

City of Shasta Lake Public Works Department Ranchera Rd. Water Main Replacement Project

Ranchera Pines Subdivision
Bid No. 2023-05

DRAWING INDEX

Sheet No.	Description
1	Title Sheet
2	General Project Notes
3	Utility Key Sheet
4	Kokanee 1+00 to 6+10
5	Kokanee 6+10 to 11+10
6	Kokanee 11+10 to 16+10
7	Kokanee 16+10 to 18+30
8	Latigo Way
9	Ranchera Begin to 8+60
10	Ranchera 8+60 to 13+60
11	Ranchera 13+60 to 18+60
12	Ranchera 18+60 to 23+60
13	Ranchera 23+60 to 28+60
14	Ranchera 28+60 to 33+60
15	Ranchera 33+60 to End
16	Water Details 1
17	Water Details 2
18	Water Details 3
19	Water Details 4
20	Drainage Details 1
21	Drainage Details 2
22	Drainage Details 3
23	Paving and Delineation 1
24	Paving and Delineation 2

ENGINEER:

Shelby Millingar

Shelby Millingar - Project Engineer
RCE No. 90158

Date

APPROVED:

William Bond - City Engineer
RCE No. 69476

Date

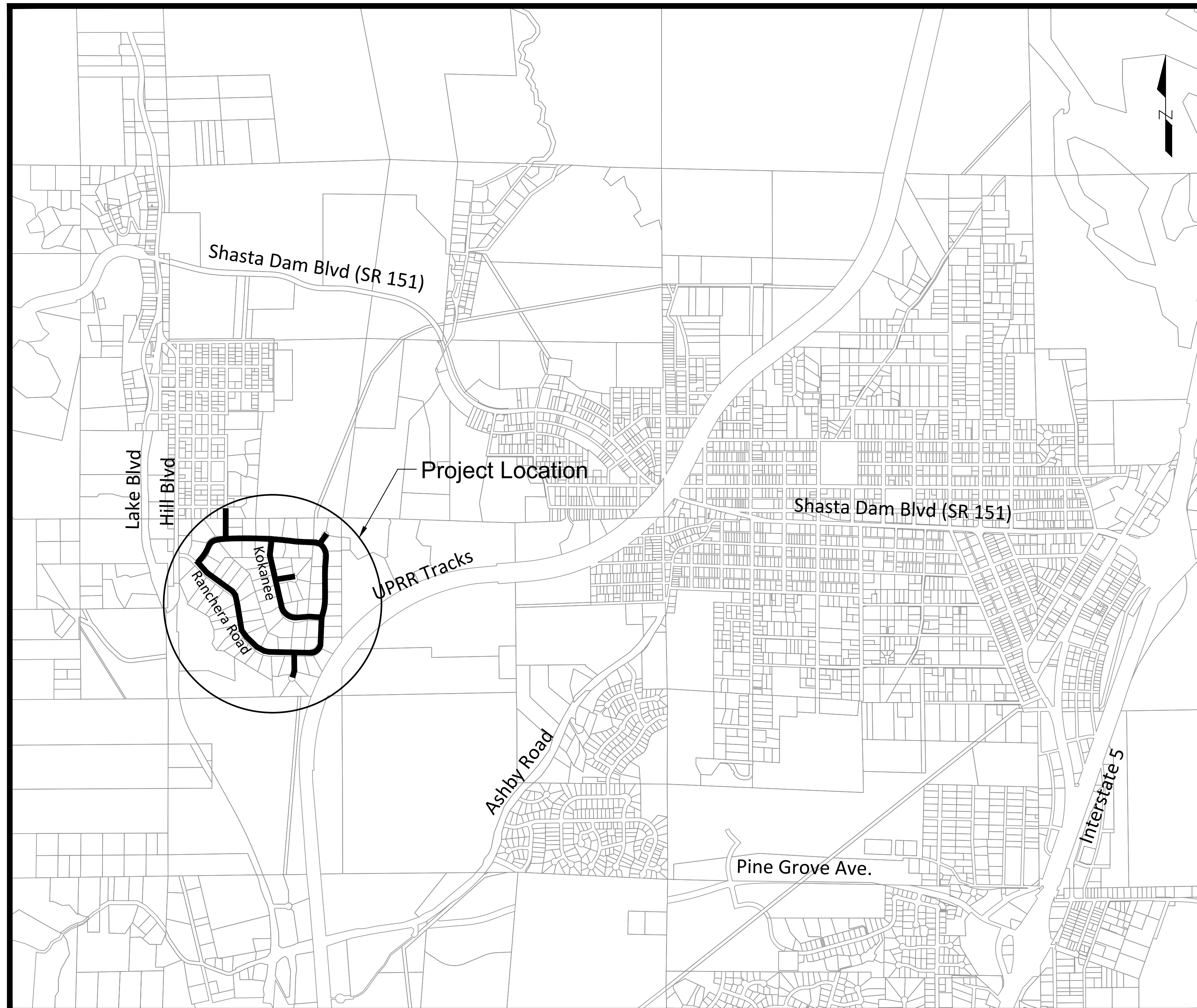
Contractor Requirements:

All Contractors bidding on or performing work within the City of Shasta Lake involving connections to, or modifications of, the City's potable water distribution system shall carry a Water Distribution Operator, Grade 2 certification, and shall be required to maintain active certification throughout the entire duration of the project. All work on new or existing potable systems shall be performed under the DIRECT SUPERVISION of the certified Operator employed by the Contractor. Failure to provide certification information of the Distribution Operator with his bid will result in the bid being found to be non-responsive. Additional information is available on the City's website.

A-7348



Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation



VICINITY MAP

No Scale

Legend

(N) = New (E)=Existing

- | | |
|--|---|
| <ul style="list-style-type: none"> --- Right-of-Way ☐ --- (E) Water Main --- (N) Water Main --- (N) Water Main (restrained) --- (N) Water Service & Meter --- (E) Sanitary Sewer Main and Lateral --- (E) Storm Drain --- (N) Storm Drain --- (E) Overhead Utility --- (E) Gas | <ul style="list-style-type: none"> ⬆ (N) Blow Off ⊗ (N) Combination Air Relief Valve ⊗ (E) Gate Valve ⊗ (N) Gate Valve ⊗ (E) Fire Hydrant ⊗ (N) Fire Hydrant ⊗ (E) Sanitary Sewer ⊗ (E) Storm Drain Manhole ⊗ (E) Drainage Inlet ⊗ (E) Telephone/Power Pole ⊗ (E) Pole w/Guy ⊗ Property Corner ⊗ Control Point |
|--|---|

	Designed By: SM Drawn By: SM Checked By: WBJ/T Approved: <i>Shelby Millingar</i> Associate Civil Engineer RCE No. 90158	No. _____ Date _____ Revisions _____ By _____	Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Title Sheet
CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax		CITY OF SHASTA LAKE SHASTA LAKE PUBLIC WORKS DEPARTMENT	
Scale: None		Date: 01/2023	
Sheet 1 of 24		Proposed Base_RancheraWater_120919.dwg	

General Project Notes:

1. This project generally consists of replacement and installation of water main, valve assemblies, water services, and fire hydrants on Ranchera Rd, Kokanee Dr, and Latigo Way. Work also includes replacement of existing storm drain culverts, pavement grinding and patching, transition and edge grinding, installation of paving fabric in driving lanes (nominal 24' width), placement of HMA, striping, adjustment to grade of utility manholes, replacement and adjustment to grade of valve boxes, and installation of shoulder backing material on Ranchera Rd, Kokanee Dr, Latigo Way, Shasta St, and Moccasin Ln in Shasta Lake, CA.
2. It is the responsibility of the Contractor to thoroughly examine the job sites, the Contract Specifications, and these Plans prior to submitting his bid. No additional payment shall be made by the City for any expense the Contractor may incur as a result of his failure to adequately acquaint himself with the extent of the work to be done, the general site conditions, or the requirements of the Plans, Contract Documents, General Provisions, Technical Specifications, and referenced specifications (AWWA, CAL-OSHA, etc).
3. The Contractor shall contact Underground Service Alert (USA) at (800) 227-2600 at least forty-eight (48) hours, but not less than two (2) working days, PRIOR to any demolition or excavation and request field markings of all underground utilities.
4. The City of Shasta Lake does not guarantee the completeness or accuracy of the existing underground utilities shown on these Plans. The Contractor is solely responsible for field verifying any potential utility conflicts between existing underground utilities and the work shown on these Plans. This includes both potential utility conflicts shown on these Plans and potential utility conflicts not shown on these Plans but either located, found, or marked in the field. Where potential conflicts are found, the Contractor shall take whatever measures are needed (including preliminary potholing of the utilities at the potential conflict location) prior to work in the area to allow time for the responsible agency to correct the conflict. No additional payment shall be made by the City for any expense the Contractor may incur as a result of his failure to adequately explore, in the opinion of the Engineer, potential utility conflicts.
5. Extreme caution shall be exercised by the Contractor when working on or near survey monuments and property corners. MONUMENTS AND CORNERS SHALL NOT BE DISTURBED! If the Contractor does disturb a survey monument or property corner, he shall notify the Engineer immediately, and shall pay all costs associated with resetting the monument or corner to its' correct location. Under no circumstances shall personnel other than the a licensed Surveyor in the State of California modify existing monuments.
6. Several items of work shown on these Plans (notably valve cluster replacements) must be completed in a single day. The Contractor shall take this requirement into account when preparing his bid and his work plan to ensure that a sufficient personnel and equipment are onsite and available to allow the work to be completed as required.
7. If the Contractor wishes to use water from the City of Shasta Lake water distribution system, the Contractor shall install a hydrant meter, backflow device, and control valve on the fire hydrant designated as the water source. The Contractor shall obtain the hydrant meter and control valve from the City of Shasta Lake Water Utility. Refer to the Contract Documents for additional information and costs.
8. Disposal of materials is not permitted within the public right-of-way. The Contractor shall make arrangements for disposal sites outside of the right-of-way, shall pay any and all costs involved, and shall furnish the City with all required permits and Disposal Site Agreements. Refer to the Contract Technical Specifications for additional requirements. All materials removed from the project shall be properly disposed of by the Contractor under the guidelines of this project. When any material is to be disposed of outside the project work area, the Contractor shall obtain both a written agreement between the property owner and the Contractor and a copy of the permit that allows material disposal at the subject site. The agreement shall grant the Contractor permission to use the private property as a disposal site, and shall absolve the City of all responsibility for consequences of such usage. The permit copy shall be obtained from the property owner, the Shasta County Building Department, the City of Shasta Lake Building Department, or other regulatory agency as appropriate. Both the agreement and permit shall be filed with the Engineer PRIOR to the use of the property, and the Contractor shall obtain permission from the Engineer to dispose of the material at the proposed location designated in the agreement and on the permit before any material is disposed of on said property.
9. The Contractor shall not use the public right-of-way for long term staging or material storage. During the work day, the Contractor may use the work area for storage of project materials and equipment that will be used that day; however, at the end of the day, the work site shall be cleaned up to the satisfaction of the Engineer.
10. All grades and alignments shown on the Plans shall be subject to adjustment in the field by the Engineer.
11. This is a Public Works prevailing wage project.

General Water Notes:

1. As a part of this project, the Contractor shall pre-dig all excavations for valve assembly replacement, and shall measure all pipe ODs to verify that commonly available gaskets and hardware will fit the existing pipes. If pipes are found NOT to be within the specification range of commonly available gaskets and hardware, the Contractor shall make arrangements to obtain gaskets and hardware that will fit the non-standard pipe, and the City will address via Contract Change Order ONLY the cost difference between the commonly available parts and the special order parts. The Contractor shall make an allowance in both his Bid and his project schedule to allow for this possibility, and no additional payment will be made by the City (outside of the above listed CCO) for any expense incurred by the Contractor as a result of the need to obtain specialized parts to complete the work.

All potholing of gate valve assemblies under pressure shall be executed with extreme caution, and shall be extensive enough to allow the Contractor to accurately measure the OD of all pipes and determine the existing assembly layout. Any differences between the existing gate valve assembly and the assembly to be installed per these Plans shall immediately be brought to the attention of the Engineer. The Contractor is solely responsible for securing the existing valve assembly in place between the time he removed any backfill surrounding it and the time that the assembly is replaced, and he shall brace and restrain the assembly against the effects of water hammer or other unforeseen events. Additionally, the Contractor shall be responsible for the cost to repair any damage that occurs as a result of insufficiently secured existing valve assemblies.
2. When water service interruption is necessary due to valve assembly installation or water service replacement (water main removal and replacement requires temporary water service connections - see #3 below), the Contractor shall notify all affected residents and businesses within the shutdown area for each installation or replacement at least two (2) working days in advance of the anticipated service interruption. The Contractor shall furnish, correctly fill out, duplicate, and distribute door hanger notices advising the resident of the service interruption. The Contractor shall make an allowance in both his Bid and his project schedule to allow for notification of residents and businesses, and no additional payment will be made by the City for any expense incurred by the Contractor to complete the required notifications.
3. Water main shutdowns shall be performed by City of Shasta Lake Public Works. Unless otherwise directed by the Engineer, the Contractor shall not turn any gate valve not installed by him during the course of this project - (E) gate valves shall be turned only by City personnel.
4. The Contractor shall make an allowance in both his Bid and his project schedule to allow for a two and one-half (2-1/2) hour delay during all scheduled water shutdowns to allow the City of Shasta Lake Water Utility to close gate valves, open fire hydrants and water services, and perform whatever other work is necessary to remove the system pressure from the section of water main being repaired or replaced. This 2-1/2 hour time period shall start at the time City water personnel arrives at the project site, and does not include the time needed for the Contractor to drain the line or deal with residual pressure that exists in the line due to the weight of water. No additional payment will be made for any costs incurred by the Contractor during this 2-1/2 hour time period involving delays in isolating the section of water main being repaired or replaced. Note that no guarantee is made or implied that any shutdown will result in a total absence of water in the pipe. The Contractor shall proceed with the work at the direction of the Engineer.
5. Thrust blocking shall not be disturbed after it has been placed. The Contractor shall ensure that adequate lengths of piping are installed prior to the time of thrust block placement to make certain that excavation behind the thrust block is not necessary to make any connections.
6. Under no circumstances shall water be introduced to an untested or unapproved water main by opening gate valves connected to the City water system. Water may only be introduced to an untested or unapproved water main through a backflow prevention device (see General Project Note #7). In addition, the Contractor shall make an allowance in both his Bid and his project schedule for installing such additional fittings as may be needed to allow him to fill and flush the (N) water main as required for pressure and bacteria testing in a timely manner. No additional payment will be made for any costs incurred by the Contractor for obtaining or installing additional fittings as needed to allow pressure and bacteria testing to take place in a timely manner.
7. Water valve traffic boxes shall be installed by the Contractor within 5 working days of valve installation to allow the use of the new valves in the event of an emergency water main shutdown by City personnel.
8. All water services shall be 1". The Contractor shall install bushing as needed in the 1" angle stop to mate to the existing water meter. (N) services shall be installed per COSLCS 401.00
9. The Contractor is solely responsible for field verifying any potential utility conflicts between existing underground utilities and the work shown on these Plans. This includes both potential utility conflicts shown on these Plans and potential utility conflicts not shown on these Plans but either located, found, or marked in the field. Where potential conflicts are found, the Contractor shall take whatever measures are needed (including preliminary potholing of the utilities at the potential conflict location or adjusting pipe installation) prior to work in the area to allow time for the responsible agency to correct the conflict. No additional payment shall be made by the City for any expense the Contractor may incur as a result of his failure to adequately explore, in the opinion of the Engineer, potential utility conflicts.

General Traffic Control Notes:

1. Work is completely within a residential area. Access to driveways shall be maintained throughout the length of the project.
2. Due to the width of the streets in the project area, traffic movement through the work zone will be extremely limited. The Contractor shall submit a Traffic Control Plan for approval by the Engineer that makes provisions for allowing traffic movement through the area.

General Order of Work:

It is anticipated that the Contractor shall construct the water main replacement portions of this project in the following order:

1. Remove (E) and install (N) gate valve assemblies in the work area. Exact order of assembly replacement will be determined by the City.
2. Install (N) water main.
3. Conduct acceptance pressure and bacteria testing.
4. Remove (E) and install (N) water services.
5. Replace culverts according to plans and specifications
6. Paving operations according to plans and specifications

Paving Notes:

1. Generally, project work in all locations consists of installation of paving fabric in driving lanes, installation of a 0.17" thick HMA overlay, pavement striping and marking placement, adjustment of traffic boxes to grade, as well as other incidental work shown on the Plans.
2. Striping / Marking Locations:
'STOP' / Limit Line / 4" Centerline Stripe Locations (each location listed once):
Ranchera Rd at Shasta St: North
Ranchera Rd at Ranchera Rd: East

Survey Notes:

1. Basis of bearings: the bearing N 9° 47' 12" W between found iron pipe monuments indicated hereon, as shown on that certain map of tract 1144 unit #3, recorded in book 12 of maps at page 98, shasta county records.
2. Basis of elevation: assumed elevation of 500.00 feet at CP-101.
3. Underground utilities indicated hereon are based upon surface evidence of their location and the best available information from the utility owners. The City does not guarantee the existence or non-existence of the underground utilities shown.

Survey Control Point

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-101	2,129,627.3234	6,467,585.9687	500.00	MAG NAIL & SHINER
CP-102	2,129,356.4454	6,467,929.2824	503.65	MAG NAIL & SHINER
CP-103	2,129,719.6104	6,467,487.1128	492.51	MAG NAIL & SHINER
CP-104	2,129,129.5076	6,468,203.7562	486.30	MAG NAIL & SHINER
CP-105	2,129,304.3083	6,467,963.9597	502.13	PK NAIL & WASHER
CP-106	2,128,947.8316	6,468,225.2817	473.85	MAG NAIL
CP-107	2,128,770.9100	6,468,281.0766	477.11	MAG NAIL & SHINER
CP-108	2,128,586.5467	6,468,296.2592	473.26	MAG NAIL & SHINER
CP-109	2,128,303.6729	6,468,599.6271	450.88	MAG NAIL & SHINER
CP-110	2,128,286.0779	6,469,059.4278	463.88	MAG NAIL & SHINER
CP-111	2,128,004.2870	6,469,039.4104	448.66	MAG NAIL & SHINER
CP-112	2,128,335.9062	6,469,419.9964	477.26	MAG NAIL & SHINER
CP-113	2,128,541.6300	6,469,471.1325	468.63	MAG NAIL & SHINER
CP-114	2,128,835.5836	6,469,450.6902	461.94	MAG NAIL & SHINER
CP-115	2,128,816.8462	6,469,208.1286	475.92	MAG NAIL & SHINER
CP-116	2,128,824.5127	6,468,973.5962	462.26	MAG NAIL & SHINER
CP-117	2,128,998.9379	6,468,852.7630	459.48	MAG NAIL & SHINER
CP-118	2,129,377.9828	6,468,794.9889	486.99	MAG NAIL & SHINER
CP-119	2,129,709.1685	6,468,706.2777	483.81	MAG NAIL & SHINER
CP-120	2,139,428.3575	6,469,062.9526	476.07	MAG NAIL & SHINER
CP-121	2,130,003.7103	6,468,686.3319	501.22	MAG NAIL & SHINER

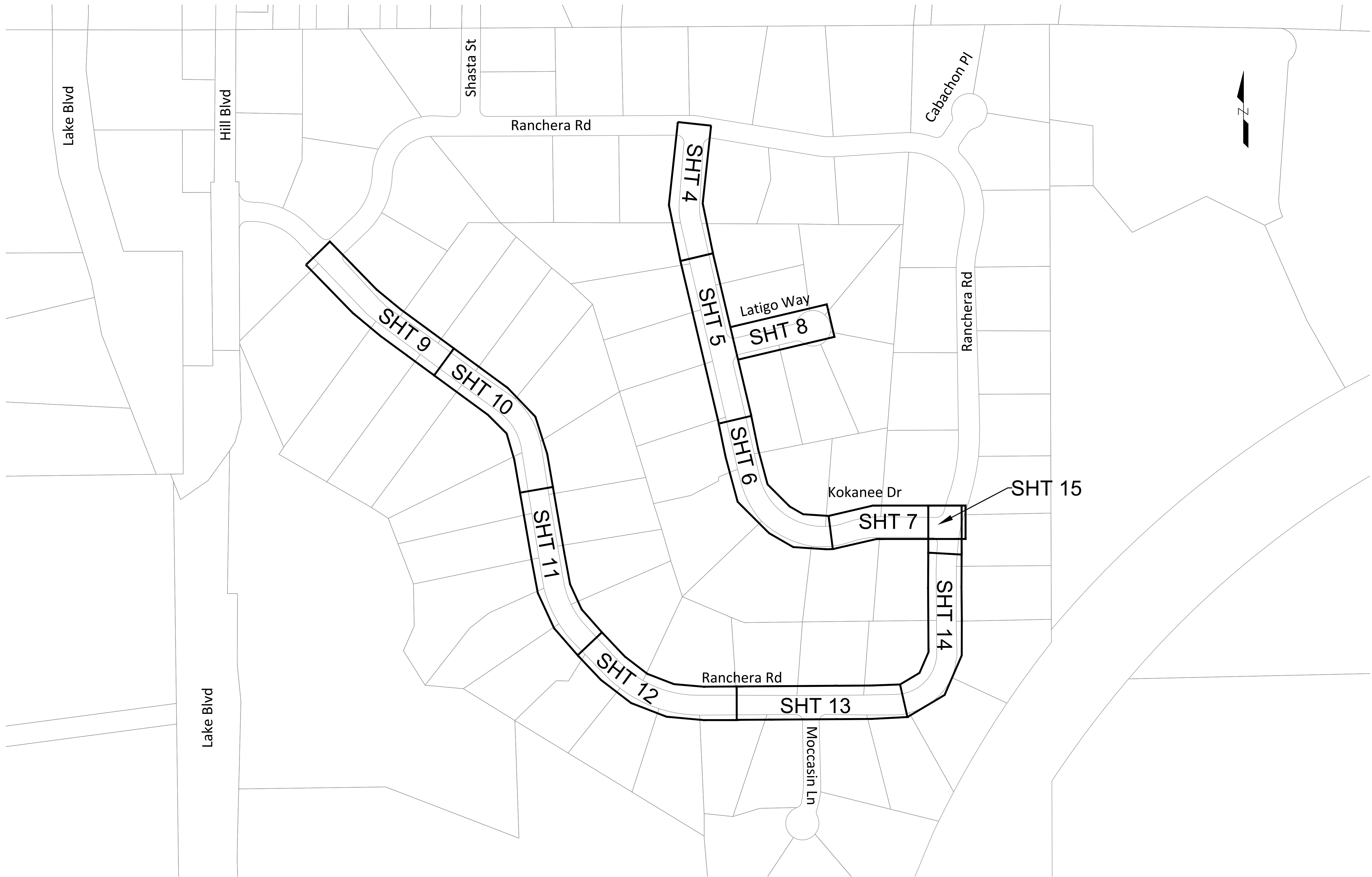


Know what's below.
Call before you dig.

