL BE HANDLED PER OAR 1926.1101.

GENERAL CONSTRUCTION NOTES

13	EXISTING GUARDRAIL TO BE LEFT IN PLACE
19	TEMPORARY MATERIAL TO BRING PHASE 1 & 2 IN SERVICE SHALL BE INCIDENTAL TO CONSTRUCTION WITH NO ADDITIONAL COMPENSATION

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CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	10
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	415
104	12" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	EA	85
111	8" - 45° MJ ELBOW, RESTRAINED JOINT	EA	2
112	12" - 45° MJ ELBOW, RESTRAINED JOINT	EA	2
116	12"x8" FLG x FLG REDUCER	EA	1
117	12"x10" MJ REDUCER	EA	1
118	10" AC PIPE CUT AND CAP	EA	2
120	12"x12"x12" FLG TEE	EA	1
121	8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	EA	2
122	12" BUTTERFLY VALVE, VB & C, FLG X MJ, PER DETAIL WL-411	EA	2
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	6
125	THRUST BLOCK, PER DETAIL WL-406	EA	1
126	2" BLOW-OFF ASSEMBLY, PER DETAIL WL-404A	EA	1

GENERAL CONSTRUCTION NOTES

1	DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2	EXISTING WATER LINE TO BE ABANDONED IN PLACE
3	CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)

2013 MAPLETON WATERLINE REPLACEMENT

Old River Rd Plan and Profile
STA 10+00 to 15+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN 08, 2013
LANCE E. CALVERT

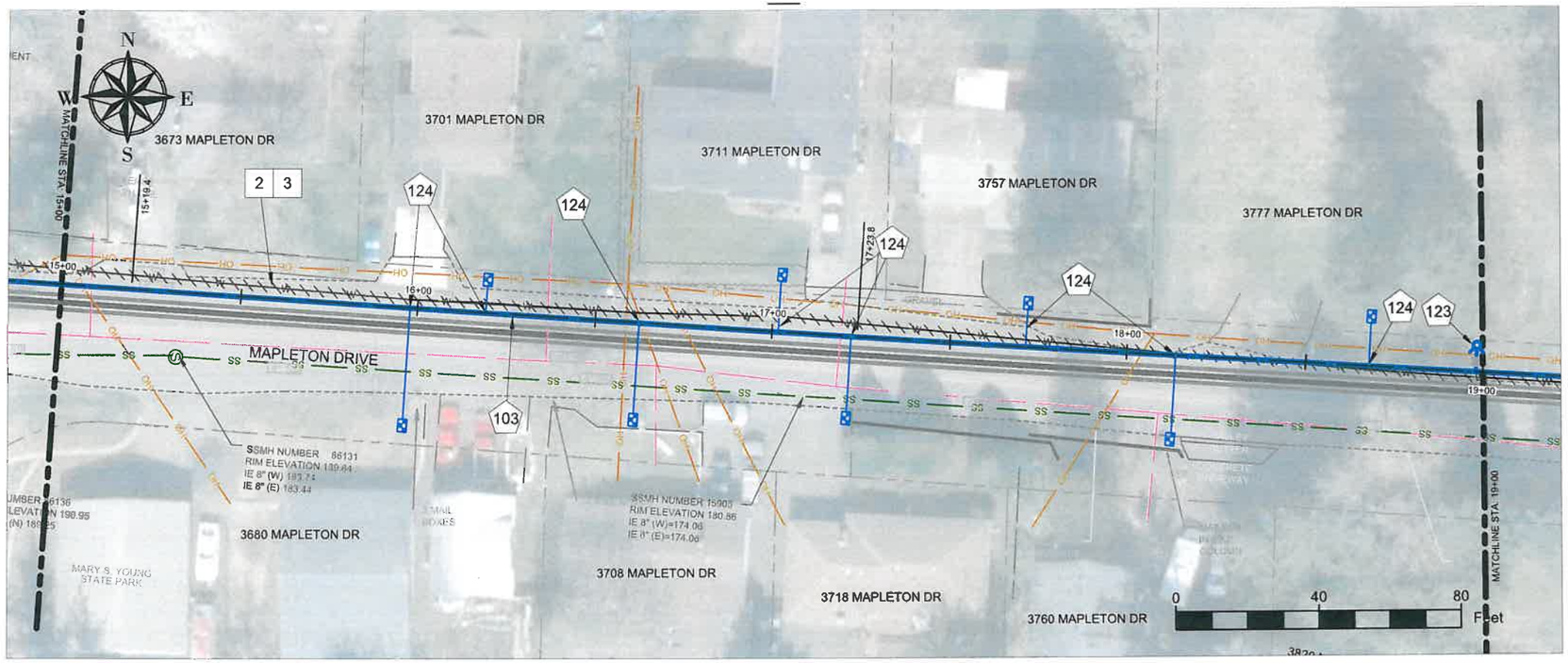
PROJECT NO.:	PW-13-09
DESIGNED BY:	ELAIS
DRAWN BY:	NBRENNAN
CHECKED BY:	LCALVERT
DATE:	11/04/2013

PLAN AND PROFILE

SCALE:

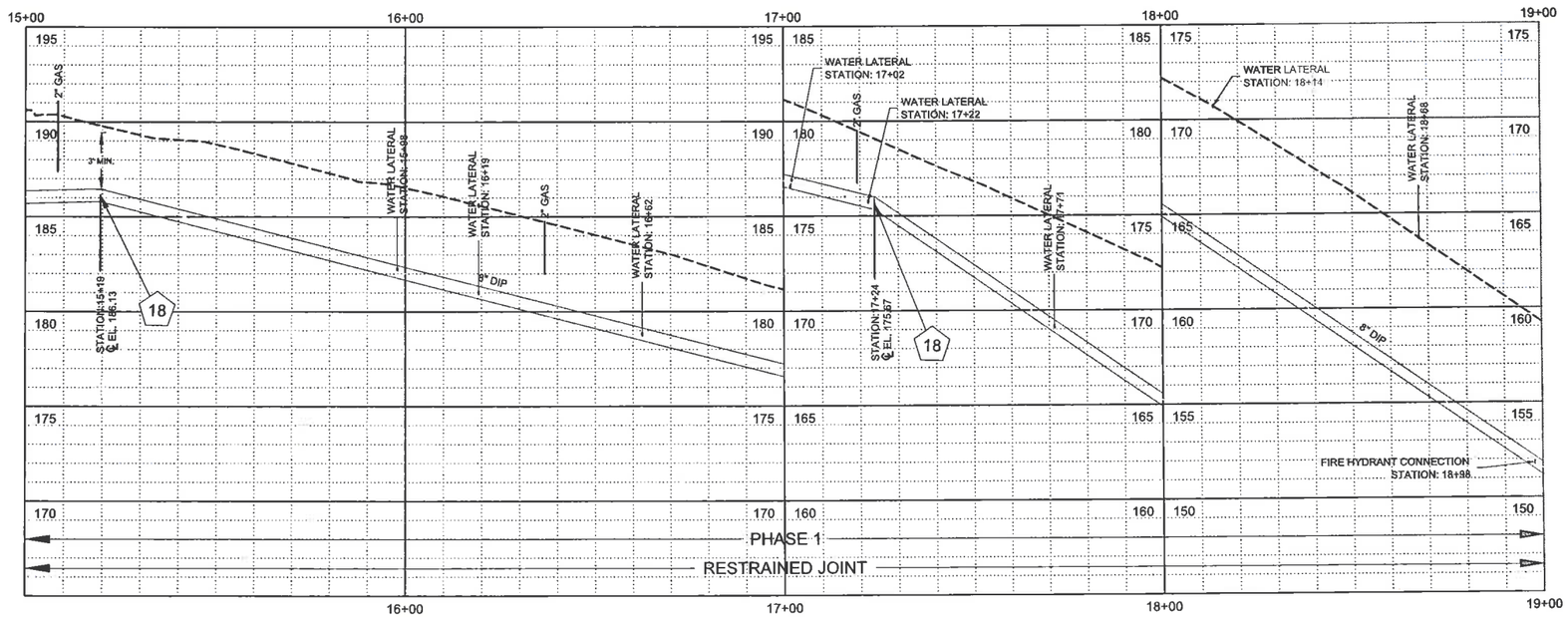
A1.1

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	7
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	EA	400
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	8

GENERAL CONSTRUCTION NOTES

2 EXISTING WATER LINE TO BE ABANDONED IN PLACE

3 CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 15+00 to 19+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

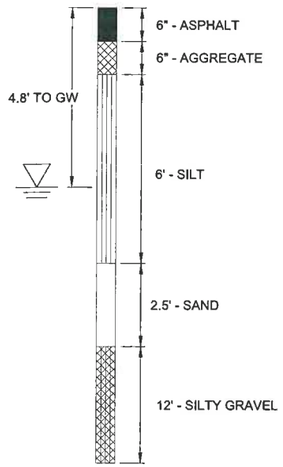
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