Contractor shall call Underground Service Alert at 811 two working days prior to excavation

A-7349

<p>Designed By: SM Drawn By: WBJ/JT Checked By: Approved: <i>Shelby Loda</i> Associate Civil Engineer REC'd 8/15/23</p>	<p>No. _____ Date _____ Revisions _____</p>
<p>PROFESSIONAL ENGINEER No. 10000000000000000000 Exp. 12/31/23 STATE OF CALIFORNIA</p>	
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>	
<p>CITY OF SHASTA LAKE</p>	
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05 General Project Notes</p>	
<p>Scale: None</p>	<p>Date: 01/2023</p>
<p>Sheet 2 of 24</p>	

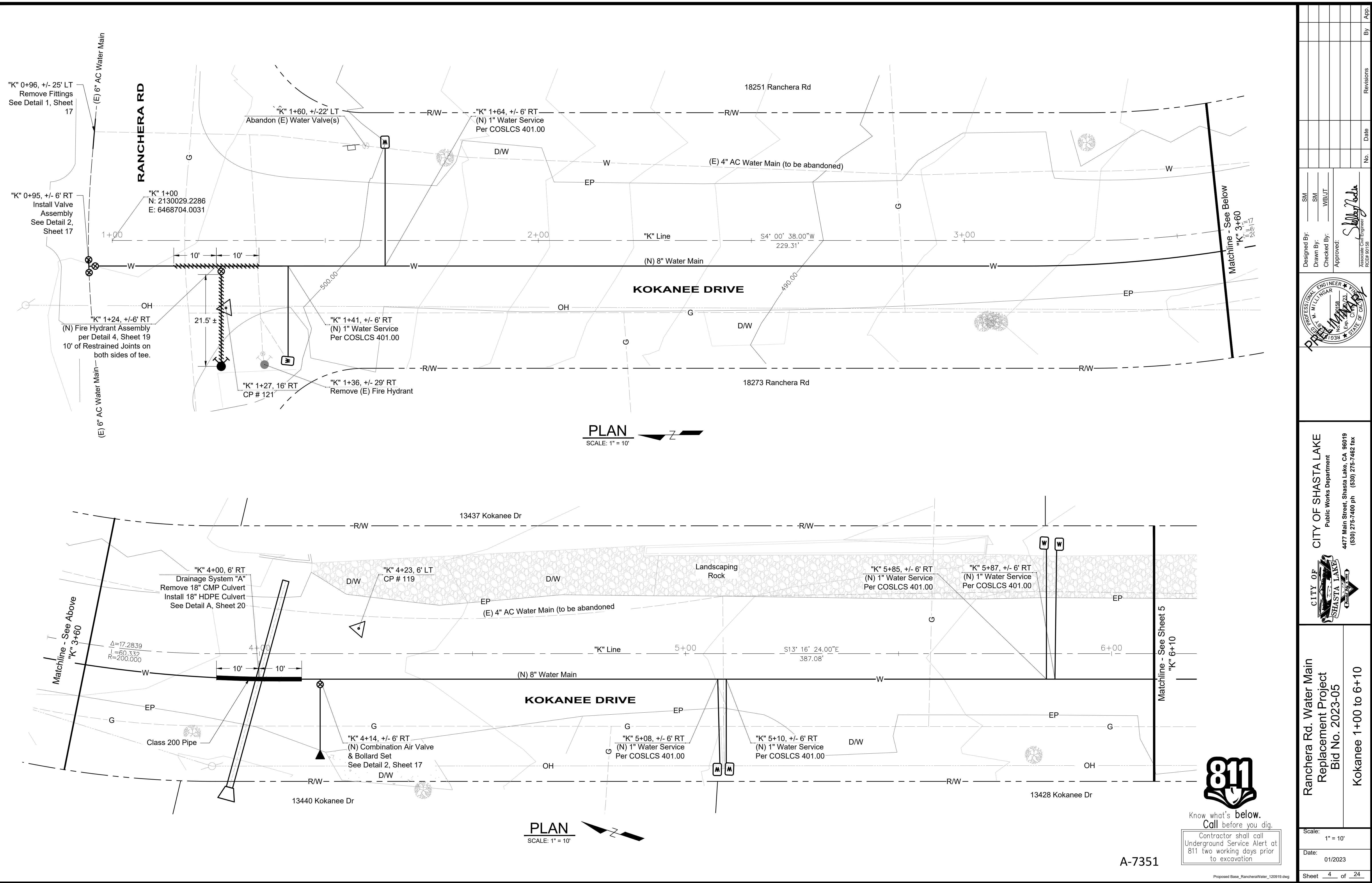


RANCHERA RD WATER MAIN REPLACEMENT PROJECT - UTILITY KEY SHEET

SCALE: 1" = 150'

A-7350

		Designed By: SM Drawn By: SM Checked By: WBJ/JT Approved: <i>Shelby Zedler</i> <small>Associate Civil Engineer RCEP 34158</small>	No. _____ Date _____ Revisions _____ By _____
		CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax	
Ranchera Rd Water Main Replacement Project Bid No. 2023-05		Utility Key Sheet	
Scale: 1" = 150'		Date: 01/2023	
Sheet 3 of 24		<small>Proposed Base_RancheraWater_120919.dwg</small>	



PLAN
SCALE: 1" = 10'

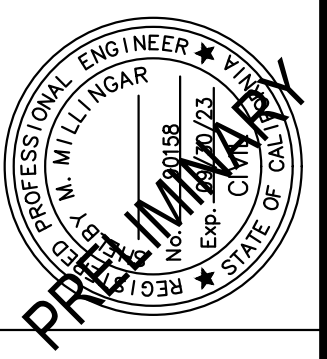
PLAN
SCALE: 1" = 10'

811
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7351

No.	Date	Revisions	By	App.

Designed By: SM
 Drawn By: WBJ/T
 Checked By:
 Approved: *Shelby Tode*
 Associate Civil Engineer
 REC# 54158



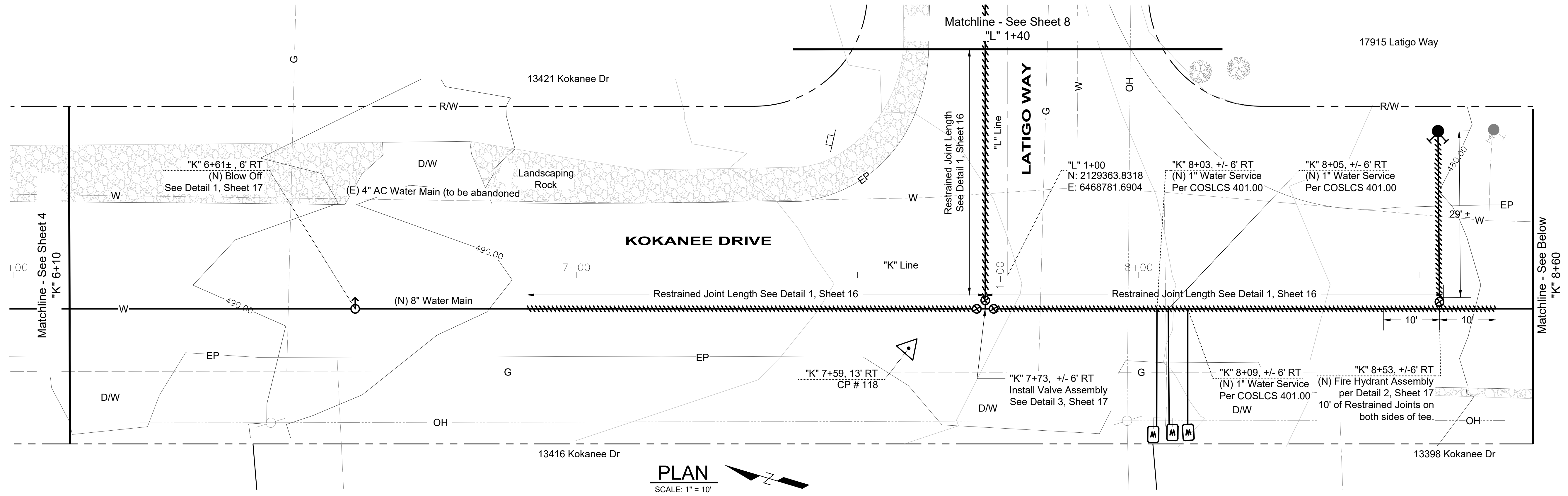
CITY OF SHASTA LAKE
 Public Works Department
 4477 Main Street, Shasta Lake, CA 96019
 (530) 275-7400 ph (530) 275-7462 fax



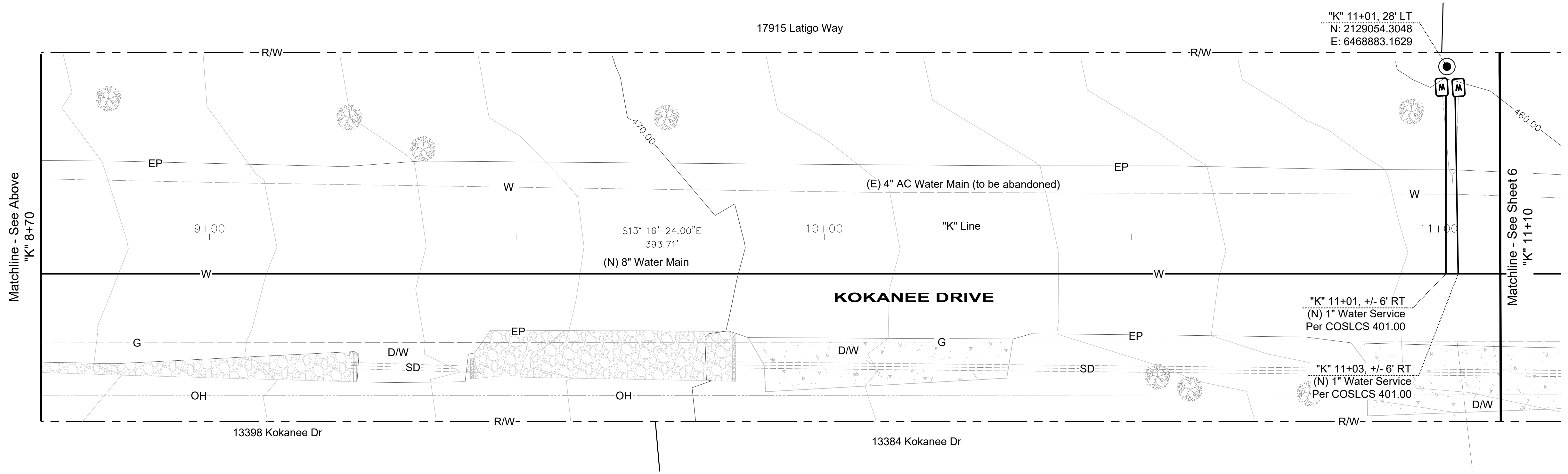
Ranchera Rd. Water Main
 Replacement Project
 Bid No. 2023-05
 Kokanee 1+00 to 6+10

Scale: 1" = 10'
 Date: 01/2023
 Sheet 4 of 24

Proposed Base_RancheraWater_120919.dwg



PLAN
SCALE: 1" = 10'



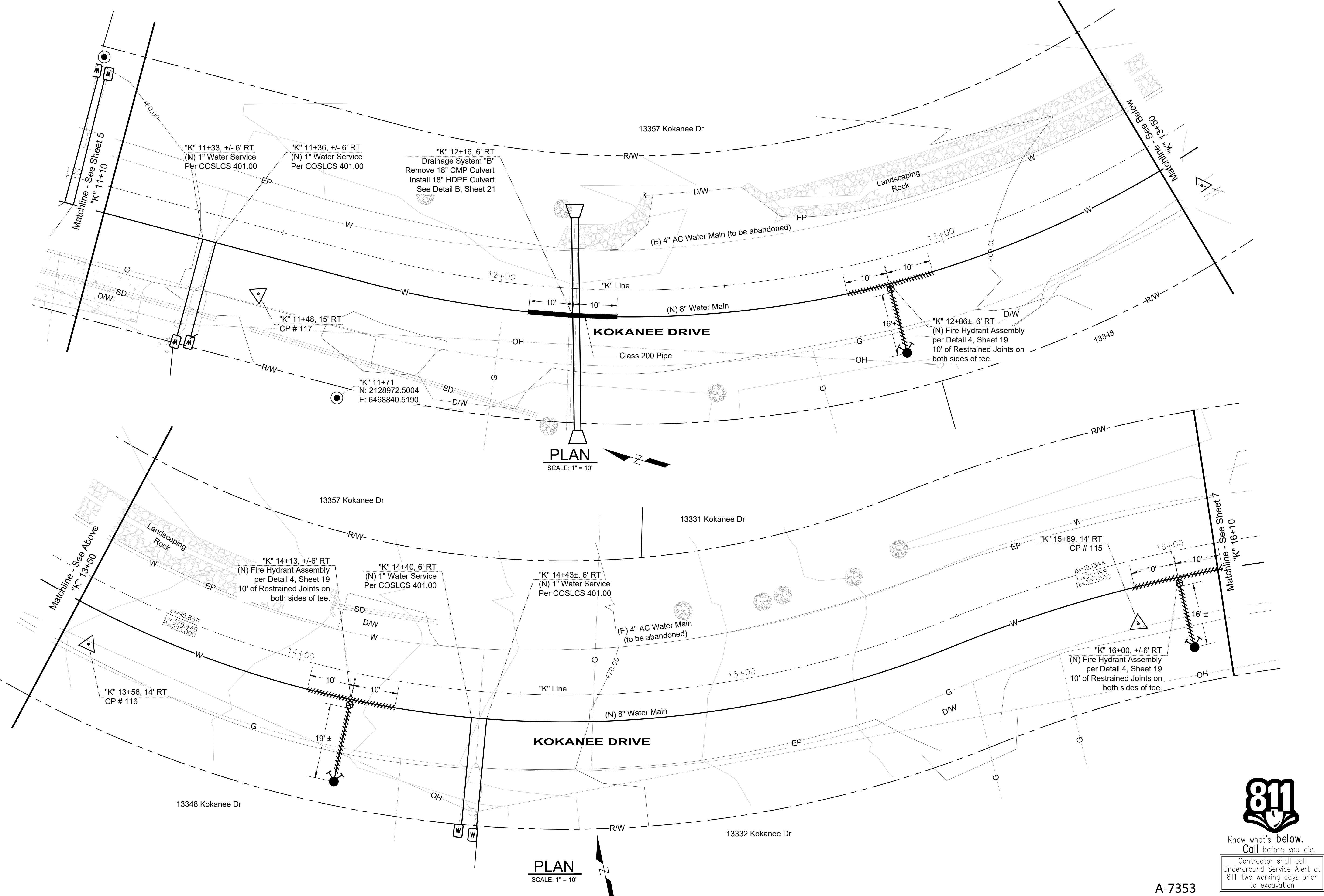
PLAN
SCALE: 1" = 10'



Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7352

<p>DESIGNED BY: SM DRAWN BY: SM CHECKED BY: WBJ/JT APPROVED: <i>Shelby Loda</i> Associate Civil Engineer RCEP 34158</p>	<p>DATE: _____ NO. _____ REVISIONS: _____ BY: _____</p>
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>	
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Kokanee 6+10 to 11+10</p>	
<p>Scale: 1" = 10'</p>	<p>Date: 01/2023</p>
<p>Sheet 5 of 24</p>	



PLAN
SCALE: 1" = 10'

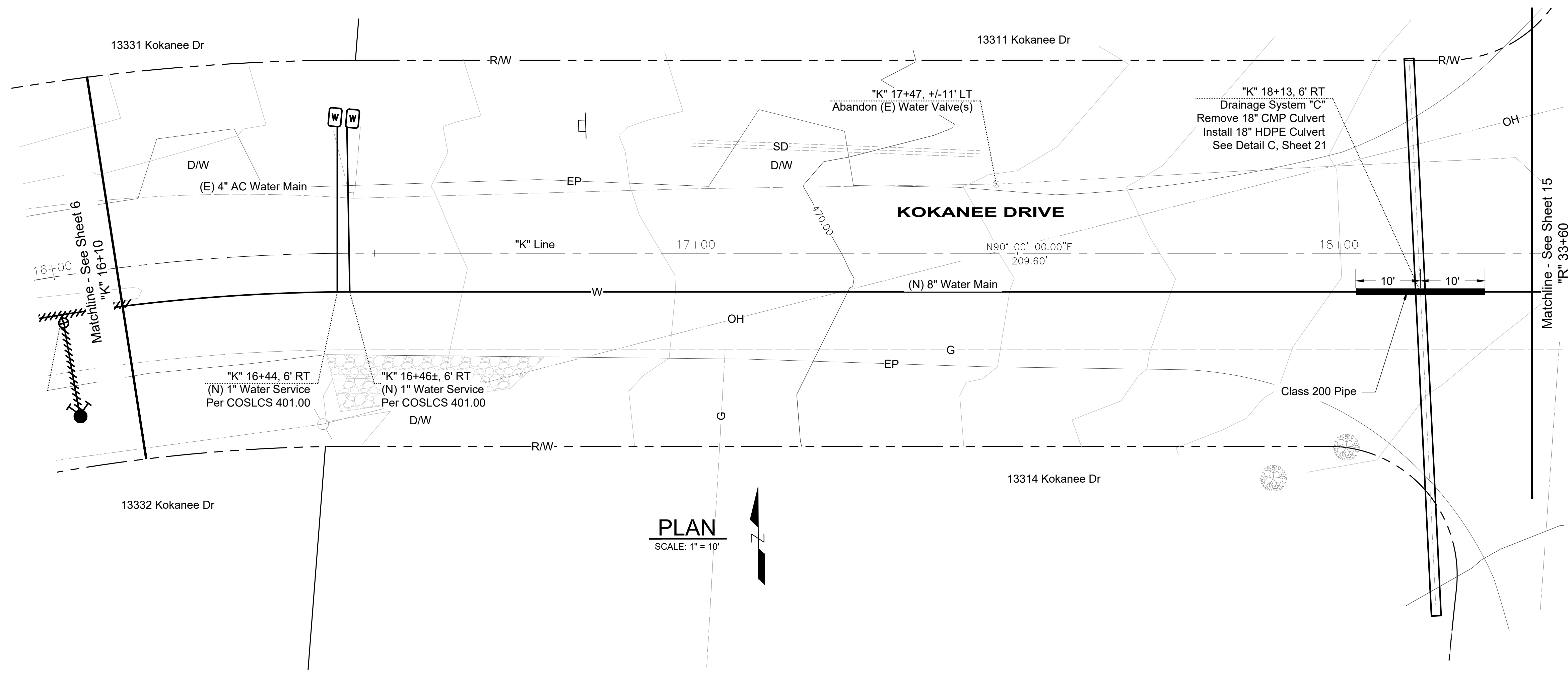
PLAN
SCALE: 1" = 10'

Contractor shall call 811 two working days prior to excavation

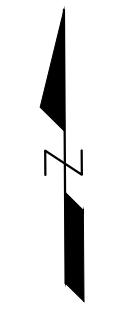
Designed By: SM	Drawn By: SM	Checked By: WBJ/T	Approved: <i>Shelby Noda</i> Associate Civil Engineer RCEP 54158	No.	Date	Revisions	By	App.
				CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax				
Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Kokanee 11+10 to 16+10				Scale: 1" = 10' Date: 01/2023 Sheet 6 of 24				

A-7353

Proposed Base_RancheraWater_120919.dwg



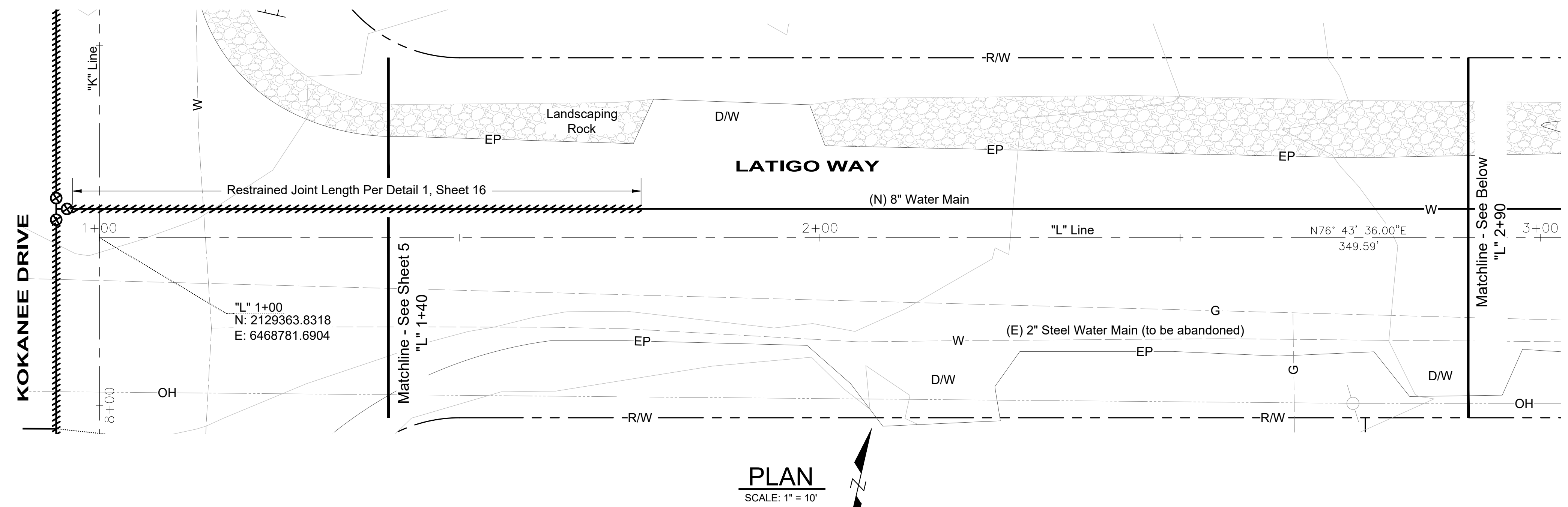
PLAN
SCALE: 1" = 10'



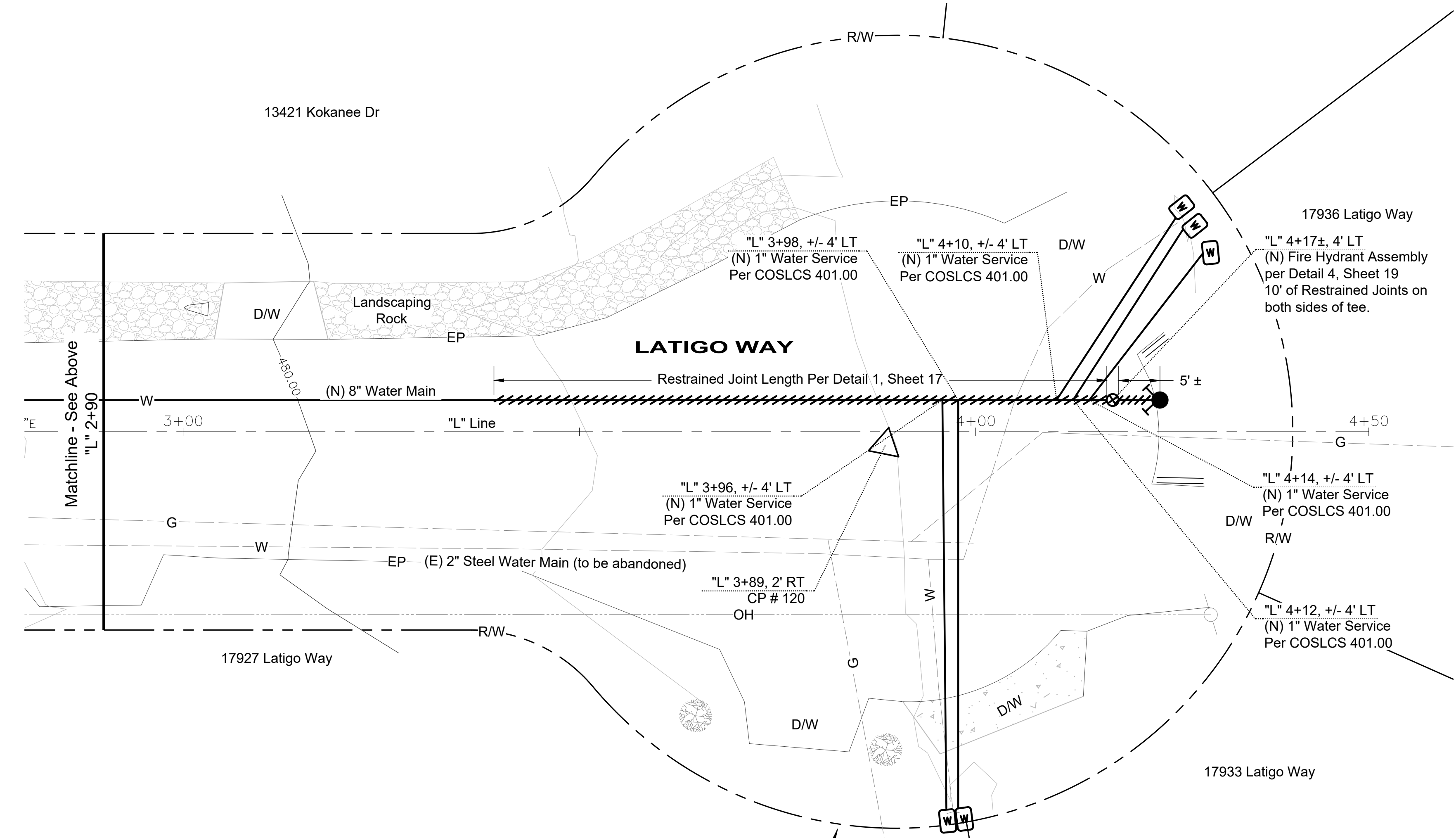
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7354

Designed By: SM Drawn By: SM Checked By: WBJ/JT Approved: <i>Shelby Noda</i> <small>Associate Civil Engineer RCEP 34158</small>	No. _____ Date _____ Revisions _____ By _____ App. _____
CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax	
Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Kokanee 16+10 to 18+30	
Scale:	1" = 10'
Date:	01/2023
Sheet	7 of 24



PLAN
SCALE: 1" = 10'

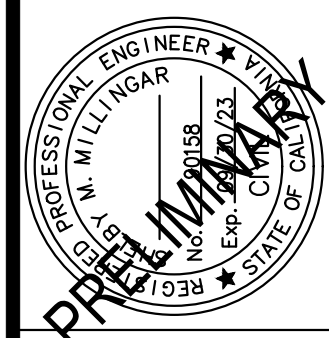


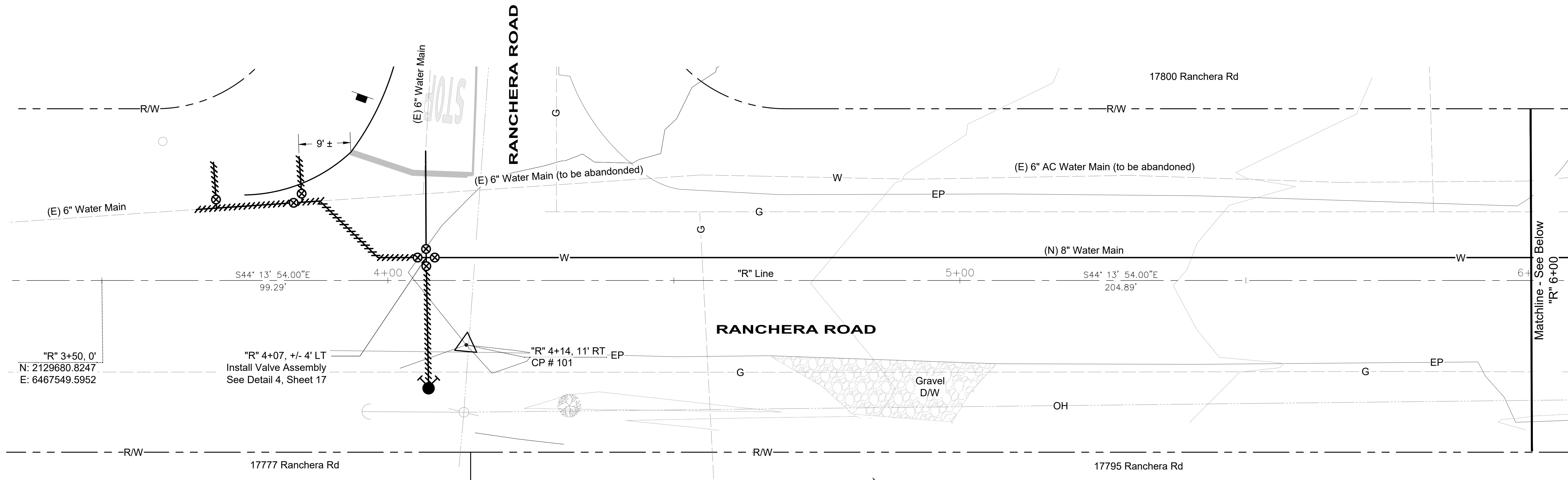
PLAN
SCALE: 1" = 10'



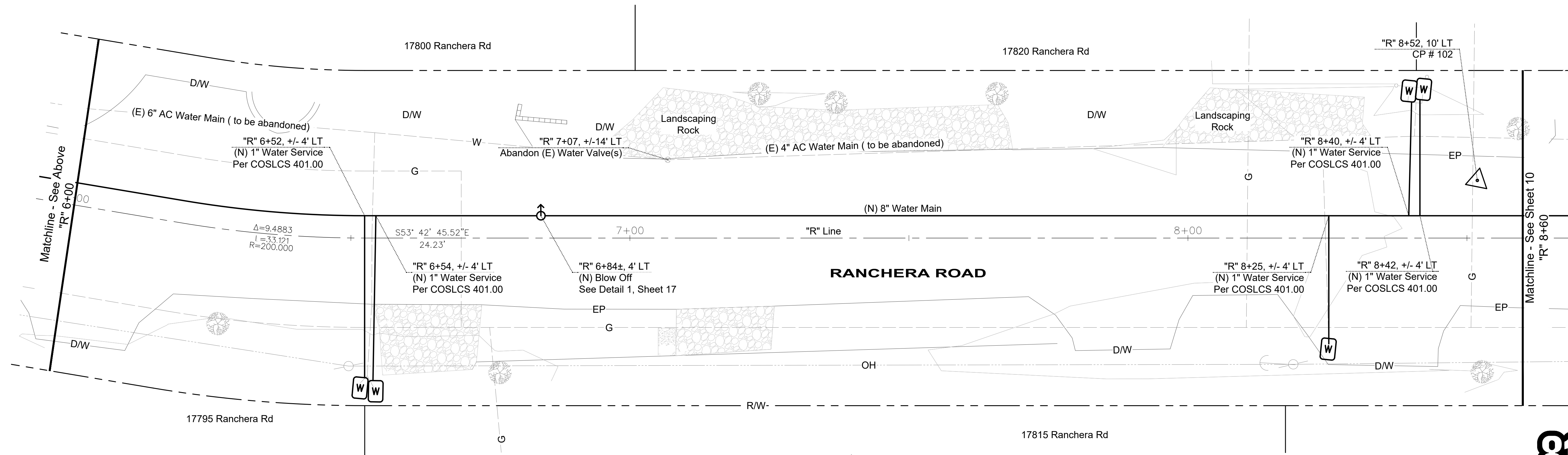
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7355

SM	WBI/JT	 Approved: <i>Shelly Nade</i> Associate Civil Engineer RCEP #1418	No.	Date	Revisions	By	App.	
Designed By:	Checked By:							
Drawn By:								
CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax		Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Latigo Way					Scale: 1" = 10' Date: 01/2023 Sheet 8 of 24	



PLAN
SCALE: 1" = 10'



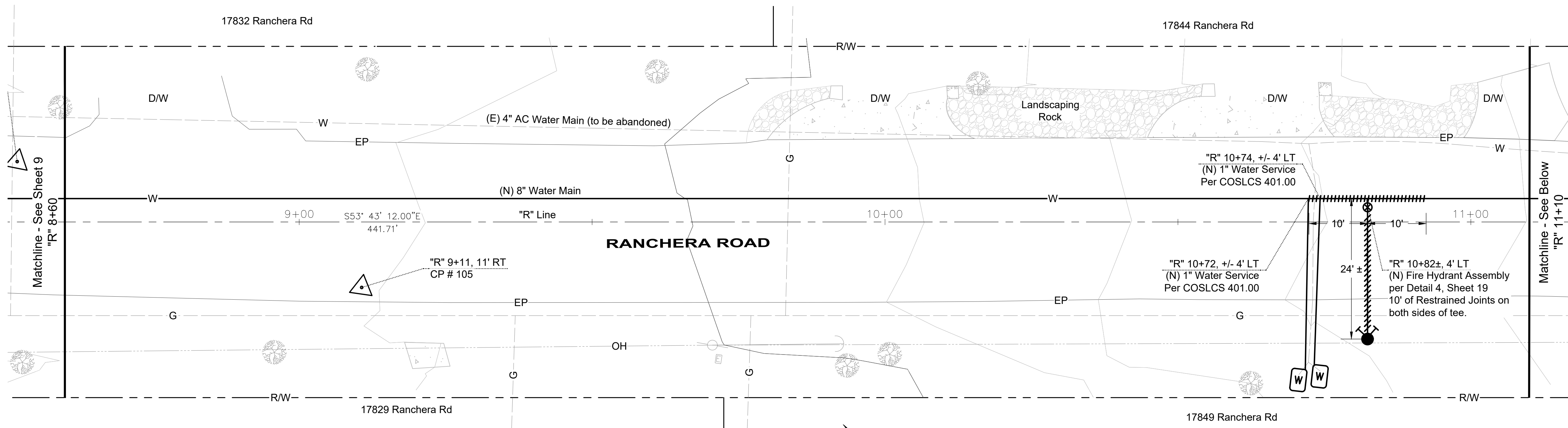
PLAN
SCALE: 1" = 20'



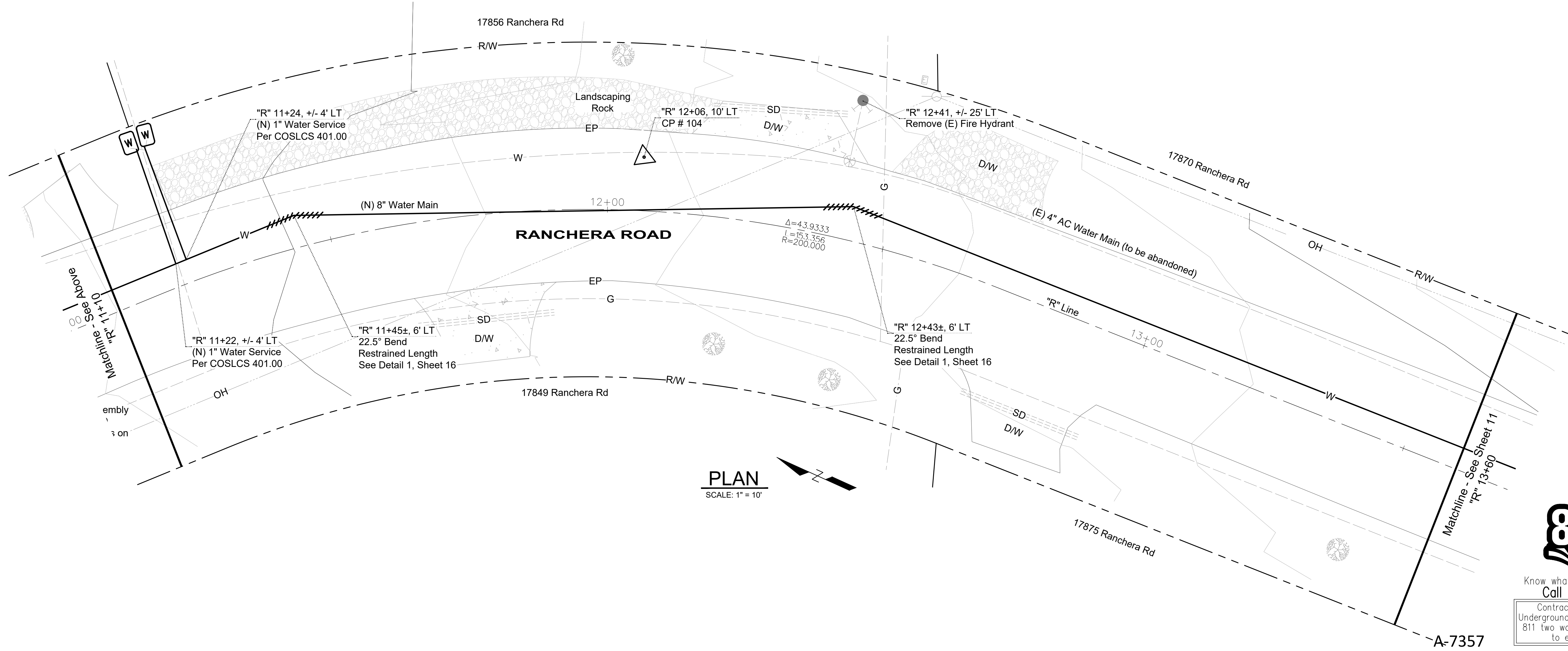
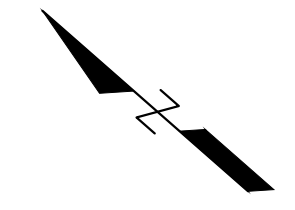
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7356

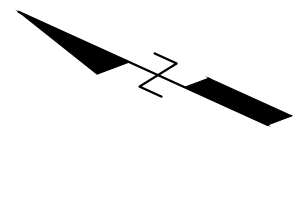
SM	WB/JT	Approved: <i>Shelby Loda</i>	Revisions	By	App.
Designed By:	Checked By:	Associate Civil Engineer	No.	Date	
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>					
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Ranchera Begin to 8+60</p>					
<p>Scale: 1" = 10'</p>					
<p>Date: 01/2023</p>					
<p>Sheet 9 of 24</p>					



PLAN
SCALE: 1" = 10'

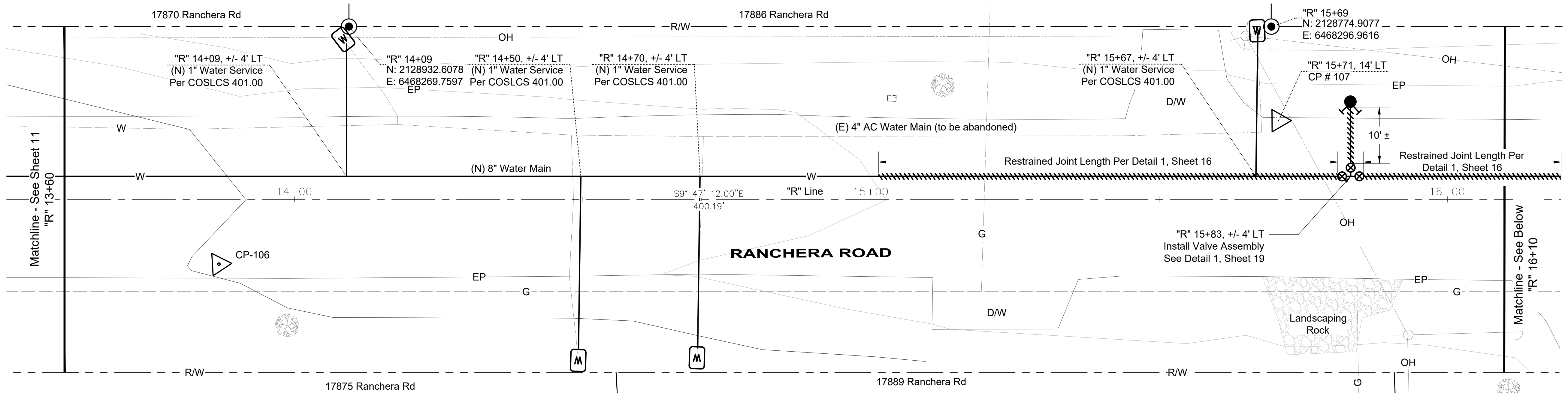


PLAN
SCALE: 1" = 10'