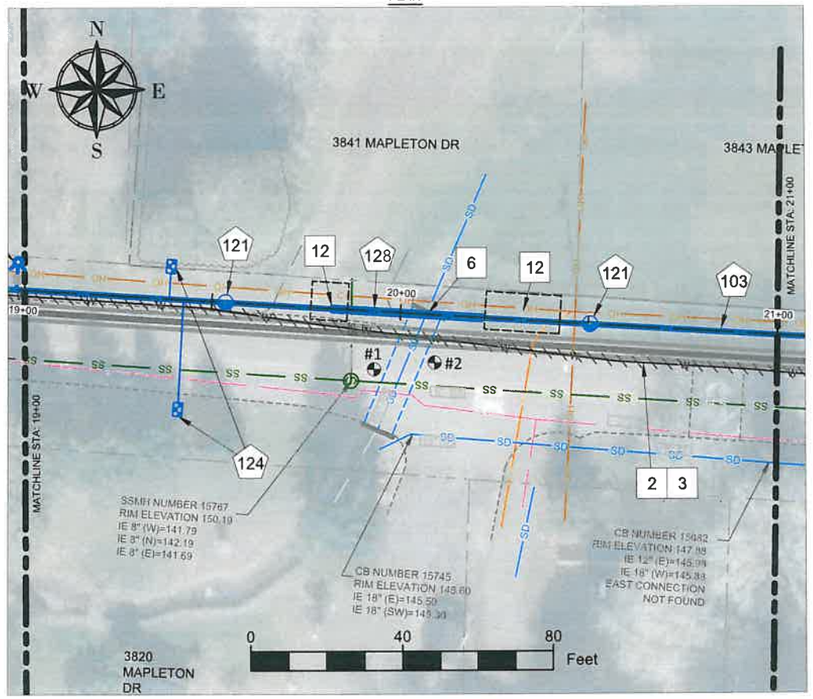
SCALE:

A1.2

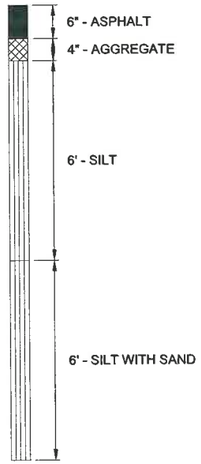
BORING #1



PLAN

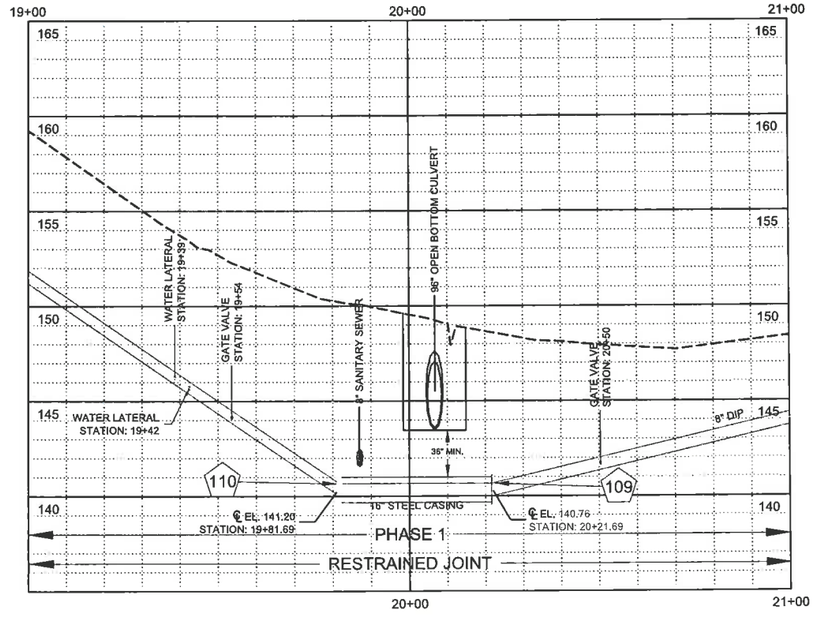


BORING #2



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
103	*8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT*	LF	200
109	*8" - 11.25° MJ ELBOW, RESTRAINED JOINT*	EA	1
110	*8" - 22.5° MJ ELBOW, RESTRAINED JOINT*	EA	1
121	*8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411*	EA	2
124	*REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE*	EA	2
128	*16" STEEL PIPE CASING*	LF	40

GENERAL CONSTRUCTION NOTES

2 *EXISTING WATER LINE TO BE ABANDONED IN PLACE*

3 *CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)*

6 *TRENCHLESS CROSSING, 16" CASING, 40' LONG. CONTRACTOR TO DETERMINE THE LOCATION AND DIMENSIONS OF THE BORING SHAFT*

12 *BACKFILL BORING SHAFTS WITH CONTROLLED LOW STRENGTH MATERIAL PER ODOT SECTION 00442.*

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 19+00 to 21+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
67771PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

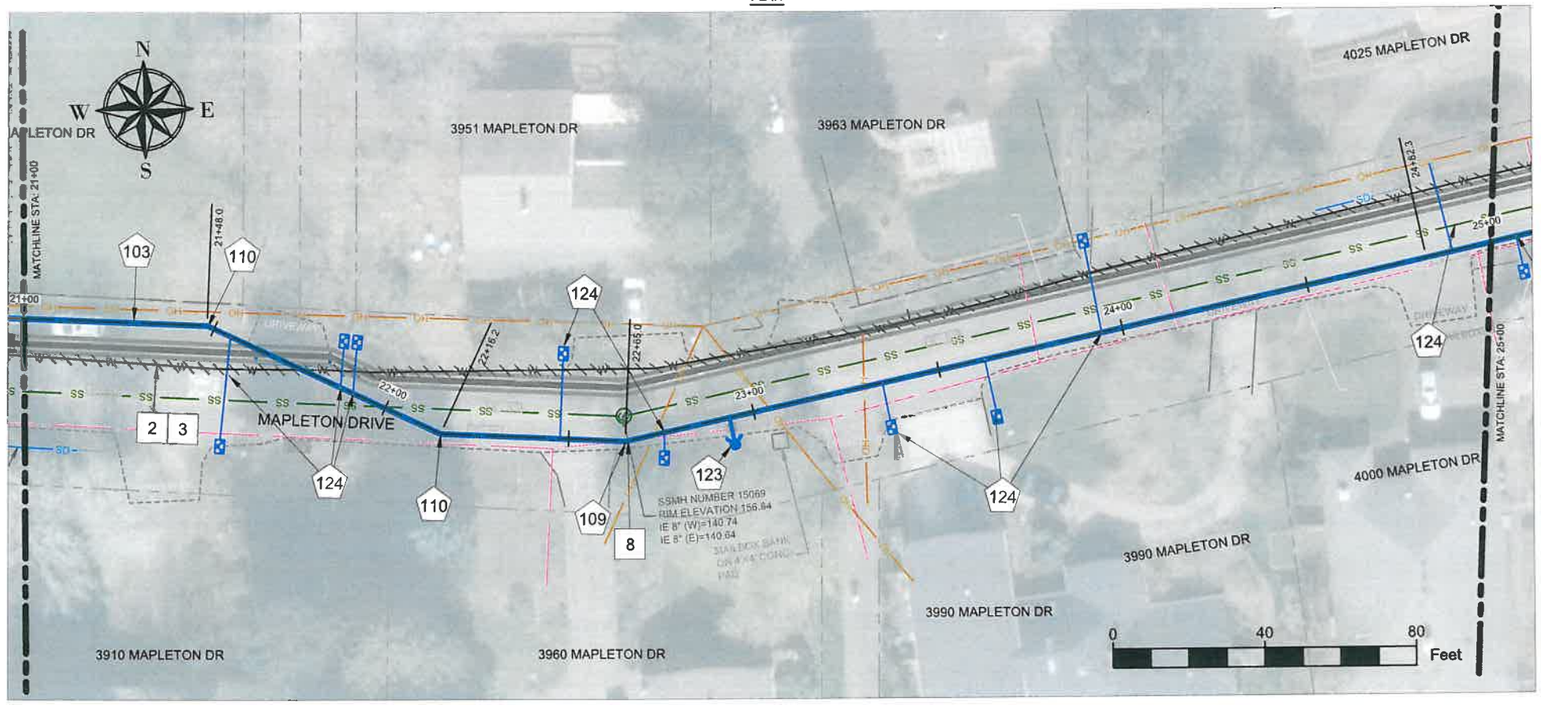
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

SCALE:

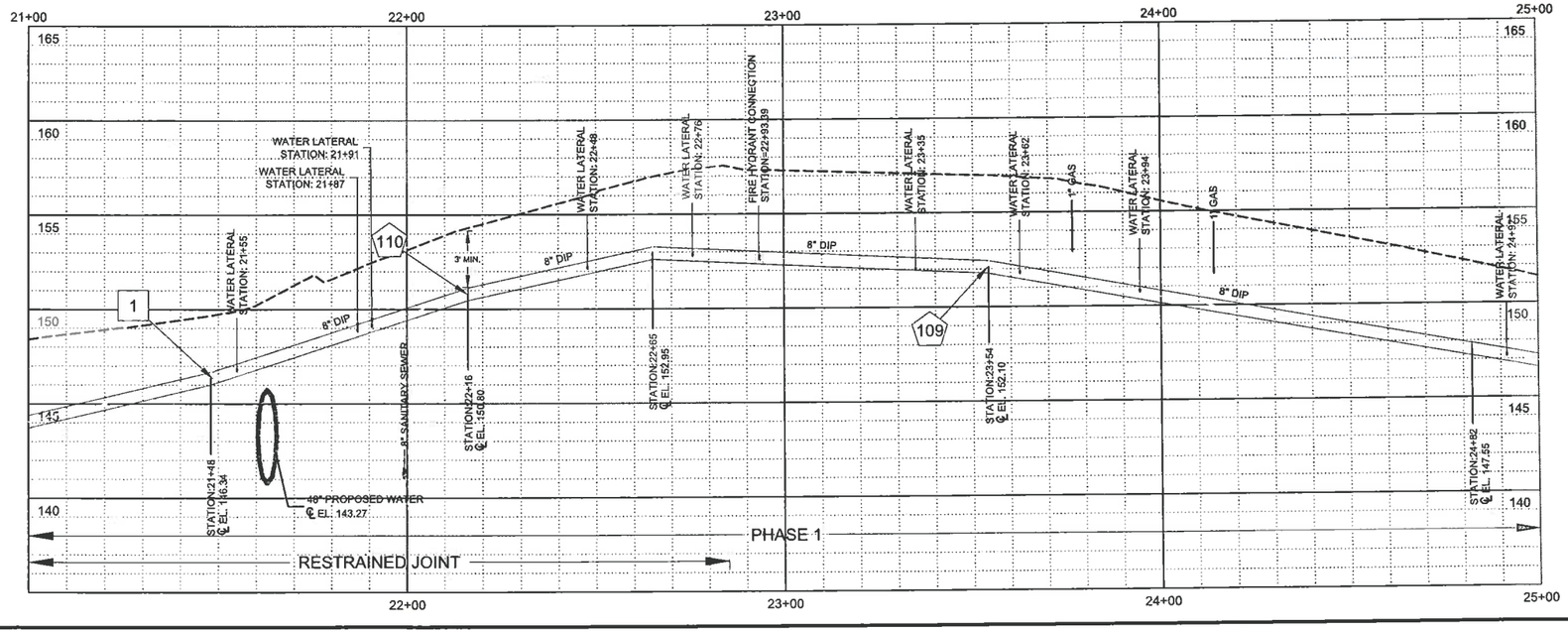
A1.3

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
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WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	8
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	400
109	8" - 11.25° MJ ELBOW, RESTRAINED JOINT	EA	1
110	8" - 22.5° MJ ELBOW, RESTRAINED JOINT	EA	1
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	9

GENERAL CONSTRUCTION NOTES

1. DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2. EXISTING WATER LINE TO BE ABANDONED IN PLACE
3. CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)
8. GAS LINE TO BE RELOCATED BY NW NATURAL

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 21+00 to 25+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 08, 2013
LANCE E. CALVERT

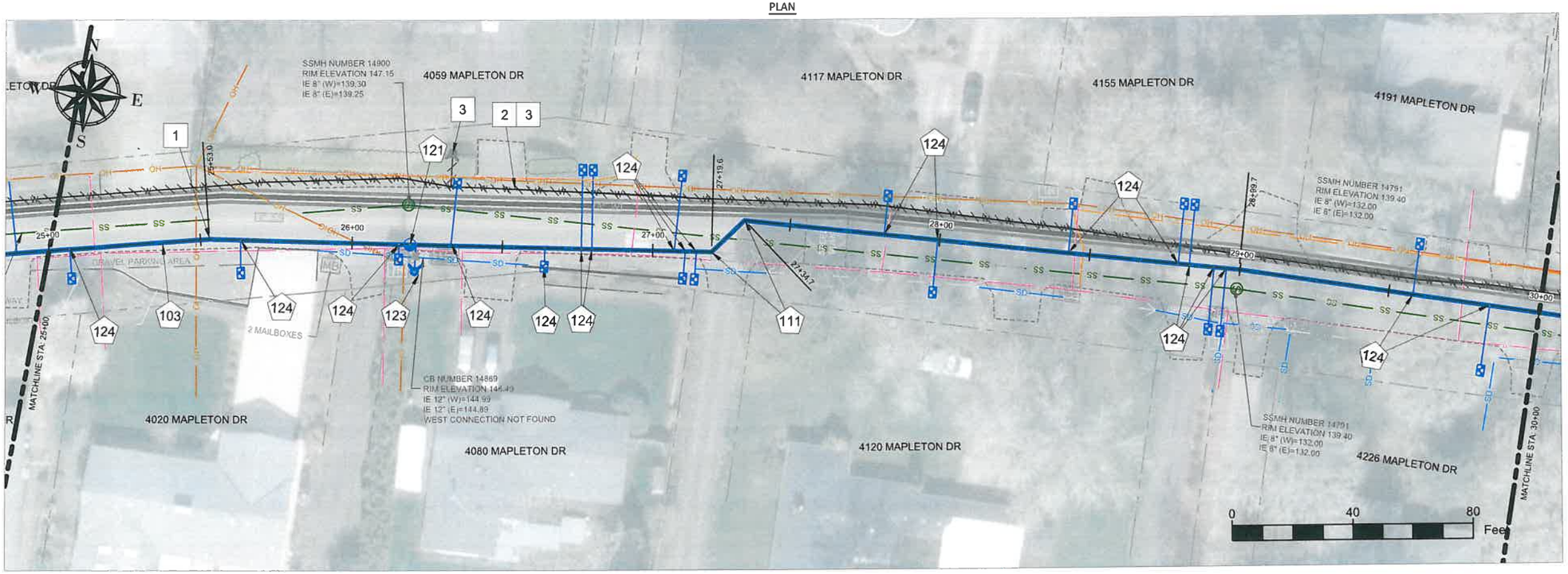
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

SCALE:

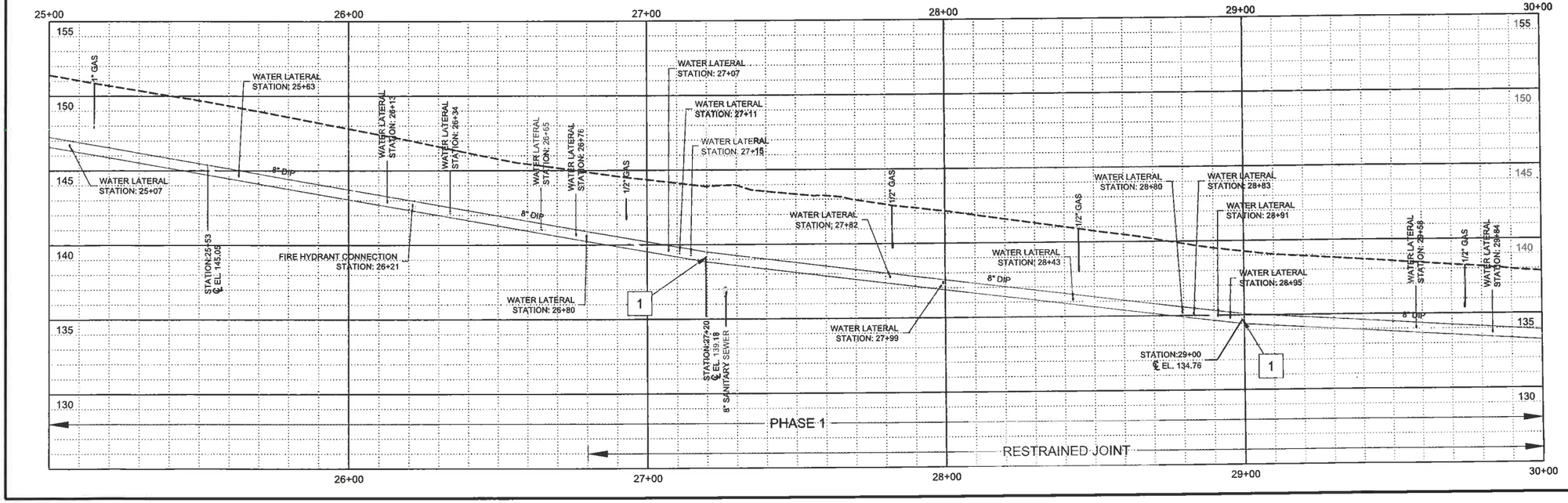
A1.4

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	10
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	500
111	8" - 45° MJ ELBOW, RESTRAINED JOINT	EA	1
121	8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	EA	1
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	19

GENERAL CONSTRUCTION NOTES

1. DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2. EXISTING WATER LINE TO BE ABANDONED IN PLACE
3. CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 25+00 to 30+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