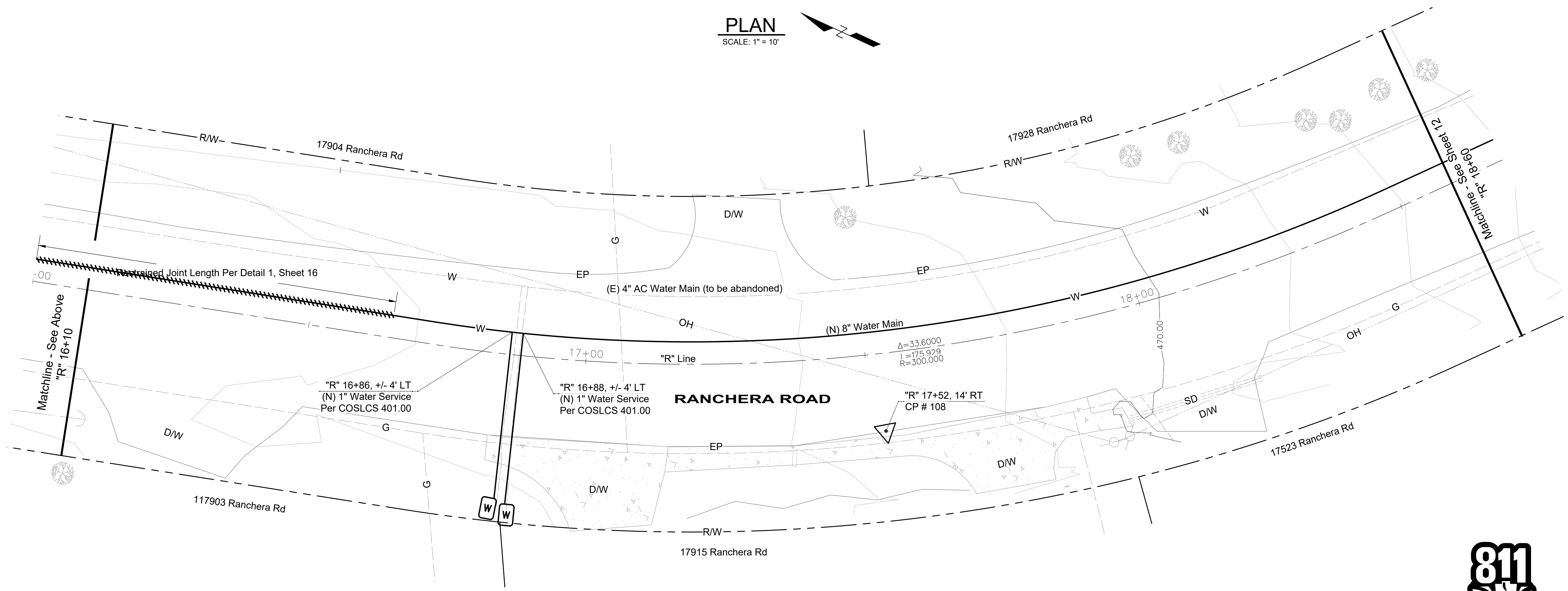


Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

SM	SM	WBI/JT	Approved: <i>Shelby Loda</i>	Associate Civil Engineer RCE# 34158
Designed By:	Drawn By:	Checked By:	No. _____ Date _____	
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>				
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05</p>				
<p>Ranchera 8+60 to 13+60</p>				
<p>Scale: 1" = 10'</p>				
<p>Date: 01/2023</p>				
<p>Sheet 10 of 24</p>				



PLAN
SCALE: 1" = 10'



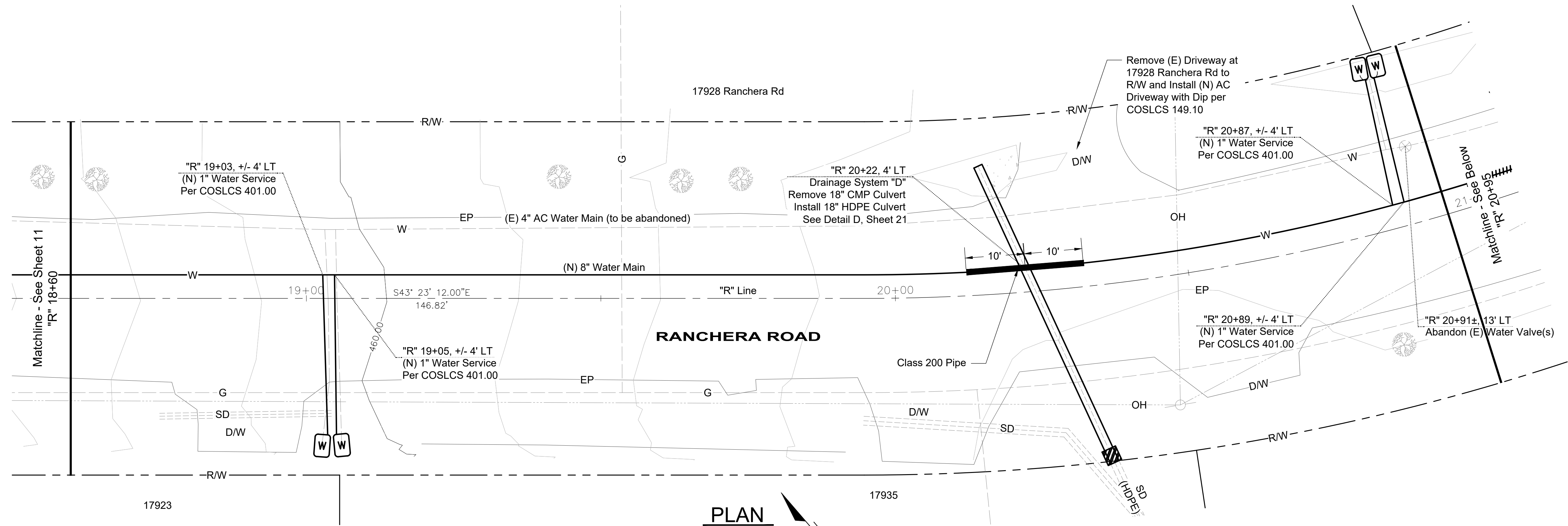
PLAN
SCALE: 1" = 10'



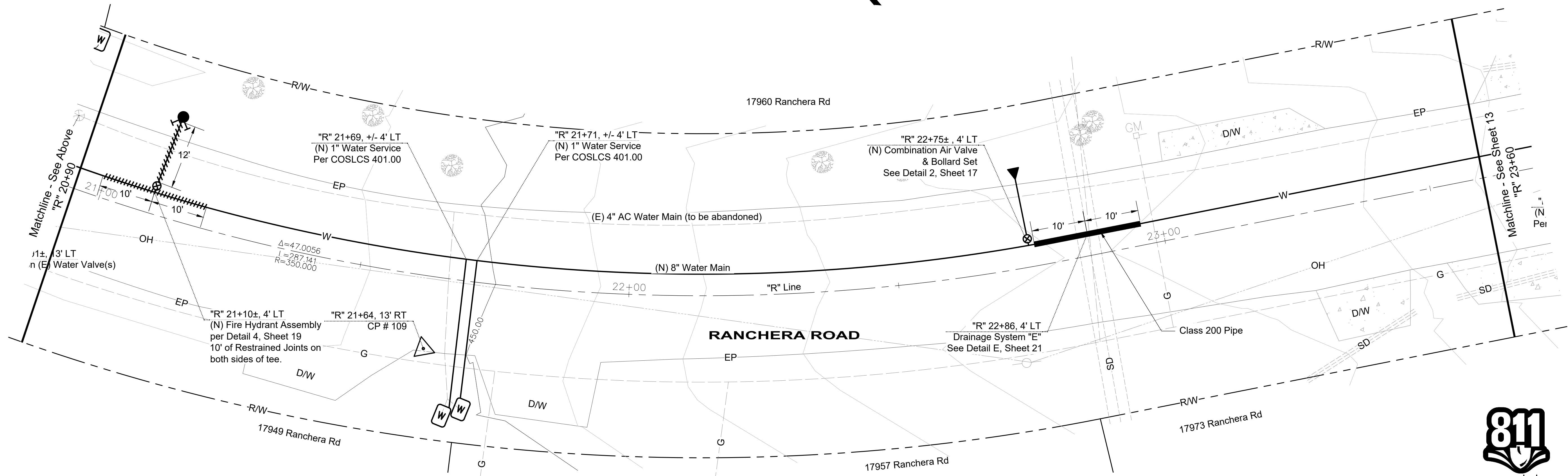
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7358

SM	WBI/JT	By	App.
Designed By:	Checked By:	Date	Revisions
Drawn By:	Approved:	No.	
Associated Civil Engineer	<i>Shelby Loda</i>		
CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax			
Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Ranchera 13+60 to 18+60			
Scale:	1" = 10'		
Date:	01/2023		
Sheet	11	of	24



PLAN
SCALE: 1" = 10'



PLAN
SCALE: 1" = 10'

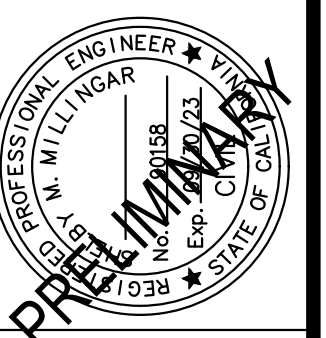


Know what's below.
Call before you dig.

Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7359

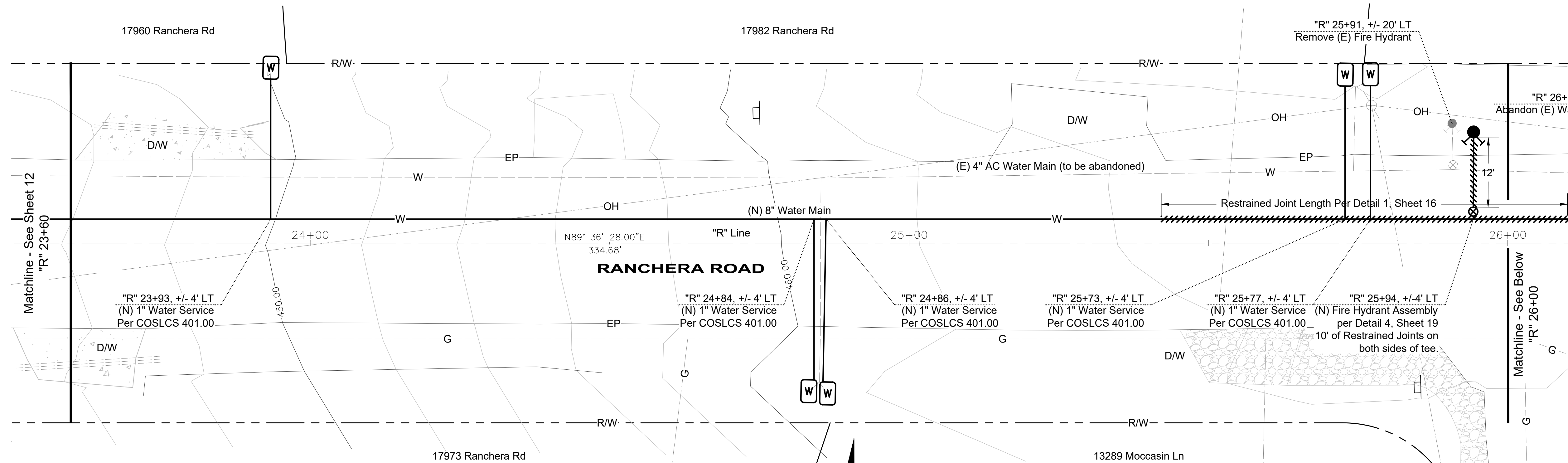
SM	WB/JT	By	App.
Designed By:	Checked By:	Revisions	Date
Approved:		No.	



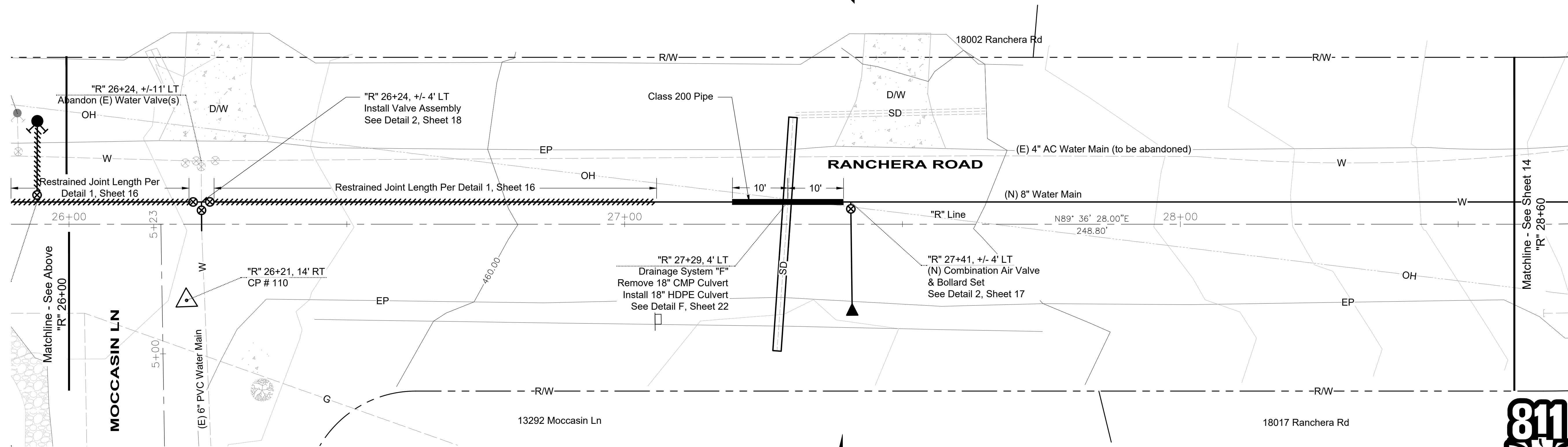
CITY OF SHASTA LAKE
Public Works Department
4477 Main Street, Shasta Lake, CA 96019
(530) 275-7400 ph (530) 275-7462 fax

Ranchera Rd Water Main
Replacement Project
Bid No. 2023-05
Ranchera 18+60 to 23+60

Scale:	1" = 10'
Date:	01/2023
Sheet	12 of 24



PLAN
SCALE: 1" = 10'

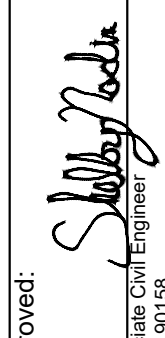
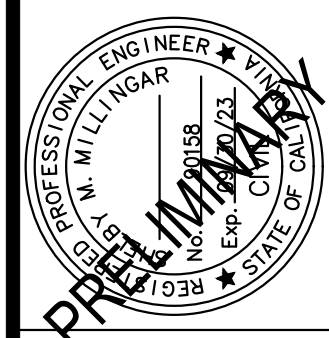



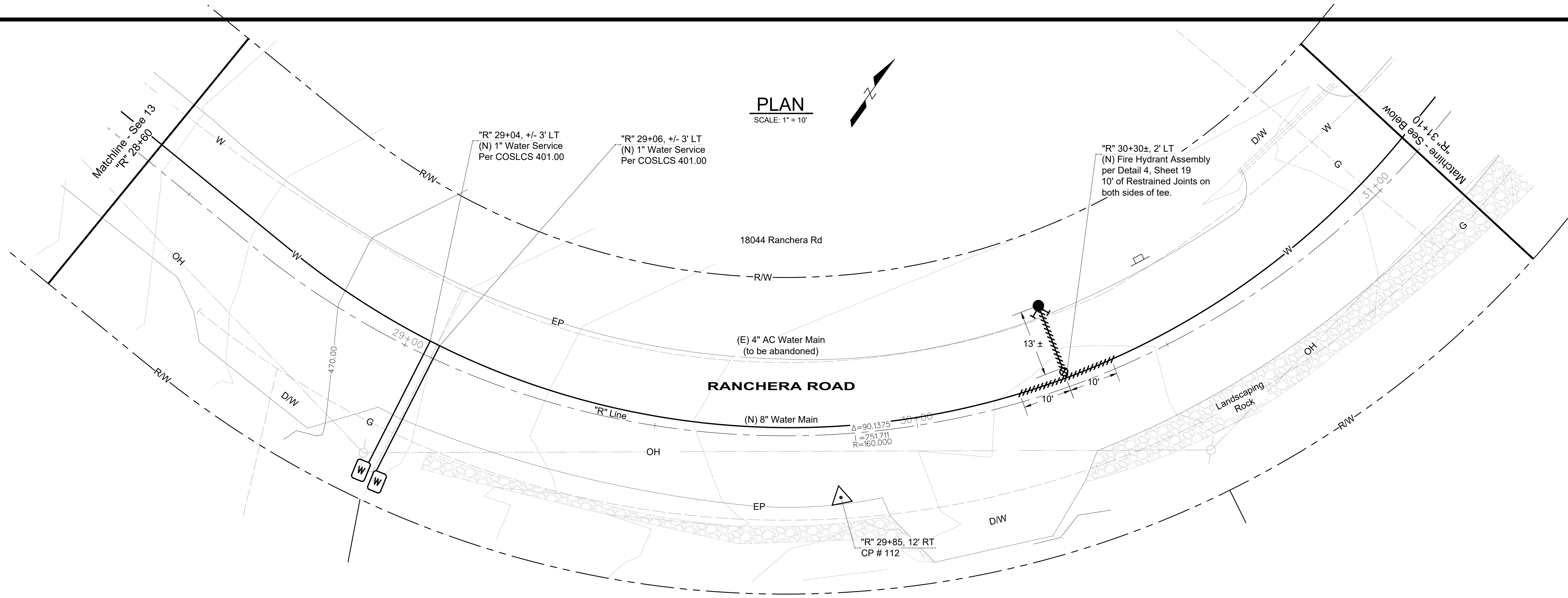
PLAN
SCALE: 1" = 10'



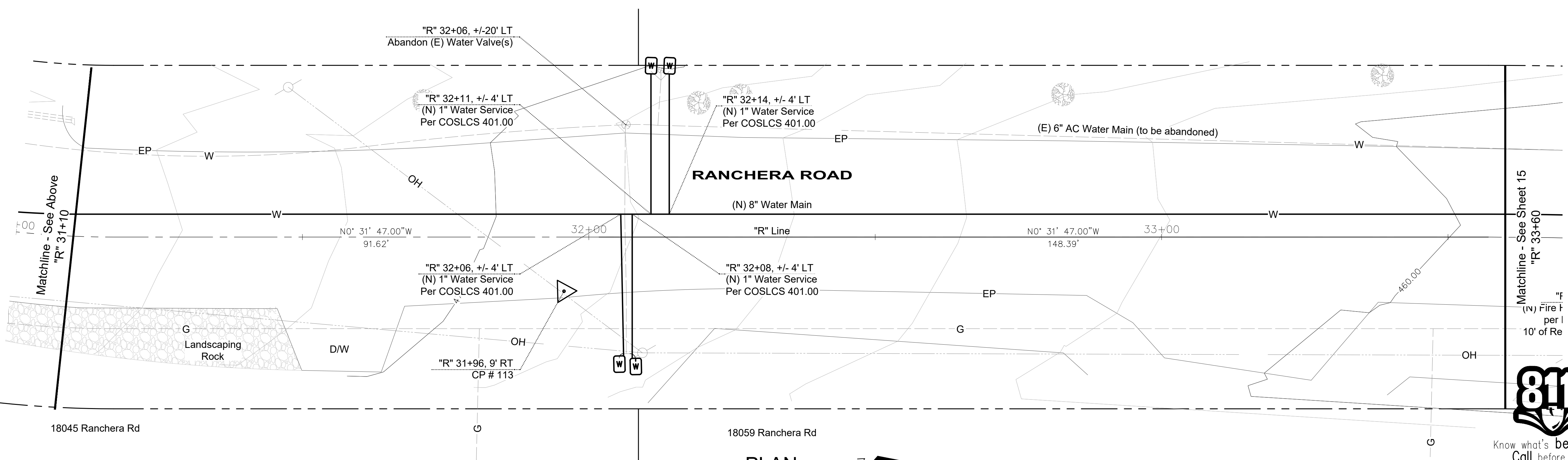
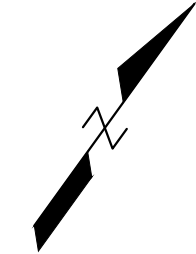
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7360

SM	SM	WB/JT	By	App.
Designed By:	Drawn By:	Checked By:	Revisions	Date
Approved:	 Associate Civil Engineer RCEP 34138		No.	Date
				
CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax				
				
Ranchera Rd Water Main Replacement Project Bid No. 2023-05				
Ranchera 23+60 to 28+60				
Scale: 1" = 10'				
Date: 01/2023				
Sheet 13 of 24				



PLAN
SCALE: 1" = 10'

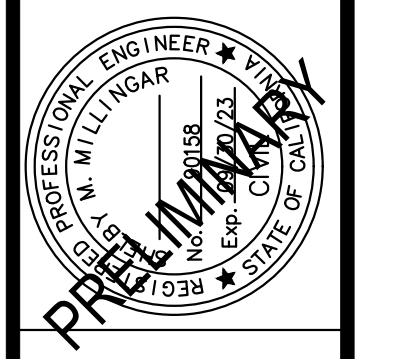


PLAN
SCALE: 1" = 10'

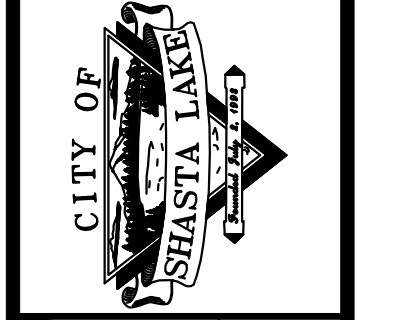


811
Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

Designed By: SM	Drawn By: SM	Checked By: WBJ/JT	Approved: <i>Shelby Goble</i>
Associate Civil Engineer			REC'd for Use
No.	Date	Revisions	By



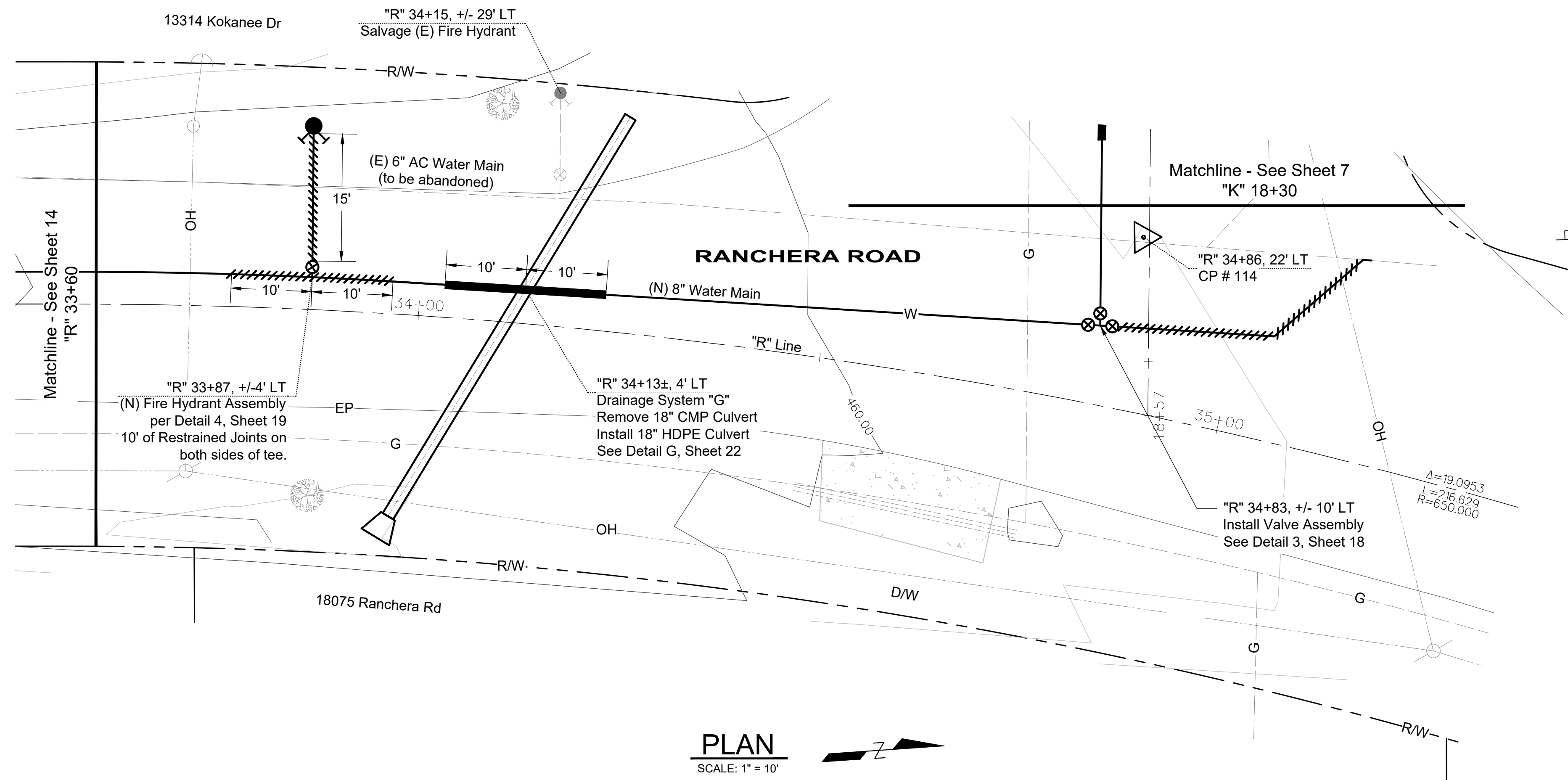
CITY OF SHASTA LAKE
Public Works Department
4477 Main Street, Shasta Lake, CA 96019
(530) 275-7400 ph (530) 275-7462 fax



Ranchera Rd Water Main Replacement Project
Bid No. 2023-05
Ranchera 28+60 to 33+60

A-7361

Proposed Base_RancheraWater_120919.dwg



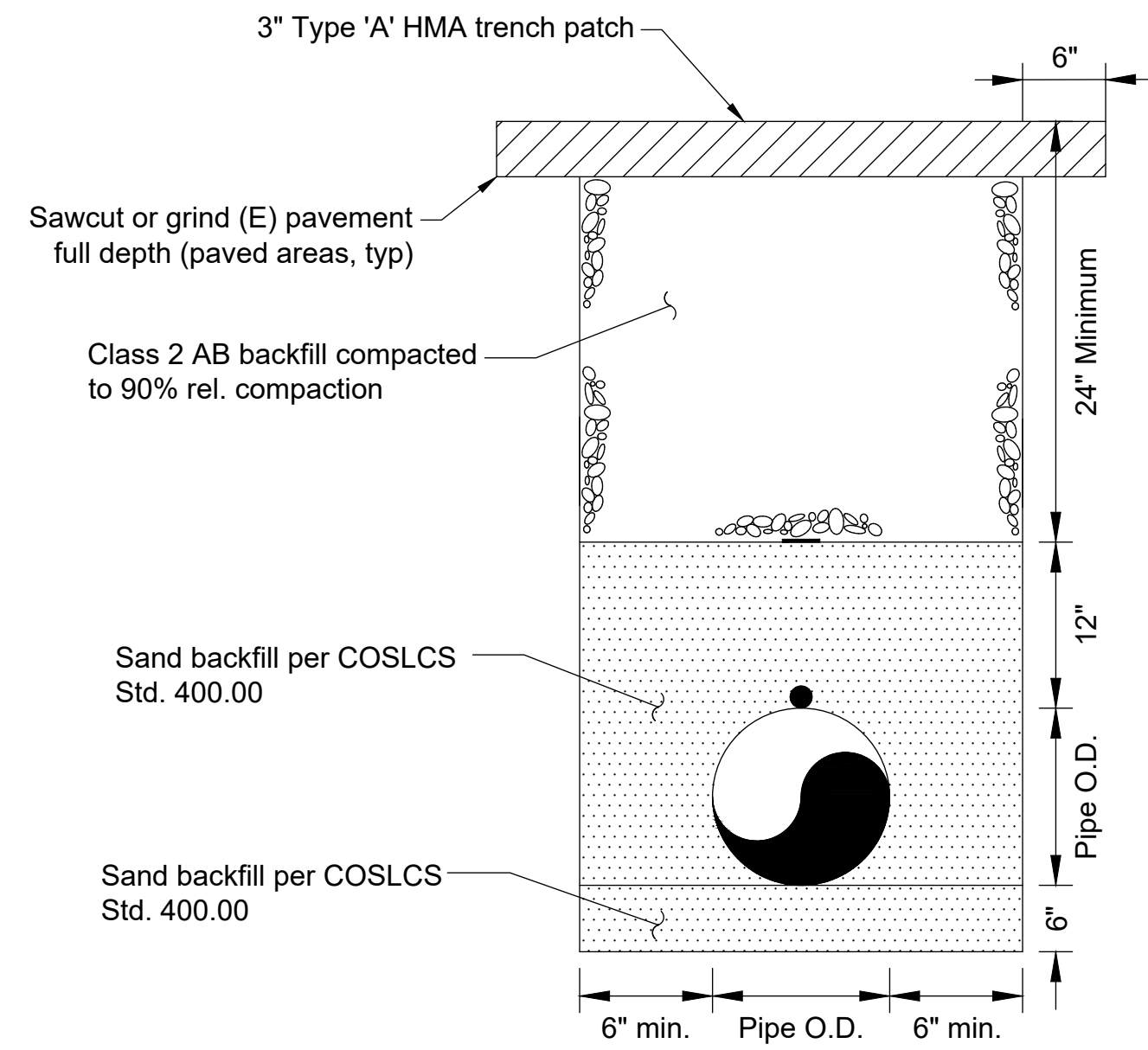
PLAN
SCALE: 1" = 10'



Know what's below.
Call before you dig.
Contractor shall call
Underground Service Alert at
811 two working days prior
to excavation

A-7362

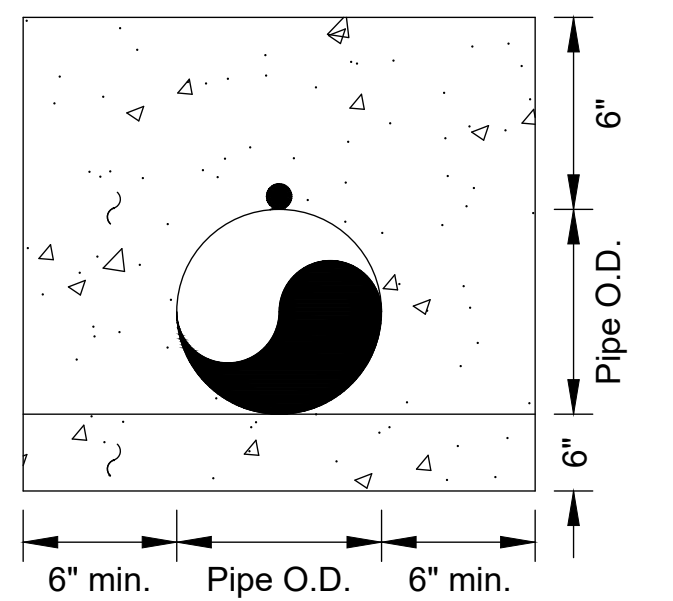
Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Ranchera 33+60 to End	CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax	PROFESSIONAL ENGINEER No. 13818 Exp. 01/23 STATE OF CALIF.	Designed By: SM Drawn By: SM Checked By: WBJ/JT Approved: <i>Shelby Beck</i> Associate Civil Engineer RCSP #1158	No. _____ Date _____ Revisions _____ By _____ App. _____
Scale: 1" = 10'	Date: 01/2023	Sheet 15 of 24		



NOTES:

- The Contractor shall install locating wire per COSLCS Std. 400.00.
- Bedding material under coupling bells shall be hand-excavated so that there is a minimum clearance of 1" under the bell.
- All water main fittings (including joint restraint assemblies) shall have all exposed nuts and bolts completely covered with spray-on rubberized undercoating, and all fittings shall be wrapped with 6 mil polyethylene plastic prior to trench backfill.
- The Contractor shall adequately shore his excavation to prevent the trench walls from sloughing into the trench. No additional payment will be made by the City to the Contractor for extra backfill that may be required due to sloughing trench walls.
- With approved traffic control, pipe backfill may be left exposed (without pavement surfacing) for a period of one (1) working day. After this time, the trench shall be patched with temporary asphalt pavement patching (cold mix), permanent asphalt pavement patching (hot mix), or traffic-rated excavation plates.

3a
16 WATER MAIN TRENCH DETAIL
No Scale



NOTES:

- This Standard does not apply to joint utility trenching - see Page 620.00
- Concrete for encasement shall be 2000 psi.
- On All concrete encased pipelines, pipe shall be supported on concrete blocks, grout pads, or other approved methods. Two supports shall be required per joint of pipe. Care shall be taken not to float pipe while placing concrete.
- Trench width on each side of the pipe shall be a minimum of either six (6) inches or wider as required to allow for placement and hand compaction of encasement material in the haunch zone of the pipe.

3b
16 WATER MAIN TRENCH DETAIL - CONCRETE ENCASEMENT
No Scale

403.00

THRUST BLOCKS AND ANCHOR DETAILS

THRUST BLOCK DETAIL

FITTING SIZE	TEE CROSS		VALVE DEAD END, WYE, HYDRANT	Horizontal Bearing Area of Thrust Blocks in Square Feet							Vertical Volume of Thrust Blocks in Cubic Yards								
	A-1	A-2		STRADDLE BLOCK	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND							
4	1.9	1.4	1.0	1.6	1.4	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---
6	4.3	3.0	2.1	3.7	3.0	1.6	1.0	---	---	---	---	---	---	---	---	---	---	---	---
8	7.6	5.4	3.8	6.5	5.3	2.9	1.5	1.0	2.3	1.1	---	---	---	---	---	---	---	---	---
10	11.8	8.4	5.9	10.2	8.4	4.6	2.4	1.2	3.7	1.8	---	---	---	---	---	---	---	---	---
12	17.0	12.0	8.5	14.7	12.0	6.6	3.4	1.7	5.5	2.8	1.2	---	---	---	---	---	---	---	---

NOTES:

- Concrete shall conform to Page 100.00.
- Thrust blocking shall be poured against undisturbed earth, and shall be kept clear of all joints and appurtenances.
- Tie rods shall be deformed galvanized cold rolled steel rebar, 40 ksi tensile strength.
- Above horizontal bearing areas based on a test pressure of 150 psi and an allowable soil bearing stress of 2000 lbs/SF. To compute bearing areas for different test pressures and soil bearing stresses, use the following equation:
Bearing Area = (Test Pressure / 150) x (2000 / Soil Bearing Stress) x Table Value
- Above vertical volumes based on test pressure of 150 psi and a unit weight of concrete of 4050 lbs per cubic yard. To compute bearing areas for different test pressures and soil bearing stresses, use the following equation:
Volume = (Test Pressure / 150) x Table Value
- Per Page 402.10 and 402.20, all mechanical joints shall be restrained.

2
16

402.10

HORIZONTAL BENDS, DEAD ENDS, AND INLINE VALVES

Pipe Size	1 1/4" Bend	2 1/2" Bend	45° Bend	90° Bend	Dead End & Inline Valve
3"	2'	3'	6'	13'	39'
4"	2'	3'	6'	14'	43'
6"	2'	4'	8'	19'	60'
8"	3'	5'	11'	25'	79'
10"	3'	6'	13'	30'	94'
12"	4'	7'	15'	35'	111'
14"	4'	8'	17'	40'	129'
16"	5'	9'	18'	44'	143'
18"	5'	10'	20'	48'	158'

REDUCERS

Pipe Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	---	14"	40"	64"	82"	101"	121"	135"	151"
4"	14"	---	31"	57"	77"	96"	117"	132"	148"
6"	40"	31"	---	33"	58"	81"	103"	120"	138"
8"	64"	57"	33"	---	32"	59"	84"	104"	124"
10"	82"	77"	58"	32"	---	33"	62"	85"	107"
12"	101"	96"	81"	59"	33"	---	33"	61"	86"
14"	121"	117"	103"	84"	62"	33"	---	33"	61"
16"	135"	132"	120"	104"	85"	61"	33"	---	32"
18"	151"	148"	138"	124"	107"	86"	61"	32"	---

TEES

Branch Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	1'	1'	1'	1'	1'	1'	1'	1'
8"	1'	1'	1'	1'	1'	1'	1'	1'	1'
10"	1'	1'	1'	1'	1'	1'	1'	1'	1'
12"	1'	1'	1'	1'	1'	1'	1'	1'	1'
14"	1'	1'	1'	1'	1'	1'	1'	1'	1'
16"	1'	1'	1'	1'	1'	1'	1'	1'	1'
18"	1'	1'	1'	1'	1'	1'	1'	1'	1'

THRUST RESTRAINT LENGTHS

THRUST RESTRAINT LENGTHS

1
16

402.20

HORIZONTAL BENDS, DEAD ENDS, AND INLINE VALVES

Pipe Size	1 1/4" Bend	2 1/2" Bend	45° Bend	90° Bend	Dead End & Inline Valve
3"	1'	2'	4'	10'	22'
4"	1'	3'	5'	12'	27'
6"	2'	4'	7'	16'	36'
8"	3'	5'	9'	21'	49'
10"	3'	6'	11'	25'	59'
12"	3'	6'	12'	29'	70'
14"	4'	7'	14'	33'	79'
16"	4'	8'	16'	37'	89'
18"	4'	8'	17'	41'	98'

REDUCERS

Pipe Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	---	9"	26"	40"	52"	63"	74"	85"	94"
4"	9"	---	20"	36"	48"	60"	72"	82"	92"
6"	26"	20"	---	21"	37"	51"	63"	75"	86"
8"	40"	36"	21"	---	20"	37"	52"	65"	77"
10"	52"	48"	37"	20"	---	21"	38"	53"	67"
12"	63"	60"	51"	37"	21"	---	21"	38"	53"
14"	74"	72"	63"	52"	38"	21"	---	21"	38"
16"	85"	82"	75"	65"	53"	38"	21"	---	20"
18"	94"	92"	86"	77"	67"	53"	38"	20"	---

TEES

Branch Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	1'	1'	1'	1'	1'	1'	1'	1'
8"	1'	1'	1'	1'	1'	1'	1'	1'	1'
10"	1'	1'	1'	1'	1'	1'	1'	1'	1'
12"	1'	1'	1'	1'	1'	1'	1'	1'	1'
14"	1'	1'	1'	1'	1'	1'	1'	1'	1'
16"	1'	1'	1'	1'	1'	1'	1'	1'	1'
18"	1'	1'	1'	1'	1'	1'	1'	1'	1'

THRUST RESTRAINT LENGTHS

THRUST RESTRAINT LENGTHS

1
16

A-7363

By: App.
Revisions
Date
No.