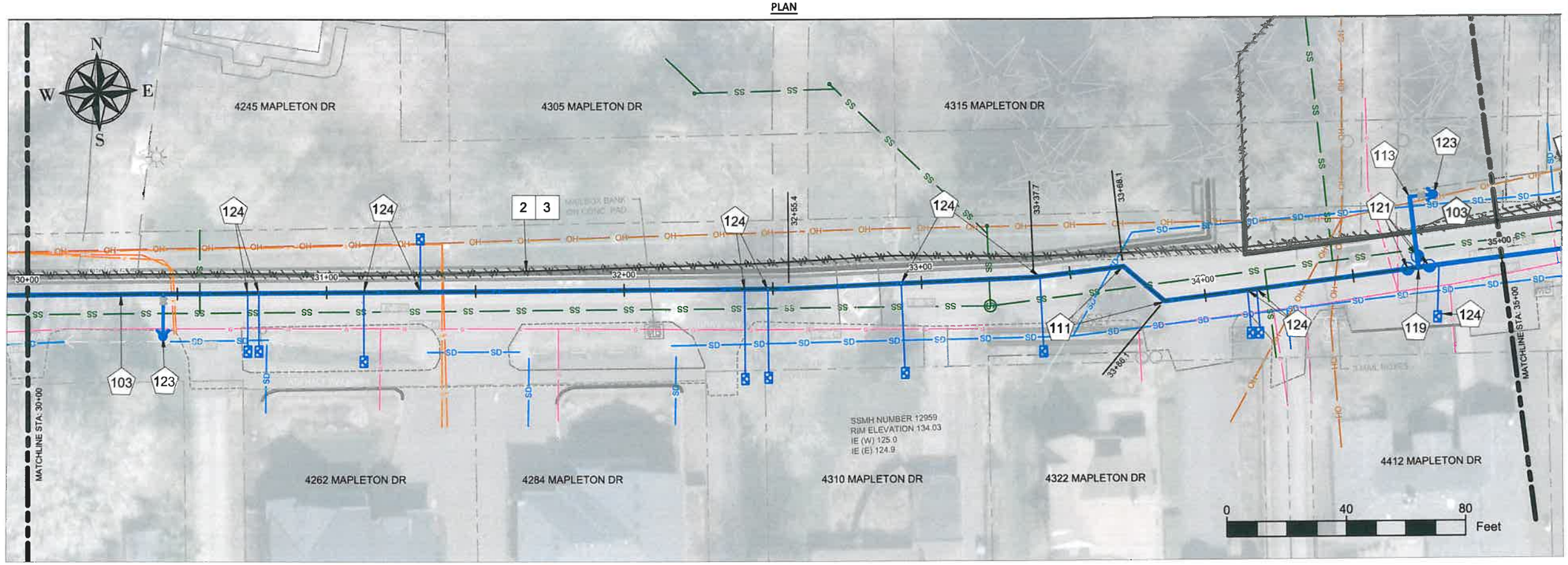
PROJECT NO.:	PW-13-09
DESIGNED BY:	ELAIS
DRAWN BY:	NBRENNAN
CHECKED BY:	LCALVERT
DATE:	11/04/2013

PLAN AND PROFILE

SCALE:

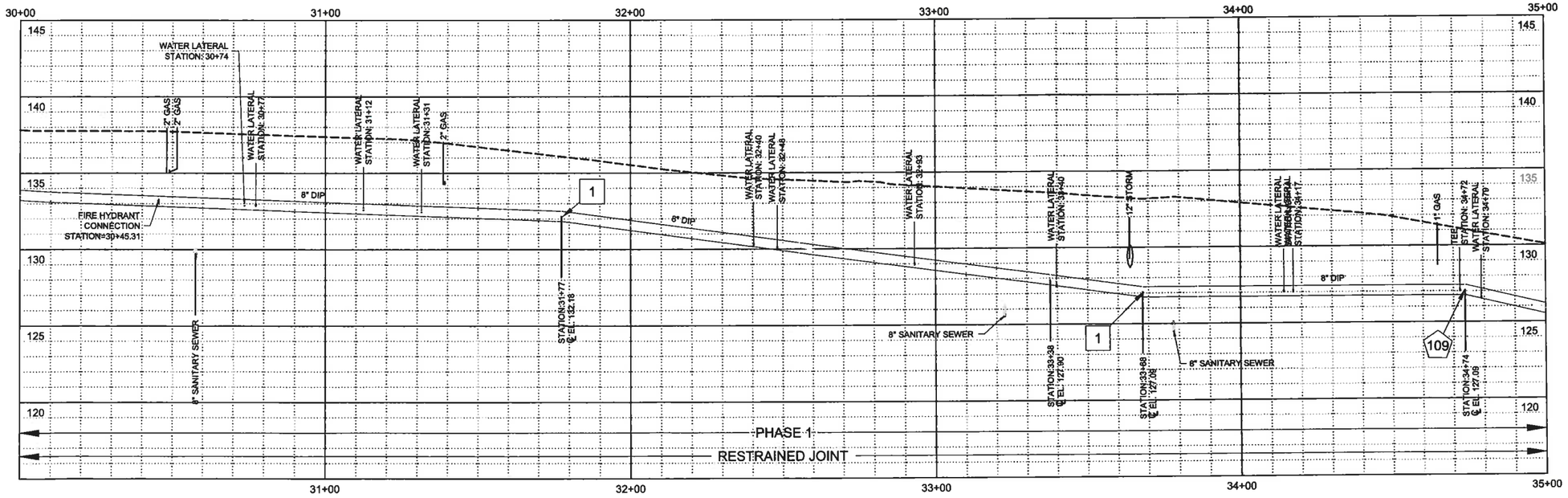
A1.5

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	*6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT*	LF	20
103	*8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT*	LF	520
109	*8" - 11.25° MJ ELBOW, RESTRAINED JOINT*	EA	1
111	*8" - 45° MJ ELBOW, RESTRAINED JOINT*	EA	1
113	*8" PLUG AT FIRE HYDRANT MJ TEE*	EA	1
119	*8"x8"x8" FLG TEE*	EA	1
121	*8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411*	EA	3
123	*FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401*	EA	2
124	*REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE*	EA	11

GENERAL CONSTRUCTION NOTES

1. *DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS*
2. *EXISTING WATER LINE TO BE ABANDONED IN PLACE*
3. *CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)*

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 30+00 to 35+00

REVISION

DATE	DESCRIPTION
11/06/2013	Restrained Pipe Quantity

REGISTERED PROFESSIONAL ENGINEER
87172PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

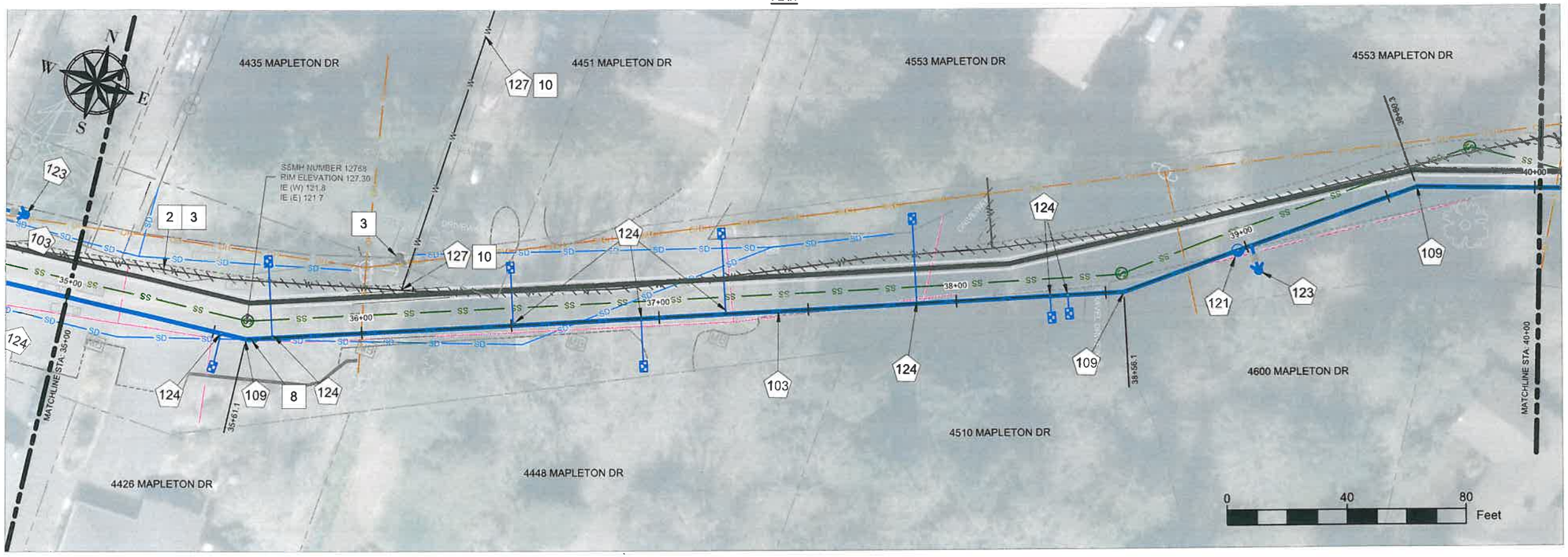
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

SCALE:

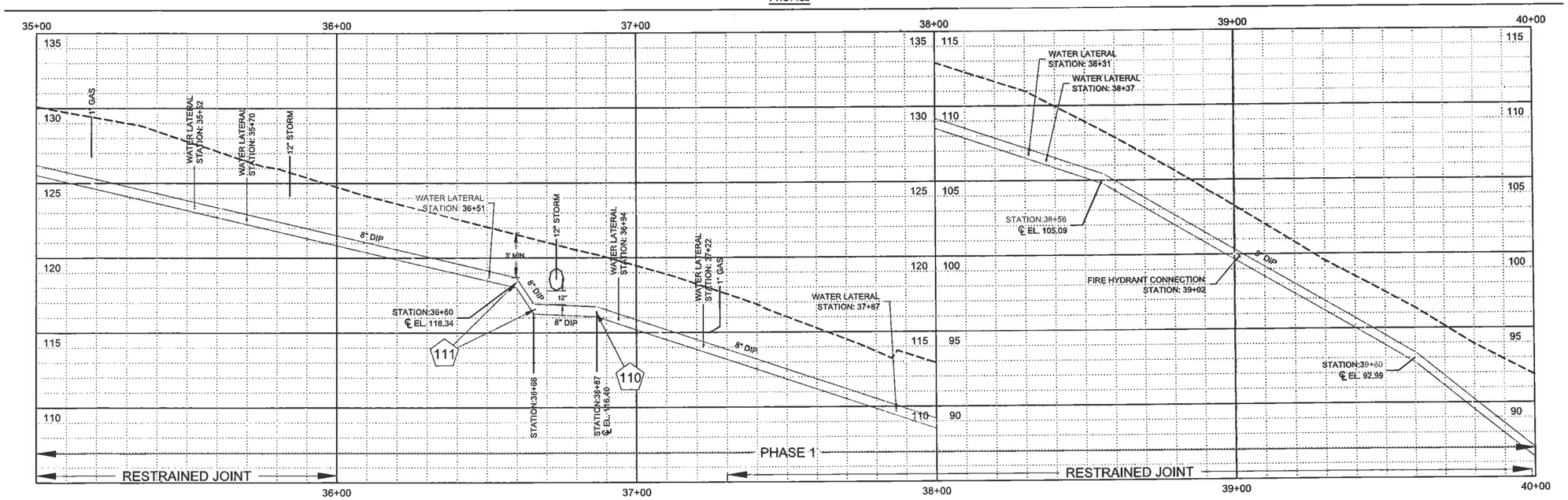
A1.6

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	10
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	500
109	8" - 11.25° MJ ELBOW, RESTRAINED JOINT	EA	3
110	8" - 22.5° MJ ELBOW, RESTRAINED JOINT	EA	1
111	8" - 45° MJ ELBOW, RESTRAINED JOINT	EA	2
121	8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	EA	1
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	8
127	CUT AND CAP 6" WATERLINE	EA	2

GENERAL CONSTRUCTION NOTES

1	DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2	EXISTING WATER LINE TO BE ABANDONED IN PLACE
3	CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)
8	GAS LINE TO BE RELOCATED BY NW NATURAL
10	CUT 6" MAIN AFTER SERVICE AT 4610 KENTHORPE WAY

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 35+00 to 40+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
82077PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

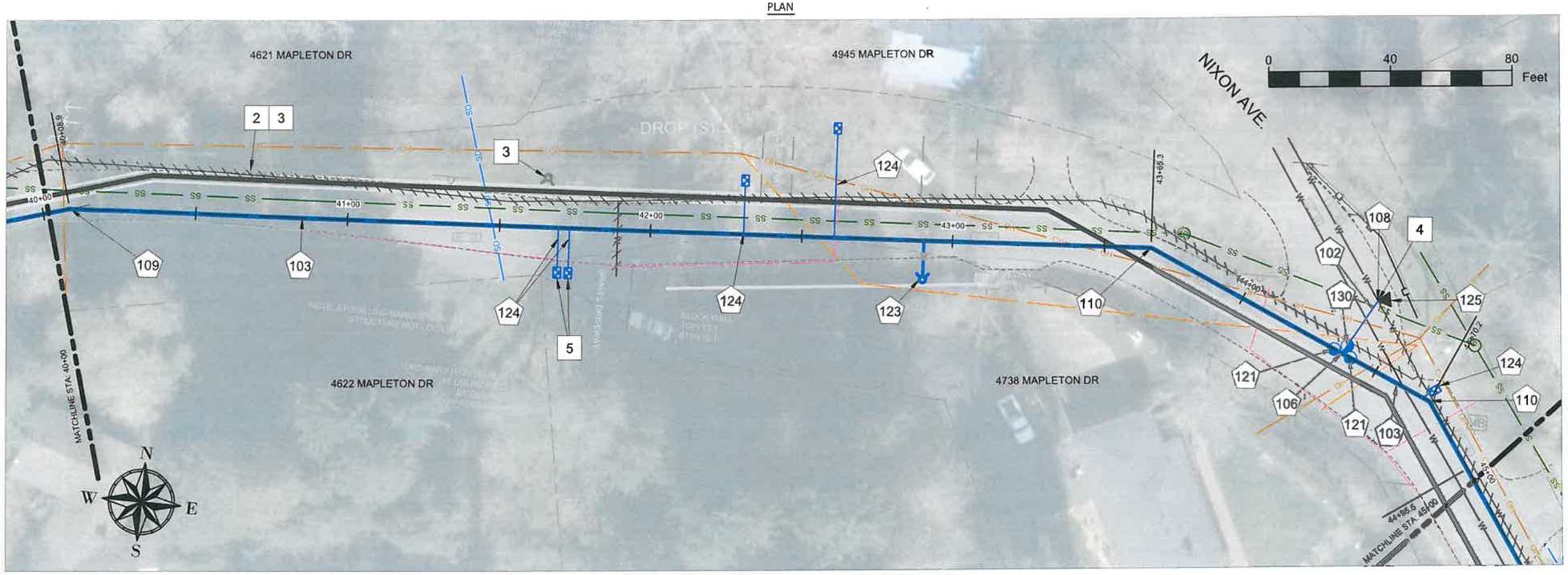
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

SCALE:

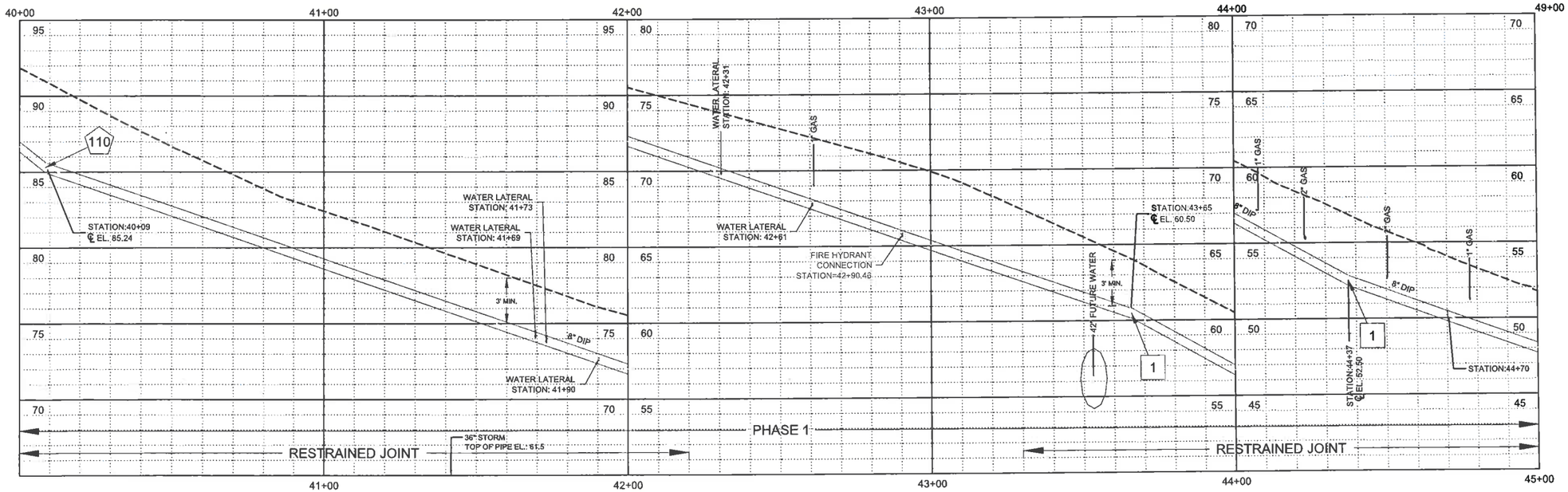
A1.7

PLAN



MAPLETON DRIVE

PROFILE



CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	75
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	435
106	8"x8"x6" FLG TEE	EA	1
108	6" - 45° MJ ELBOW, RESTRAINED JOINT	EA	1
109	8" - 11.25° MJ ELBOW, RESTRAINED JOINT	EA	1
110	8" - 22.5° MJ ELBOW, RESTRAINED JOINT	EA	3
121	8" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	EA	2
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	5
125	THRUST BLOCK, PER DETAIL WL-406	EA	1
130	6" GATE VALVE, VB & C, FLG x MJ, PER DETAIL WL-411	EA	1

GENERAL CONSTRUCTION NOTES

1. DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2. EXISTING WATER LINE TO BE ABANDONED IN PLACE
3. CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)
4. CONNECT NEW WATERLINE TO EXISTING WATERLINE
5. EXTEND NEW SERVICE LINE FROM THE NEW METER TO THE EXISTING CUSTOMERS. LOCATION AND DISTANCE TO BE DETERMINED.