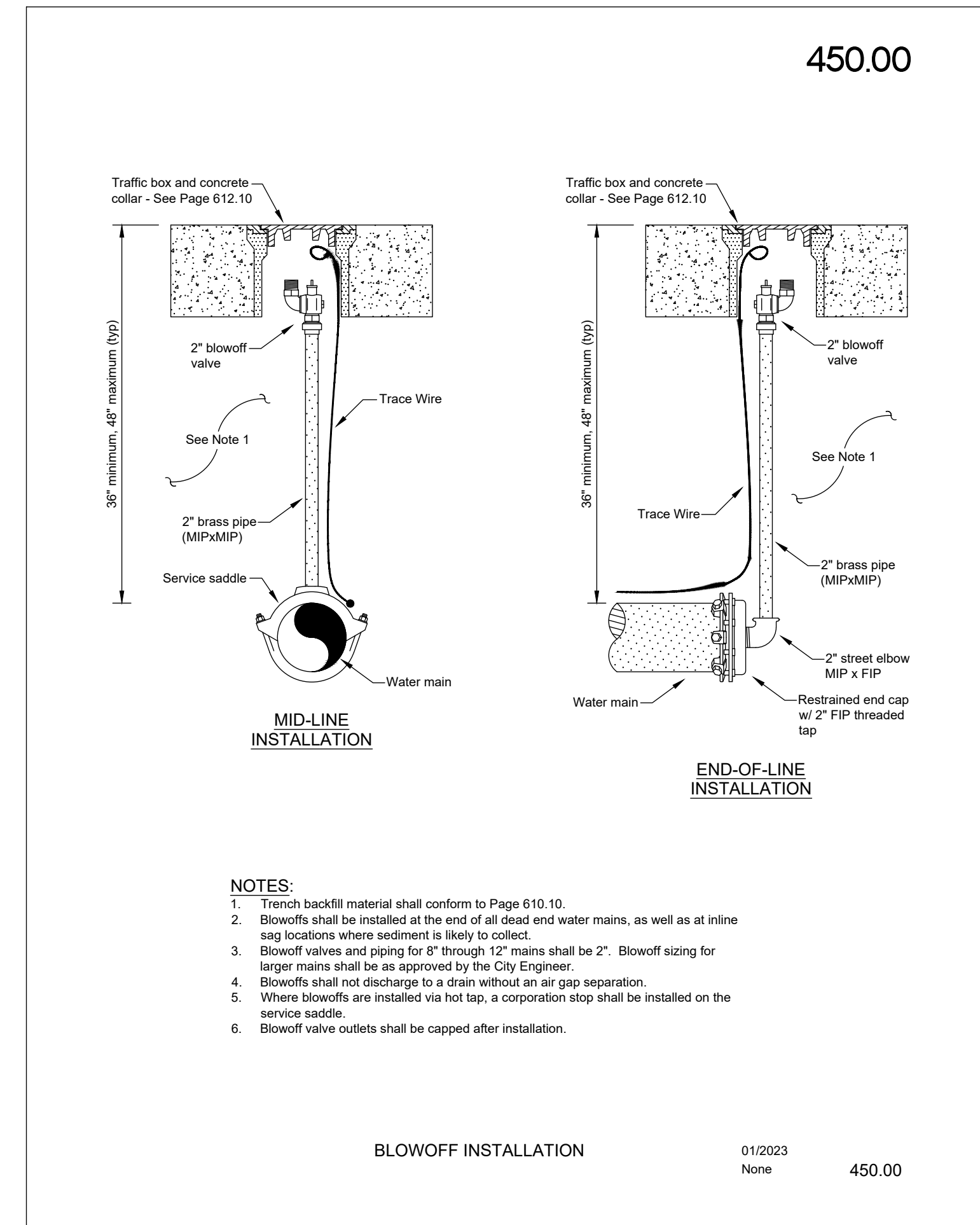
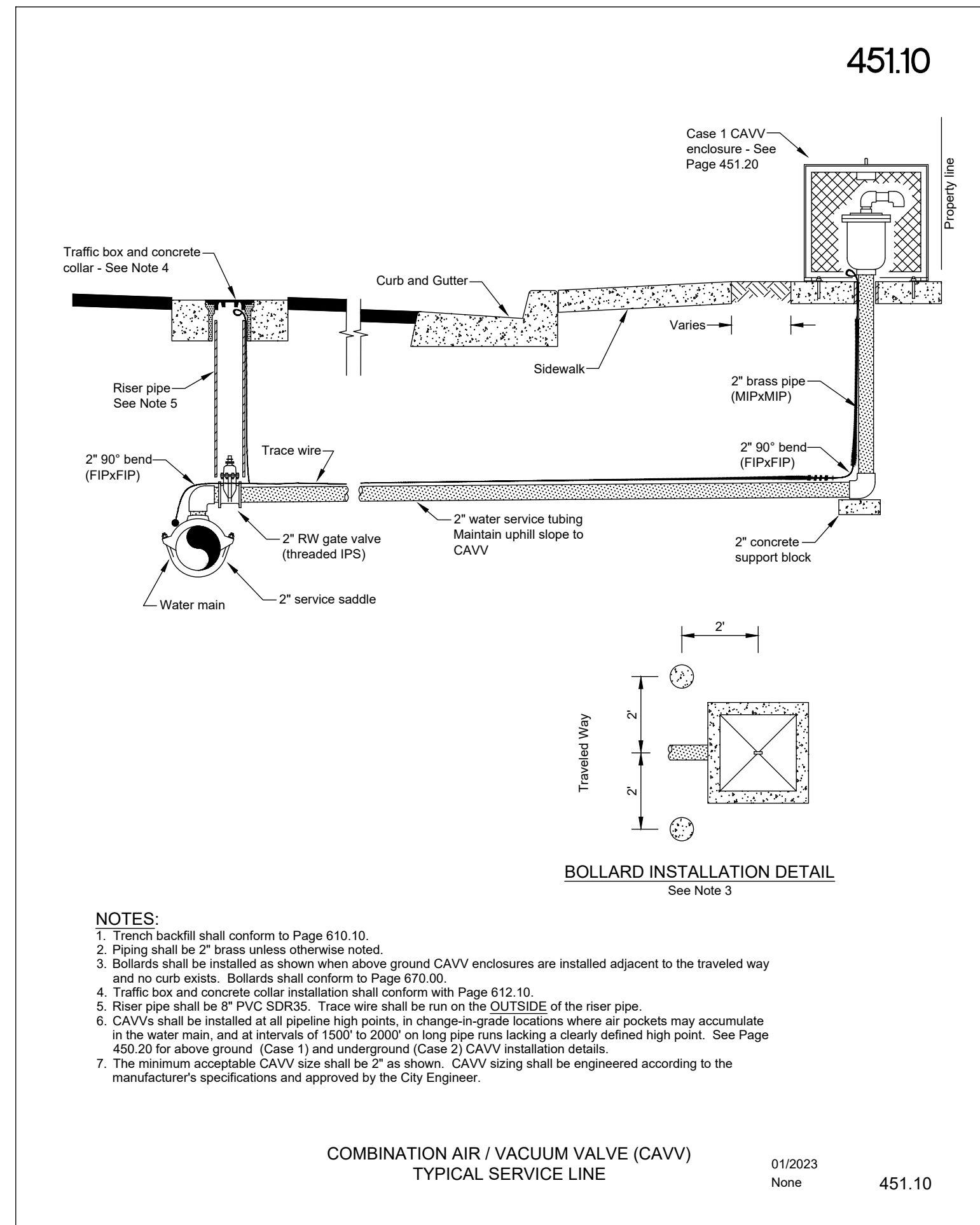
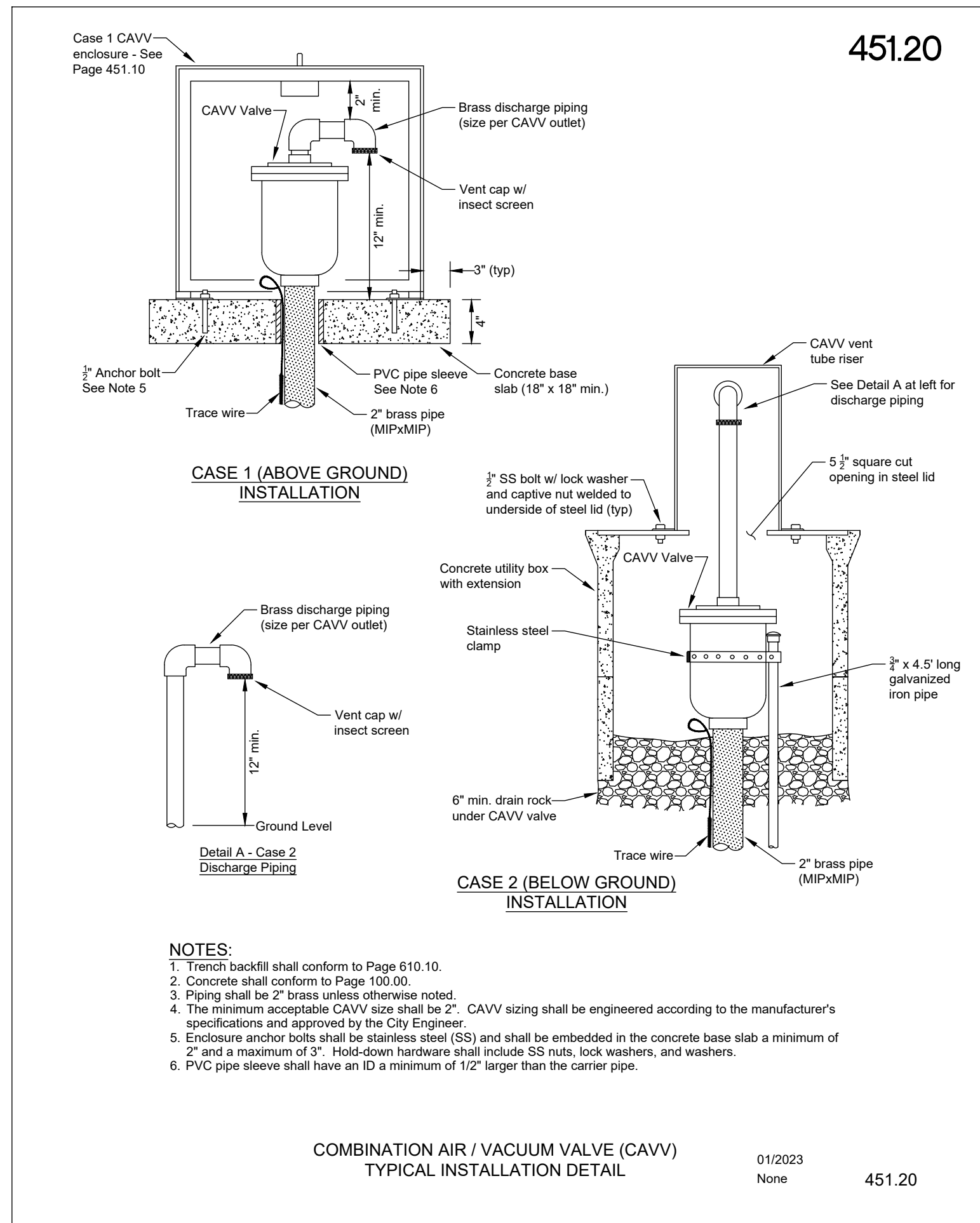
Designed By: SM
Drawn By: WBL/JT
Checked By:
Approved: *Shelby Joda*
Associate Civil Engineer
RCES 50158

CITY OF SHASTA LAKE
Public Works Department
4477 Main Street, Shasta Lake, CA 96019
(530) 275-7400 ph (530) 275-7462 fax

CITY OF SHASTA LAKE

Ranchera Rd Water Main Replacement Project
Bid No. 2023-05
Water Details 1

Scale: None
Date: 01/2023
Sheet 16 of 24



2
17

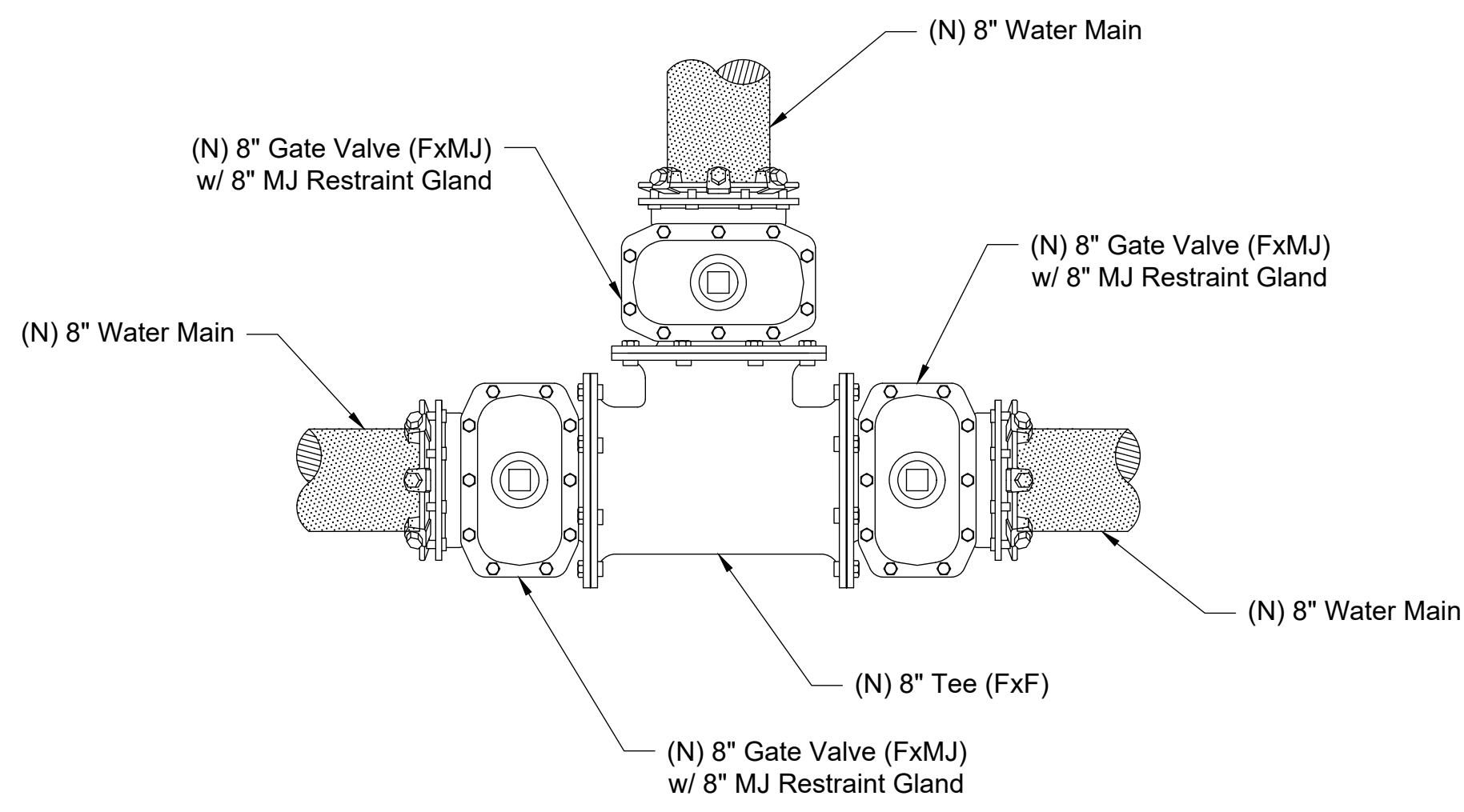
COMBINATION AIR/VACUUM VALVE (CAVV)

1
17

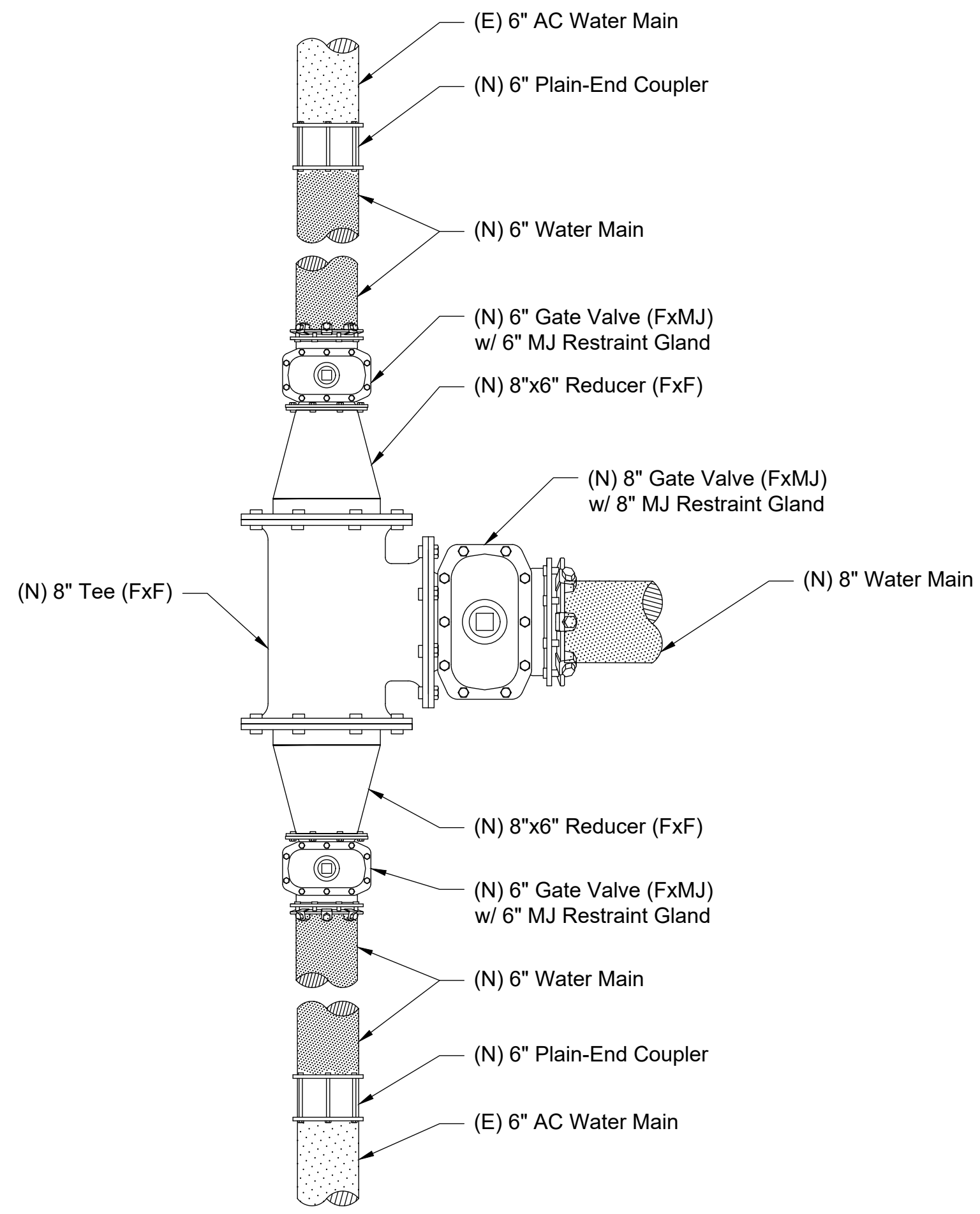
BLOW OFF DETAIL

SM	WBI/JT	Shelby Tode	Revisions	Date	No.	By	App.
Designed By:	Drawn By:	Checked By:	Approved:				
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>							
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Water Details 2</p>							
Scale: None							
Date: 01/2023							
Sheet 17 of 24							

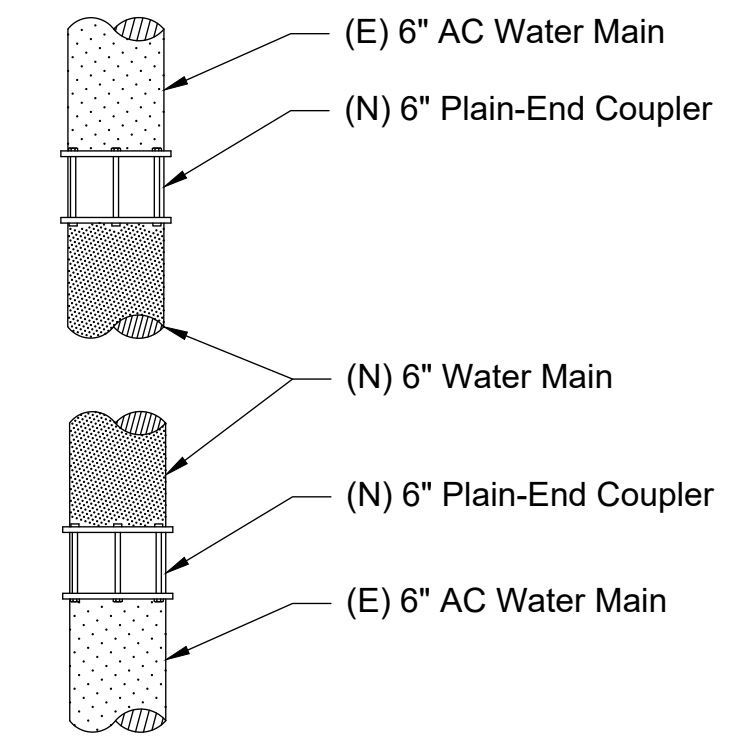
A-7364



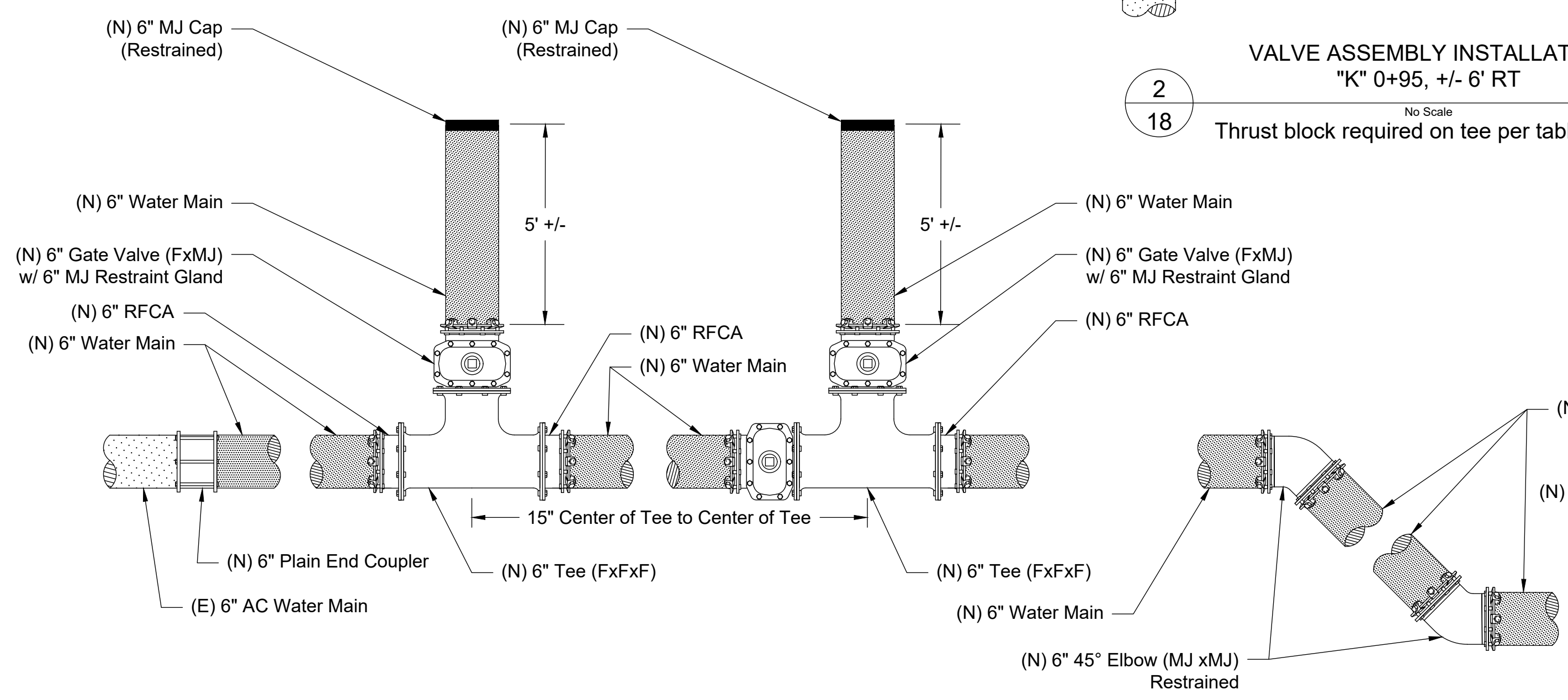
3
18
VALVE ASSEMBLY INSTALLATION
"K" 7+73, +/- 6' RT
No Scale



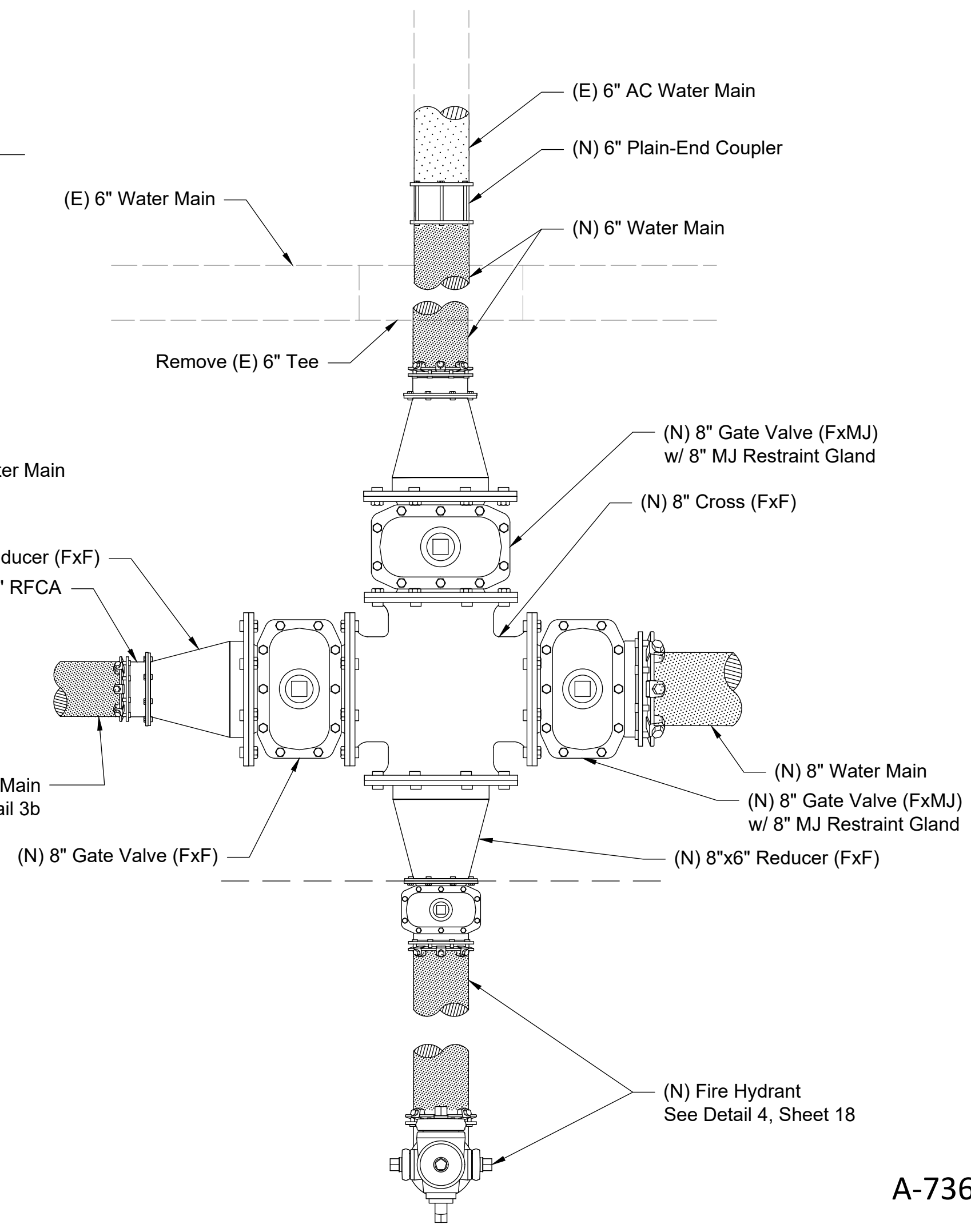
2
18
VALVE ASSEMBLY INSTALLATION
"K" 0+95, +/- 6' RT
No Scale
Thrust block required on tee per table



1
18
Fitting Removal
"K" 0+95, +/- 6' RT
No Scale



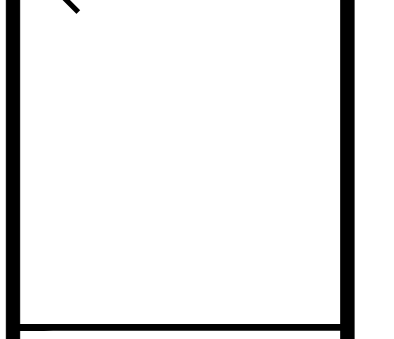
4
18
VALVE ASSEMBLY INSTALLATION & CONNECTION
"R" 4+07, +/- 4' LT
No Scale



NOTES:

1. Factory manufactured fittings shall be used exclusively.
2. Fittings required for acceptance testing of water main are not shown, and are the responsibility of the Contractor.
3. Fittings required to provide temporary water service to residents are not shown, and are the responsibility of the Contractor.
4. All fittings shall have all exposed nuts and bolts completely covered with spray-on rubberized undercoating, and all fittings shall be wrapped with 6 mil polyethylene plastic prior to trench backfill.
5. Restrain joints as required per table on Sheet 16.

SM	WBI/JT	By	App.
Designed By:	Checked By:	Date	Revisions
Drawn By:	Approved:	No.	



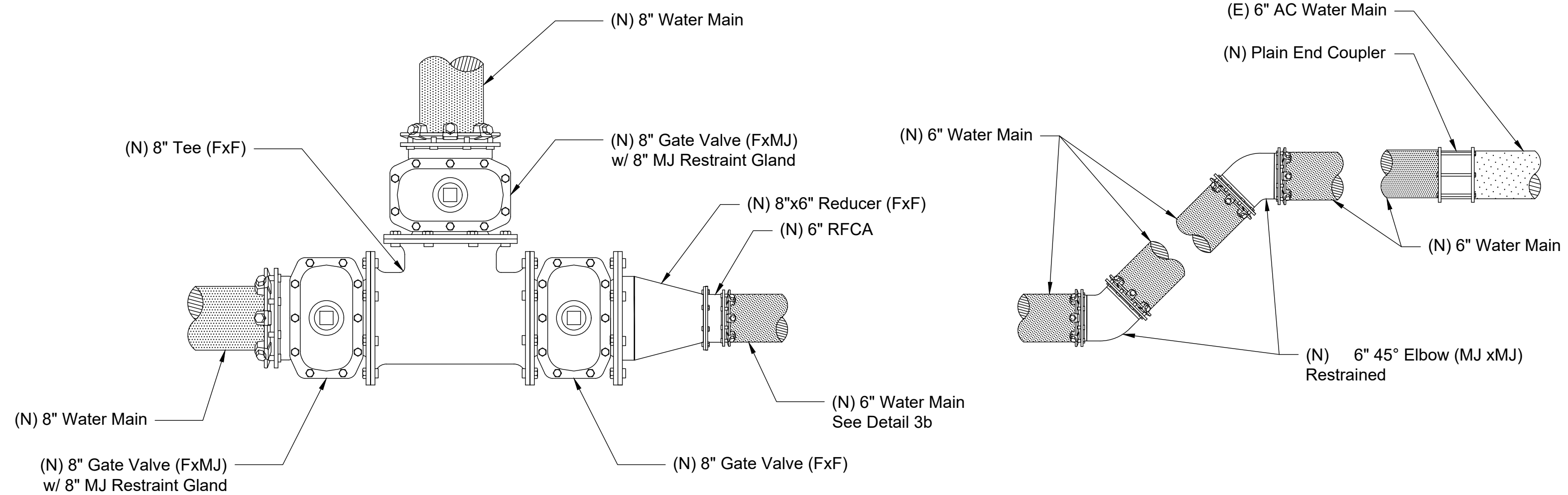
CITY OF SHASTA LAKE
Public Works Department
4477 Main Street, Shasta Lake, CA 96019
(530) 275-7400 ph (530) 275-7462 fax



Ranchera Rd Water Main Replacement Project
Bid No. 2023-05
Water Details 3

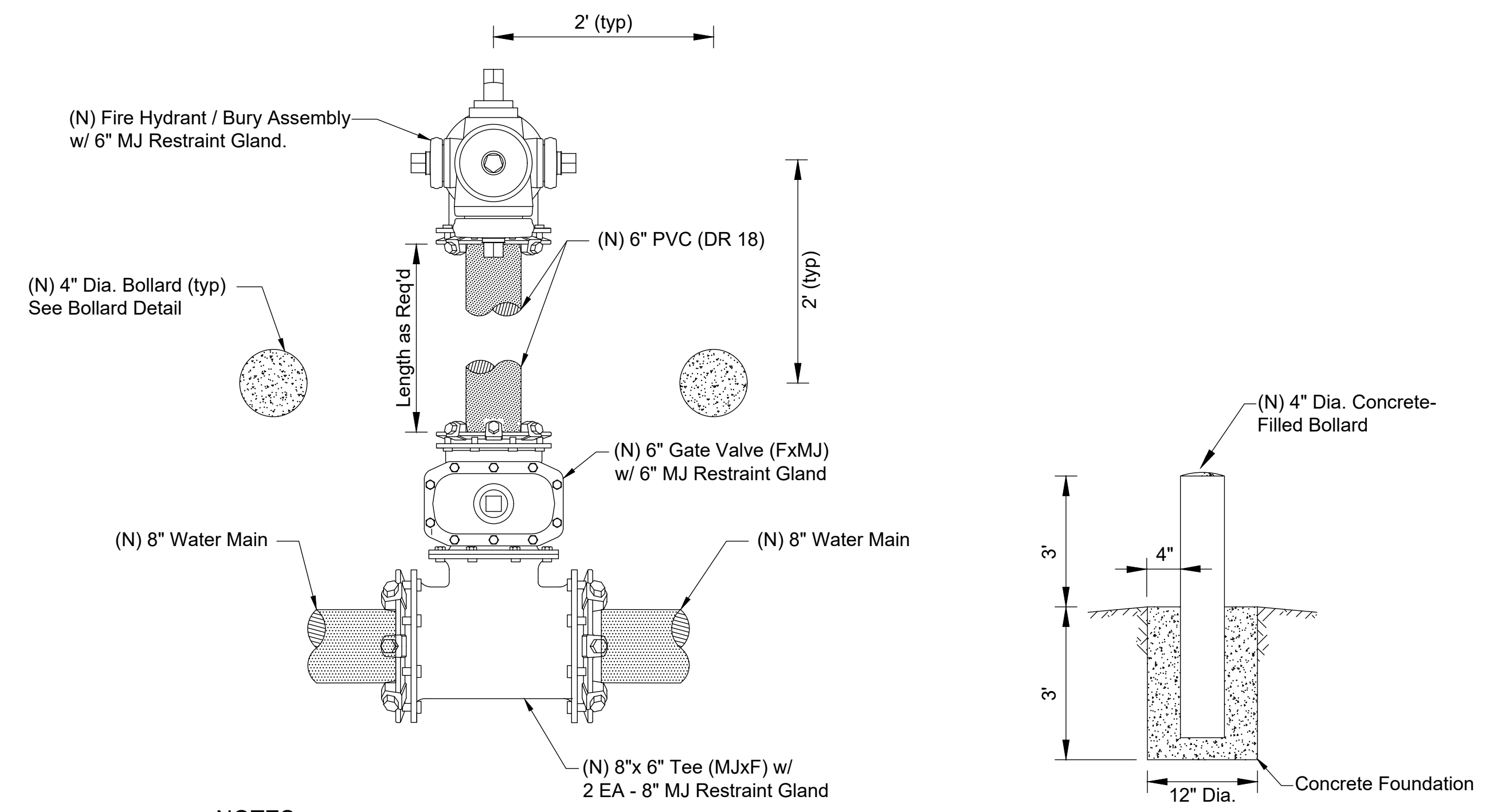
Scale:	None
Date:	01/2023
Sheet	18 of 24

A-7365



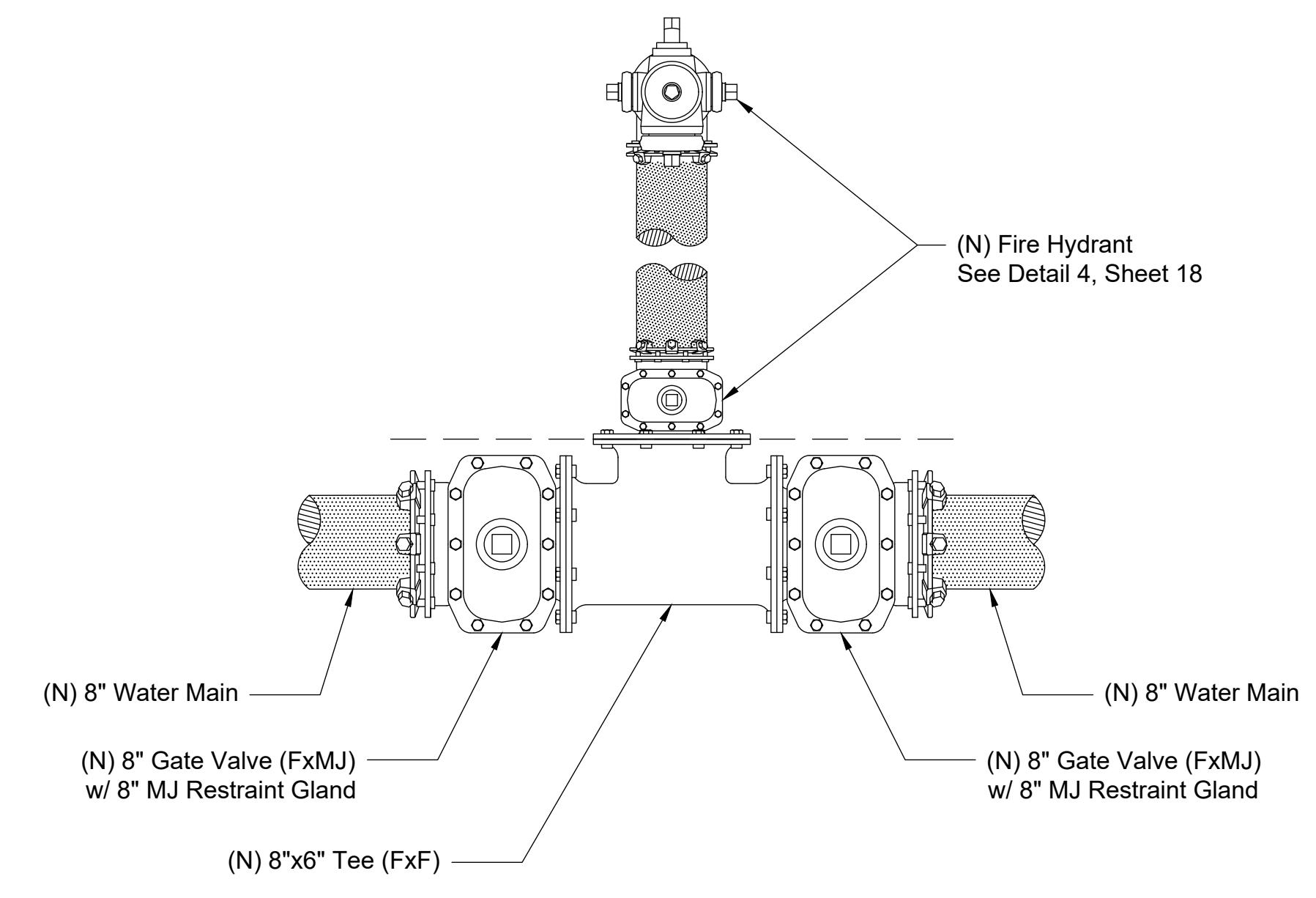
VALVE ASSEMBLY INSTALLATION & CONNECTION
 "R" 34+83, +/- 10' LT
 3
 19
 No Scale

Thrust block required on tee per table

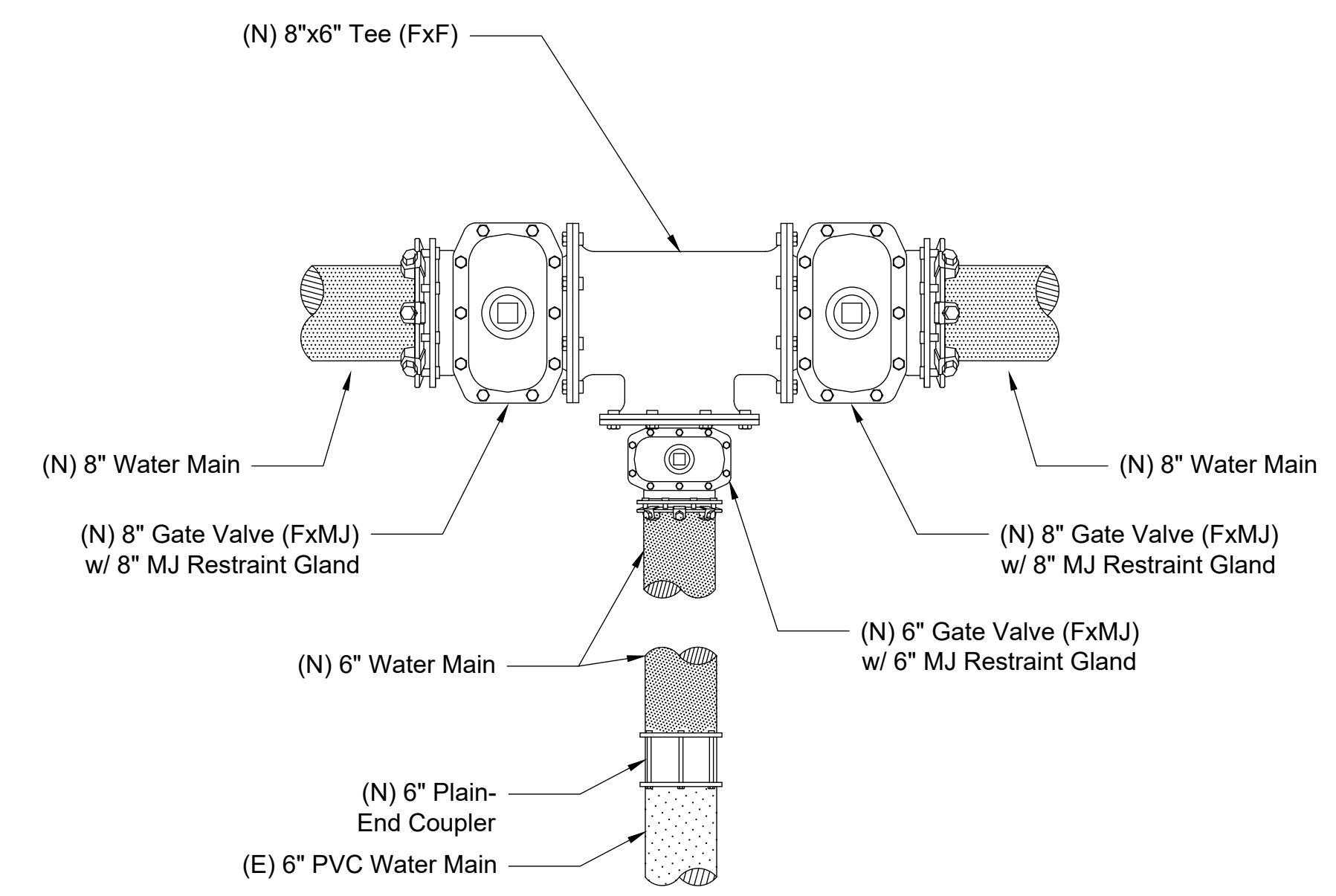


- NOTES:**
1. The Contractor shall install the hydrant assembly per COSLCS 421.00.
 2. All hydrant run joints shall be restrained. No thrust blocking is required on the assembly.
 3. All main line pipe joints within 10' of the hydrant tee shall be restrained.
 4. Bollards shall be Schedule 80 steel, shall be filled with concrete, and shall be painted Safety Yellow.
 5. Bollard location, material, installation and other details shown to be used for Combination Air Valve assembly, where shown on plans.