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 40+00 to 45+00

REVISION

DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN 08, 2013
LANCE E. CALVERT

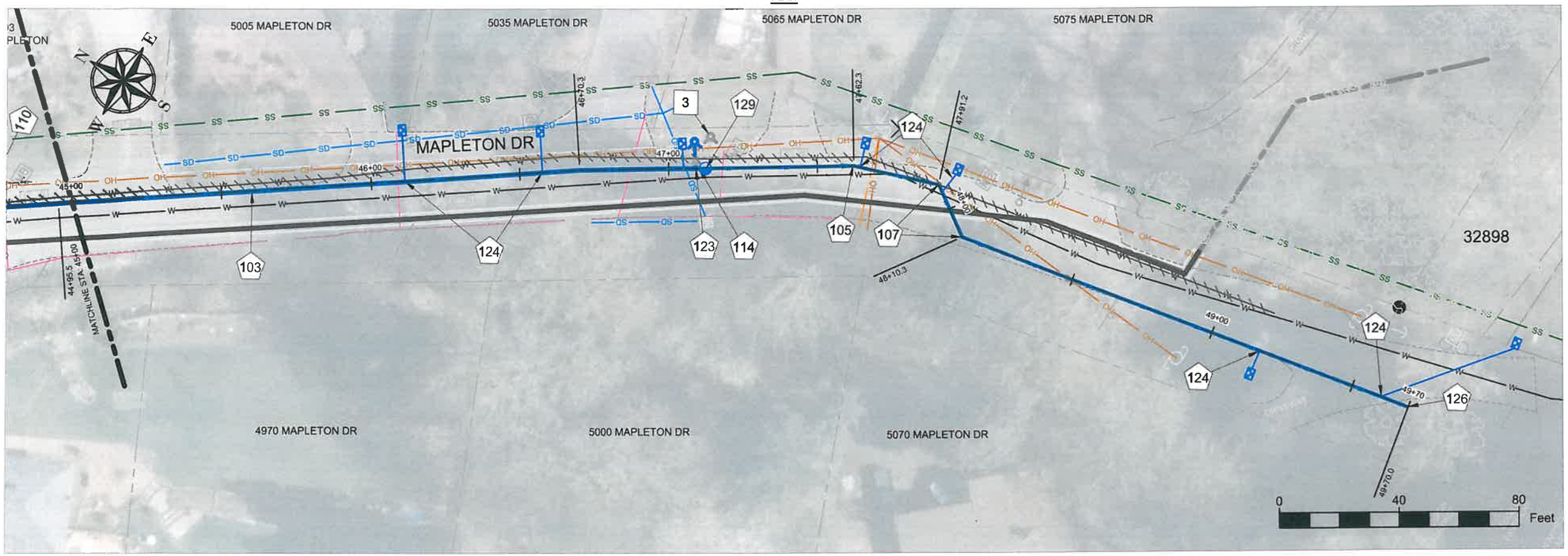
PROJECT NO.:	PW-13-09
DESIGNED BY:	ELAIS
DRAWN BY:	NBRENNAN
CHECKED BY:	LCALVERT
DATE:	11/04/2013

PLAN AND PROFILE

SCALE:

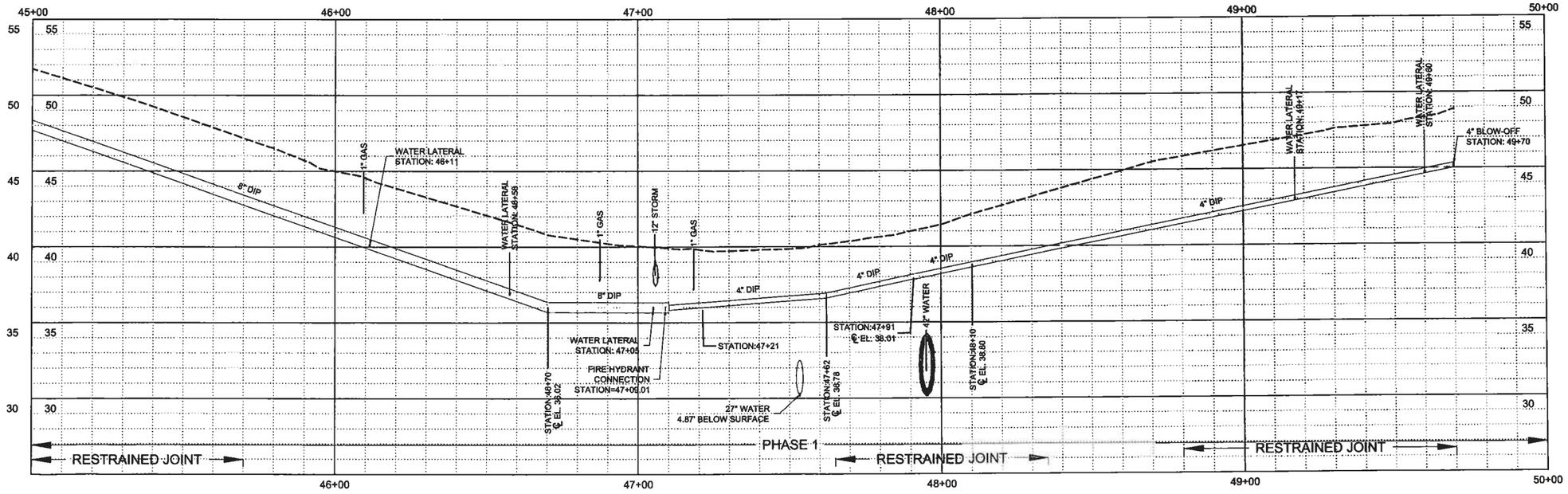
A1.8

PLAN



MAPLETON DRIVE

PROFILE



West Linn

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 656-4106

CONTRACTOR

NAME:
ADDRESS:

PHONE:
FAX:

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
102	6" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	10
101	4" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	260
103	8" DUCTILE IRON PIPE WITH POLYETHYLENE ENCASEMENT	LF	210
105	4" - 11.25° MJ ELBOW, RESTRAINED JOINT	EA	1
107	4" - 45° MJ ELBOW, RESTRAINED JOINT	EA	2
114	8"x4" FLGxFLG REDUCER	EA	1
123	FIRE HYDRANT W/ VALVE, VB & C, PER DETAIL WL-401	EA	1
124	REPLACE WATER METER WITH NEW METER & BOX PER DETAIL WL-402, WITH PVC SLEEVE	EA	6
126	2" BLOW-OFF ASSEMBLY, PER DETAIL WL-404A	EA	1
129	4" GATE VALVE, VB &C, FLG x MJ, PER DETAIL WL-311	EA	1

GENERAL CONSTRUCTION NOTES

1. DEFLECT PIPE MAXIMUM OF 5° OR PER THE MANUFACTURERS RECOMMENDATIONS
2. EXISTING WATER LINE TO BE ABANDONED IN PLACE
3. CONTRACTOR TO REMOVE ALL EXISTING METER BOXES, VALVE BOXES, AND HYDRANTS, SALVAGE TO CITY OF WEST LINN (TYP.)
4. CONNECT NEW WATERLINE TO EXISTING WATERLINE
5. EXTEND NEW SERVICE LINE FROM THE NEW METER TO THE EXISTING CUSTOMERS

2013 MAPLETON WATERLINE REPLACEMENT

Mapleton Drive Plan and Profile
STA 45+00 to 44.34

REVISION

DATE	DESCRIPTION
11/06/2013	Restrained Pipe Quantity

REGISTERED PROFESSIONAL ENGINEER
82272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

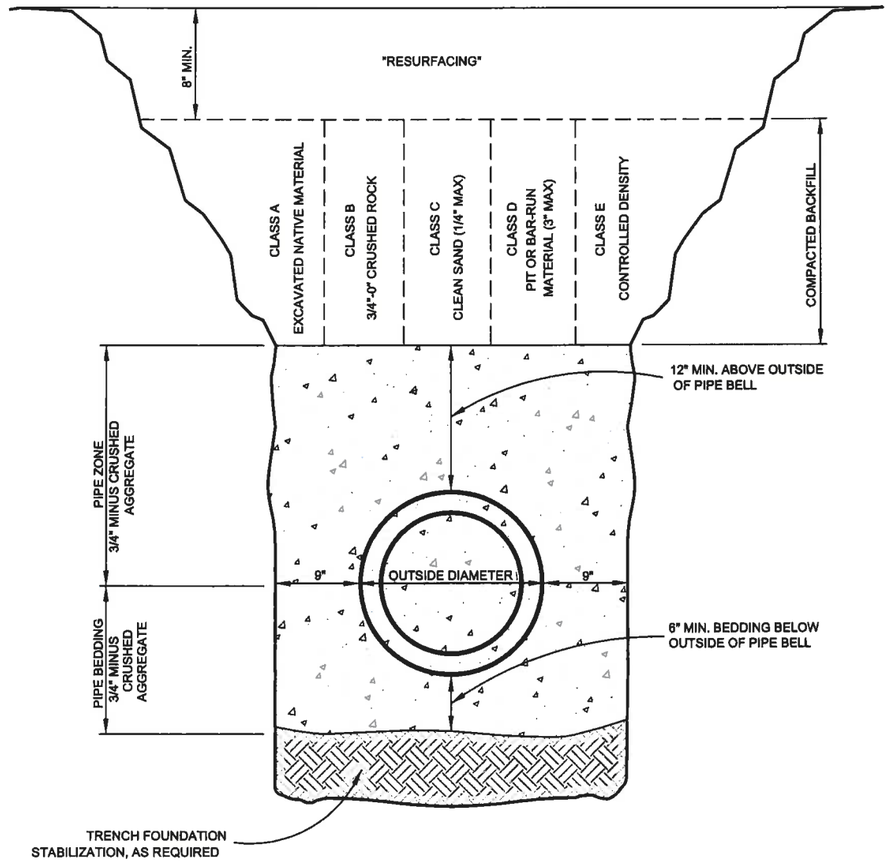
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/04/2013

PLAN AND PROFILE

SCALE:

A1.9

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.

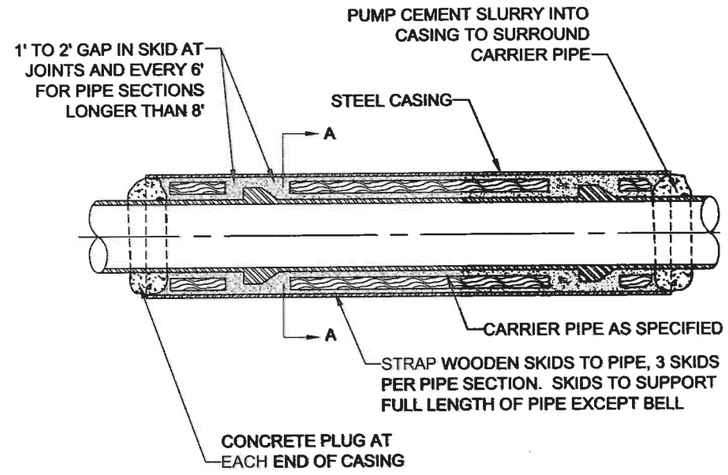


TRENCH BACKFILL BEDDING AND PIPE ZONE

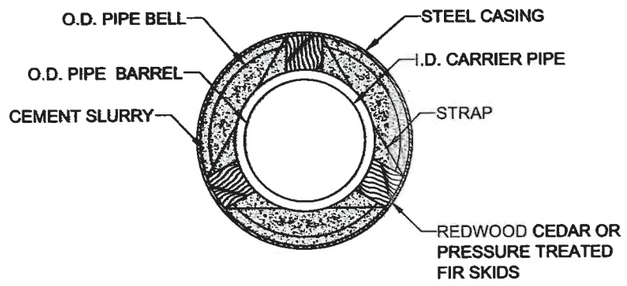
City of West Linn

DATE: 2010
DRAWING NO. WL-200
FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



PLAN



SECTION A-A

NOTE:
PLUG ENDS OF CASING WITH CONCRETE.

BORE CASING DETAIL

City of West Linn

DATE: 2010
DRAWING NO. WL-204
FILE NO.

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 4106

REGISTERED PROFESSIONAL ENGINEER
87272PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

WEST LINN PUBLIC WORKS STANDARD DETAIL DRAWINGS

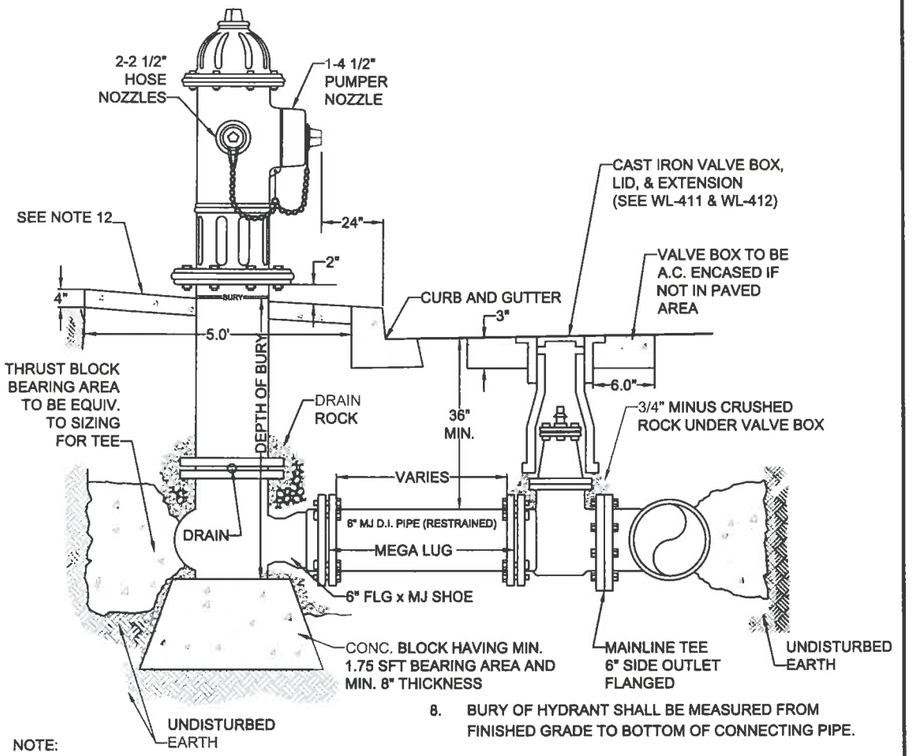
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

REVISION

DATE	DESCRIPTION

STANDARD DETAILS
SCALE:
SD1

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



NOTE:

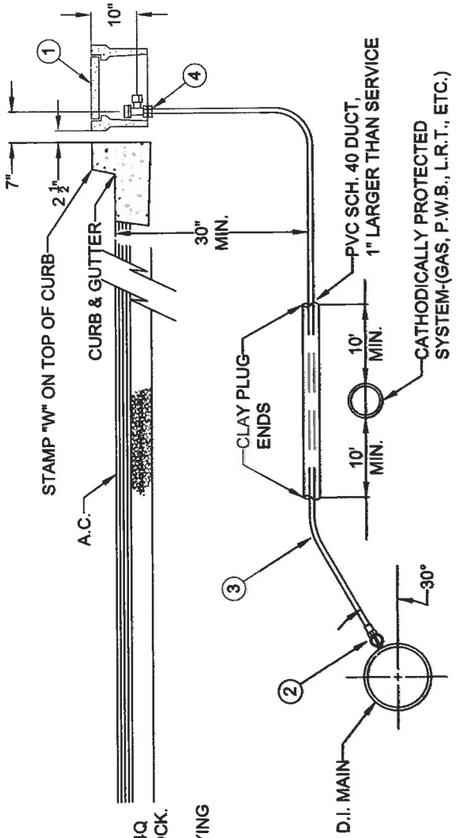
1. HYDRANT TO BE MUELLER CENTURION MDL A-423 ONLY WITH 1 1/2" OPER. NUTS OR CLOW MEDALLION F-2545.
2. HYDRANT COLOR TO BE MILLER EQUIP. ENAMEL 0 E 40 (SAFETY YELLOW).
3. JOINTS TO BE RESTRAINED BY 3/4" DIA. GALVANIZED STEEL RODS AND THRUST BLOCKS OR MEGALUGS AND THRUST BLOCKS.
4. ALL FITTINGS IN CONTACT W/CONCRETE SHALL BE WRAPPED IN PLASTIC, HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
5. MIN. 4 CFT OF 1 1/2" - 3/4" CLEAN DRAIN ROCK SHALL BE PLACED AROUND SHOE UP TO A MIN. OF 6" ABOVE DRAIN OUTLETS.
6. WHERE PLANTER STRIP EXISTS, HYDRANT SHALL BE PLACED SO THE FRONT PORT IS A MINIMUM OF 24" BEHIND THE FACE OF THE CURB.
7. WHERE INTEGRAL S/W & CURB EXISTS, HYDRANT SHALL BE PLACED AT BACK OF THE SIDEWALK, OR AS DIRECTED BY ENGINEER.
8. BURY OF HYDRANT SHALL BE MEASURED FROM FINISHED GRADE TO BOTTOM OF CONNECTING PIPE.
9. THRUST BLOCK AT FIRE HYDRANT TEE SHALL BE EQUIVALENT TO TEE PIPE SIZING (SEE WL-406).
10. HYDRANT VALVE SHALL BE MUELLER RESILIENT WEDGE GATE VALVE #A-2360-16 ONLY.
11. NO EXTENSIONS ALLOWED
12. HYDRANT SHALL HAVE A 5' x5' x 4" THICK CONCRETE APRON. THERE SHALL BE 2" OF CLEARANCE BETWEEN THE TOP OF THE APRON AND THE BOTTOM OF THE FLANGED BOLT PATTERN OF THE HYDRANT.
13. CONCRETE SHALL BE COMMERCIALLY MIXED WITH A BREAKING STRENGTH OF NOT LESS THAN 3000 PSI.

STANDARD FIRE HYDRANT ASSEMBLY

City of West Linn

DATE: 2010
DRAWING NO. WL-401
FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



MATERIAL:

1. BROOKS METER BOX, BODY NO. 37, LID AND COVER NO.37-S.
2. MUELLER CORP. STOP NO. H-15008 OR FORD F1000-4Q CORP. STOP WITH OPERATING NUT AT 3 OR 9 O'CLOCK.
3. 1" SOFT TEMPER, TYPE "K" COPPER TUBING COMPLYING WITH ASTM B-88.
4. MUELLER ANGLE METER STOP NO. H-14258 (FORD NO. KV43-444W-Q).

NOTE:

1. MACHINE DRILLED AND TAPPED ONLY. NO HAND DRILLING IS ALLOWED.
2. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
3. ALL PIPE AND STRUCTURE ZONE SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX DENSITY AS DETERMINED BY AASHTO T-180.
4. WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED AS SHOWN ABOVE WITH CLAY PLUG.
5. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY.
6. TAPS INTO MAIN TO HAVE 18" SEPARATION ON CENTER MINIMUM.
7. ANGLE METER STOPS TO BE 18" FROM PROPERTY LINE AND NOT IN DRIVEWAY APPROACH.
8. METER BOXES IN CURB TIGHT SIDEWALK AND THOSE SUBJECT TO INCIDENTAL AUTO TRAFFIC MUST HAVE METAL LIDS AND BE TRAFFIC RATED.

STANDARD 1" WATER SERVICE

City of West Linn

DATE: 2010
DRAWING NO. WL-402
FILE NO.

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 4106

REGISTERED PROFESSIONAL ENGINEER
87274PE
OREGON
JAN 08, 2013
LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

WEST LINN PUBLIC WORKS STANDARD DETAIL DRAWINGS

PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

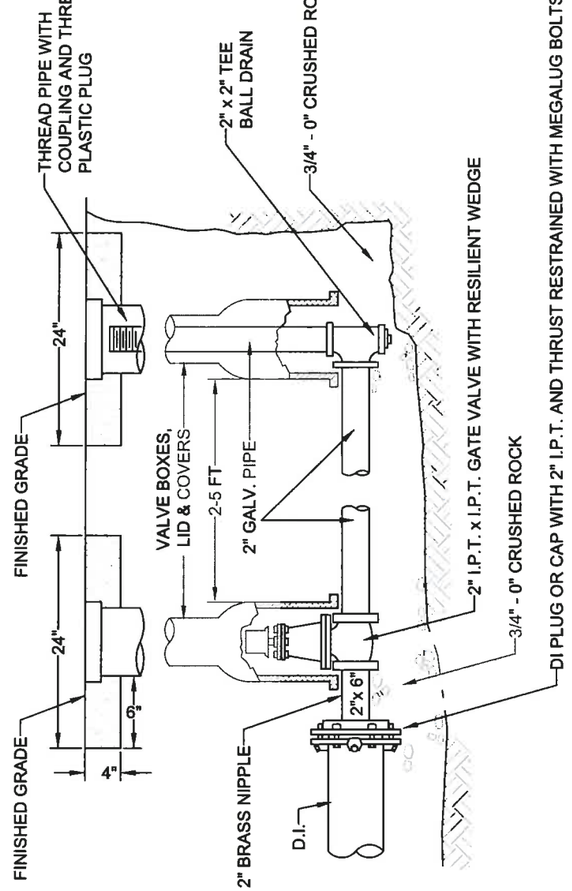
REVISION

DATE	DESCRIPTION

STANDARD DETAILS
SCALE:
SD2

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.

BLOW-OFF SIZES REQUIRED	
MAIN SIZE	BLOW-OFF SIZE
4" TO 6"	2"



NOTE:

1. VALVE BOX SHALL BE PER STANDARD DETAIL WL-411.
2. VALVE BOX TO BE CONCRETE ENCASED AS SHOWN, IF NOT IN PAVED AREA.
3. BLOW-OFF UNIT SHALL BE BACKFILLED WITH 3/4"-0" CRUSHED ROCK AND COMPACTED TO 95% OF MAXIMUM DENSITY DETERMINED BY AASHTO T-180.
4. PLACE BLOW-OFF STANDPIPE 3 FT. INSIDE R.O.W. LINE AT END OF STREET (2 FT FROM BARRICADE).

STANDARD 2" BLOW-OFF ASSEMBLY

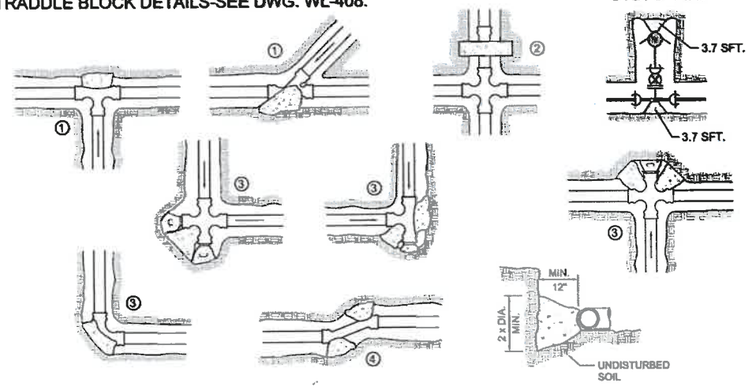
City of West Linn

DATE: 2010
DRAWING NO. WL-404A
FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.

FITTING SIZE (Inches)	TEE, WYE, & ① HYDRANTS	STRADDLE BLOCK ②	90° BEND ③ PLUGGED CROSS TEE PLUGGED-RUNS	45° BEND ④	22 1/2° BEND ④	11 1/2° BEND ④
2	*	*	*	*	*	*
4	1.7	2.1	2.4	1.3	*	*
6	3.7	4.9	5.3	2.9	1.5	*
8	6.7	8.7	9.5	5.1	2.7	1.3
10	10.5	13.6	14.8	8	4.1	2
12	15.1	19.6	21.3	11.6	5.9	2.9
14						
16	26.8	34.8	37.9	20.5	10.4	5.2
18	33.9	44	47.9	25.9	12.8	6.7
LARGER	* *	* *	* *	* *	* *	* *
BEARING AREA OF THRUST BLOCKS (sq. ft.)						

1. ALL VALUES ARE BASED ON THE FOLLOWING ASSUMPTIONS: AVG. PRESSURE = 100 PSI X 2 (safety factor); 1500 PSF SOIL BEARING CAPACITY; NORMAL DISTRIBUTION DESIGN VELOCITY NOT TO EXCEED 5 F/S.
2. ALL FITTINGS SHALL BE WRAPPED IN 8 MM PLASTIC PRIOR TO PLACEMENT OF CONCRETE.
3. BEARING SURFACE OF THRUST BLOCKING SHALL BE AGAINST UNDISTURBED SOIL
4. ALL CONCRETE MIX SHALL HAVE A MIN. 28 DAY STRENGTH OF 3000 PSI.
5. ALL PIPE ZONES SHALL BE GRAVEL FILLED AND COMPACTED.
6. THRUST BLOCKS FOR PLUGGED CROSS AND PLUGGED TEE SHALL HAVE #4 REBAR LIFTING LOOPS INSTALLED AS SHOWN.
7. VERTICAL THRUST DETAILS-SEE DWG. WL-407.
8. STRADDLE BLOCK DETAILS-SEE DWG. WL-408.



* BLOCK TO UNDISTURBED TRENCH WALLS.

** THRUST BLOCKS FOR PIPES LARGER THAN 18" WILL BE INDIVIDUALLY DESIGNED BY THE ENGINEER.

HORIZONTAL THRUST BLOCKING

City of West Linn

DATE: 2010
DRAWING NO. WL-406
FILE NO.

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
WWW.WESTLINNOREGON.GOV
PHONE: (503) 722-5500
FAX: (503) 4106

REGISTERED PROFESSIONAL ENGINEER 67272PE OREGON JAN 08 2013 LANCE E. CALVERT

CONTRACTOR
NAME:
ADDRESS:
PHONE:
FAX:

2013 MAPLETON WATERLINE REPLACEMENT

WEST LINN PUBLIC WORKS STANDARD DETAIL DRAWINGS

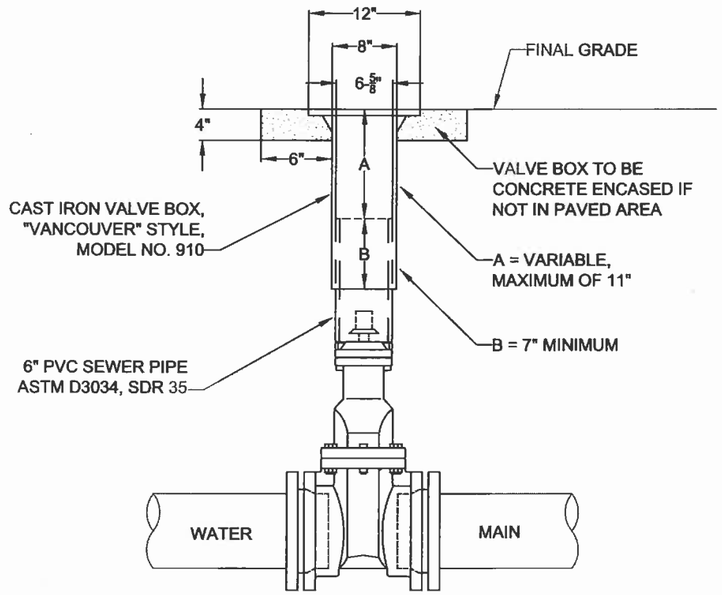
PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

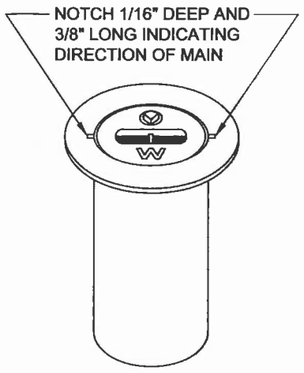
REVISION

DATE	DESCRIPTION

STANDARD DETAILS
SCALE:
SD3

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.





"VANCOUVER" 18" TALL VALVE BOX

NOTE:

1. VALVE BOXES SHALL BE CENTERED DIRECTLY OVER THE VALVE NUT IN A VERTICAL POSITION.
2. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.
3. PVC SHALL BE ONE CONTINUOUS PIECE-NO BELLS OR COUPLERS.
4. ON VALVES 8" AND LARGER, PVC SHALL BE NOTCHED OVER VALVE PACKING BOLTS SO PVC SITS ON BONNET.

STANDARD VALVE BOX DETAIL

City of West Linn

DATE: 2010
DRAWING NO. WL-411
FILE NO.

CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
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2013 MAPLETON WATERLINE REPLACEMENT

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PROJECT NO.: PW-13-09
DESIGNED BY: ELAIS
DRAWN BY: NBRENNAN
CHECKED BY: LCALVERT
DATE: 11/4/2013

REVISION

DATE	DESCRIPTION

STANDARD DETAILS
SCALE:
SD4