4
 19
 FIRE HYDRANT ASSEMBLY (TYP.)
 No Scale



VALVE ASSEMBLY INSTALLATION
 "R" 15+83, +/- 4' LT
 1
 19
 No Scale

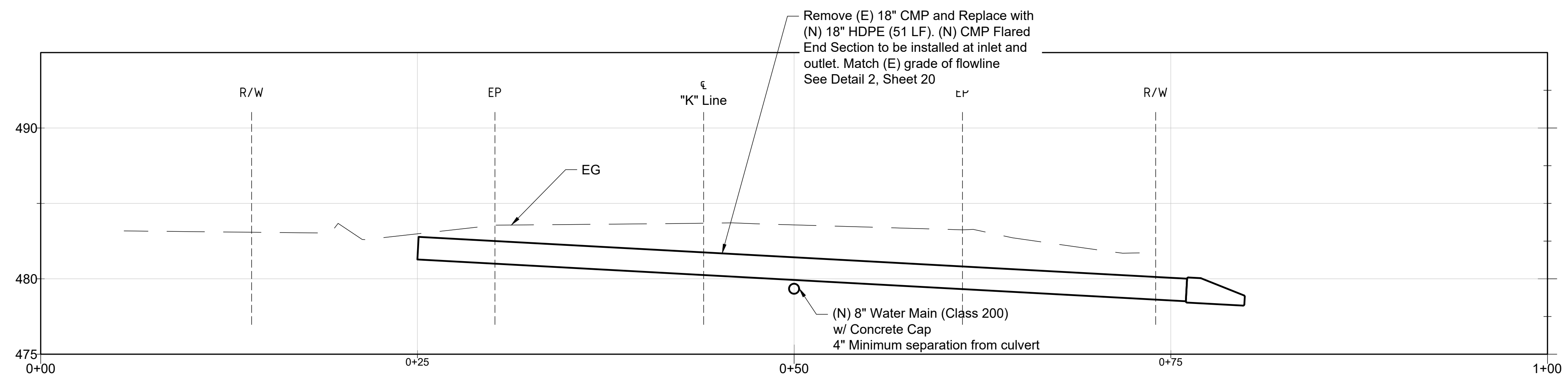
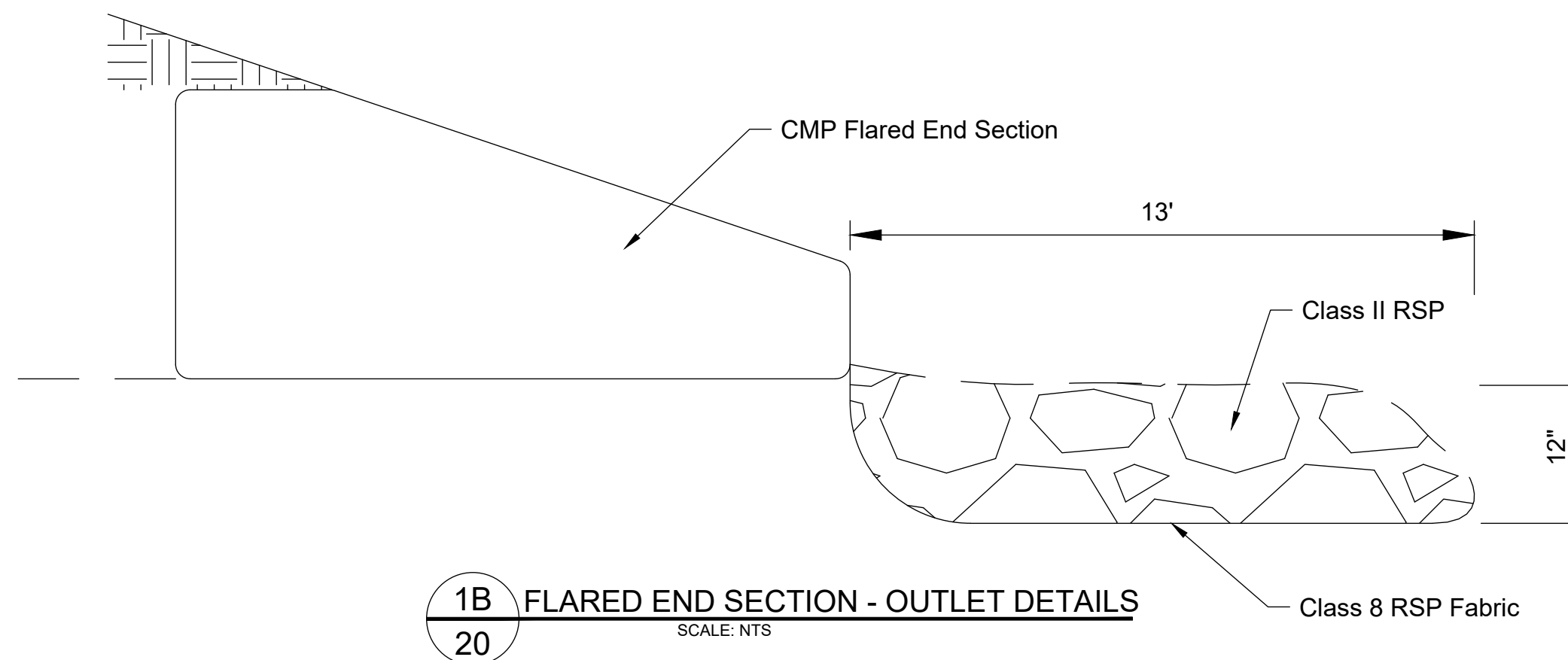
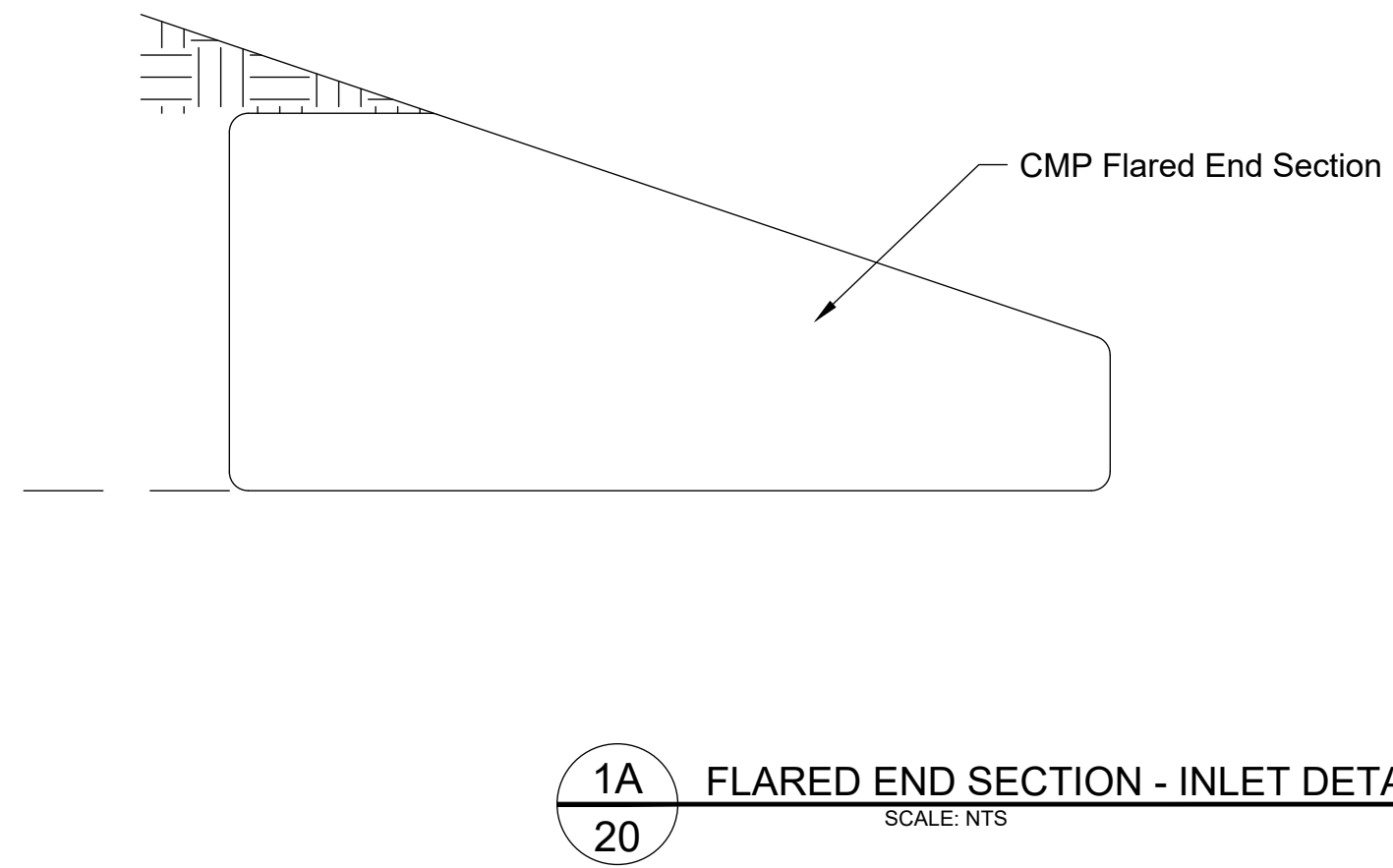
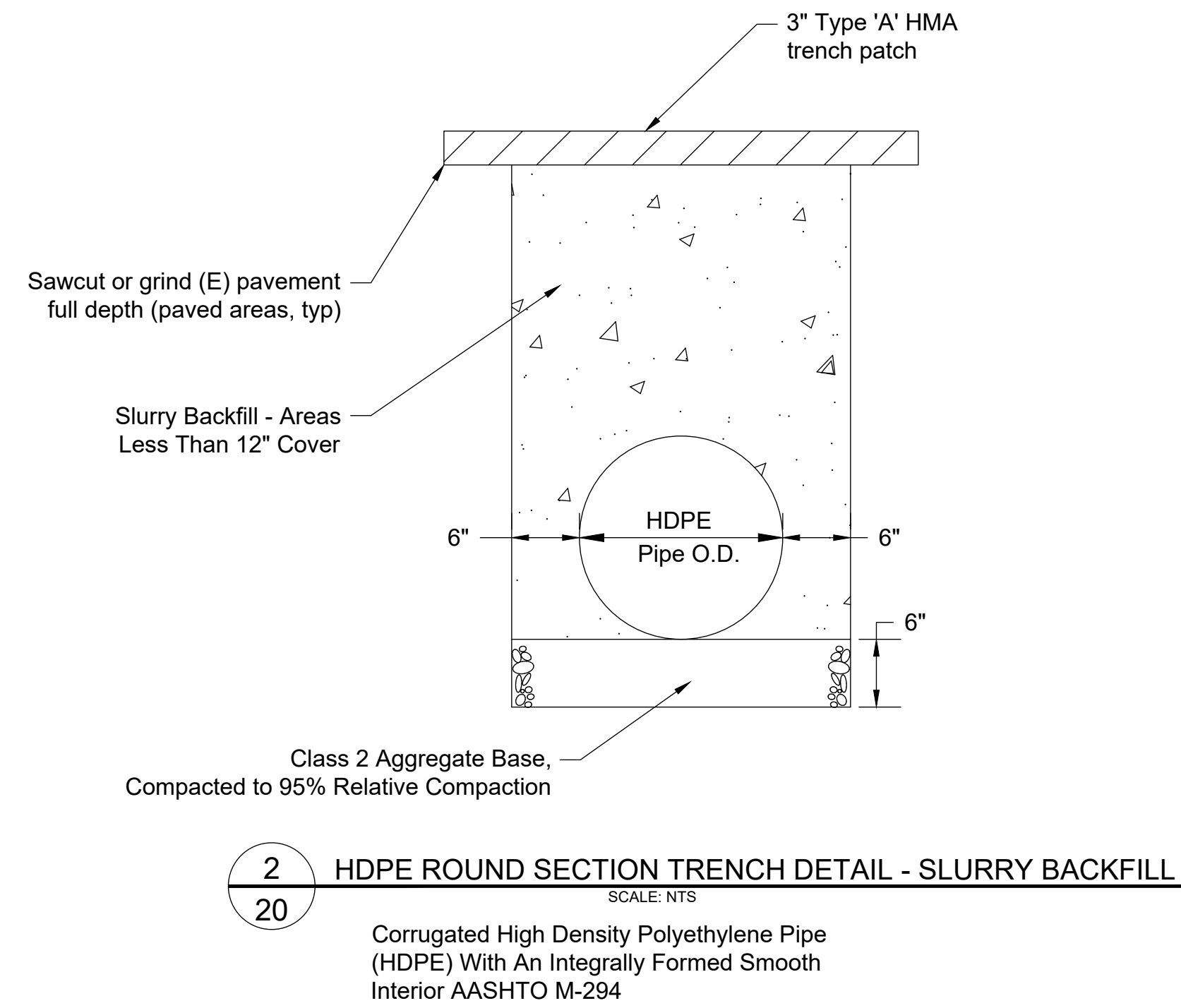


VALVE ASSEMBLY INSTALLATION
 "R" 26+24, +/- 4' LT
 2
 19
 No Scale

- NOTES:**
1. Factory manufactured fittings shall be used exclusively.
 2. Fittings required for acceptance testing of water main are not shown, and are the responsibility of the Contractor.
 3. Fittings required to provide temporary water service to residents are not shown, and are the responsibility of the Contractor.
 4. All fittings shall have all exposed nuts and bolts completely covered with spray-on rubberized undercoating, and all fittings shall be wrapped with 6 mil polyethylene plastic prior to trench backfill.
 5. Restrain joints as required per table on Sheet 16.

SM	WBI/JT	By	App.
Designed By:	Checked By:	Revisions	Date
Drawn By:	Approved:	No.	Date
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>			
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05 Water Details 4</p>			
<p>Scale: None</p>			
<p>Date: 01/2023</p>			
<p>Sheet 19 of 24</p>			

A-7366



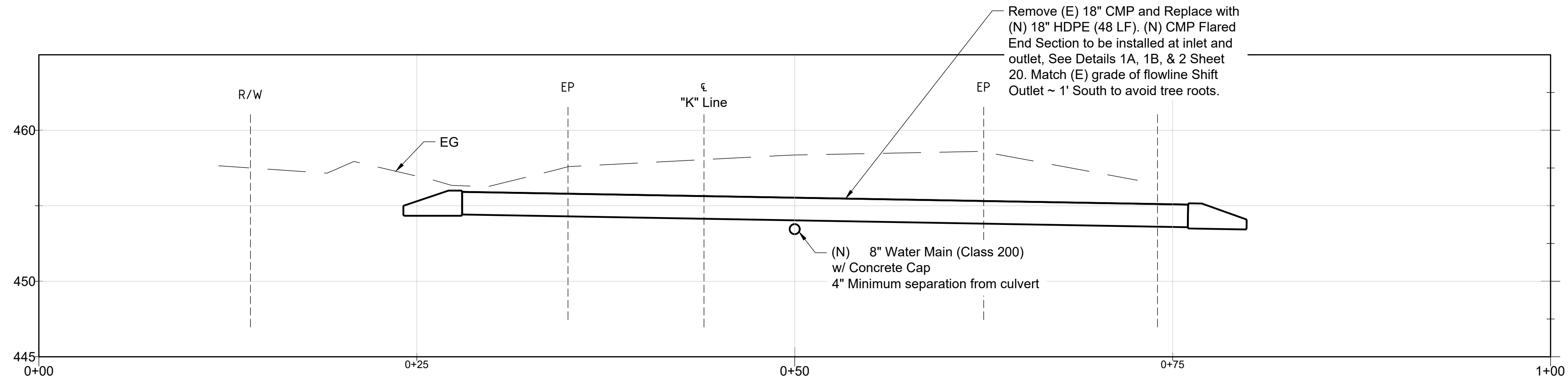
DRAINAGE SYSTEM
"K" 4+00, +/- 6' RT
1" = 5'



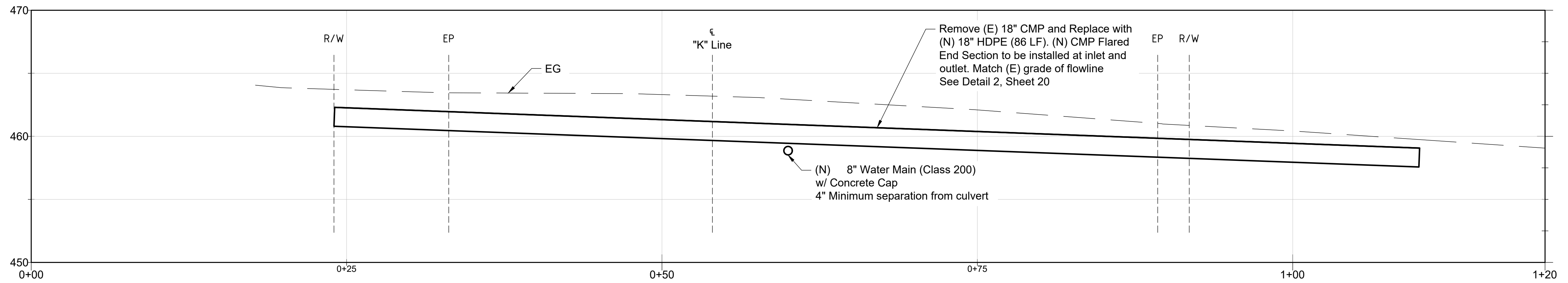
Know what's below.
Call before you dig.
Contractor shall call Underground Service Alert at 811 two working days prior to excavation

A-7367

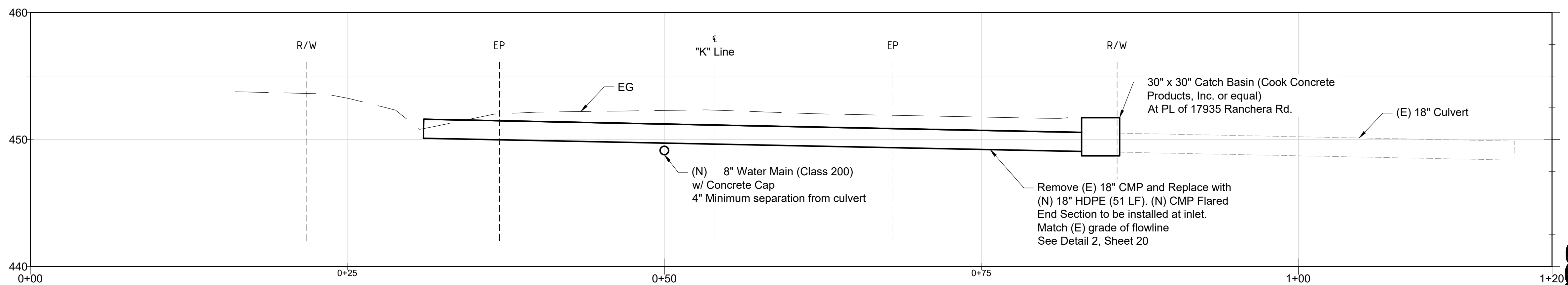
Designed By: SM WBI/JT		Approved: Associate Civil Engineer RCEP 48156	No.	Date	Revisions	By	App.
Drawn By: WBI/JT							
Checked By:							
City of Shasta Lake Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax			Ranchera Rd Water Main Replacement Project Bid No. 2023-05		Drainage Details 1		
Scale: None			Date: 01/2023		Sheet 20 of 24		



DRAINAGE SYSTEM
 "K" 12+16, +/- 6'RT
 1" = 5' B



DRAINAGE SYSTEM
 "K" 18+13, +/- 6'RT
 1" = 5' C



DRAINAGE SYSTEM
 "R" 20+22, +/- 4' LT
 1" = 5' D

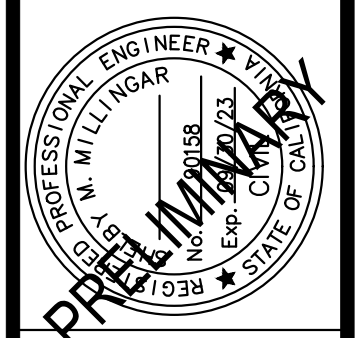


Know what's below.
 Call before you dig.

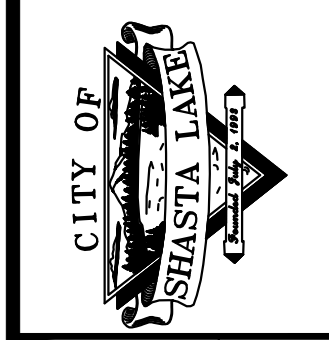
Contractor shall call
 Underground Service Alert at
 811 two working days prior
 to excavation

A-7368

Designed By:	SM	By:	
Drawn By:	WBI/JT	Date:	
Checked By:		No.:	
Approved:	<i>Shelby Nade</i>	Revisions:	
	Associate Civil Engineer		

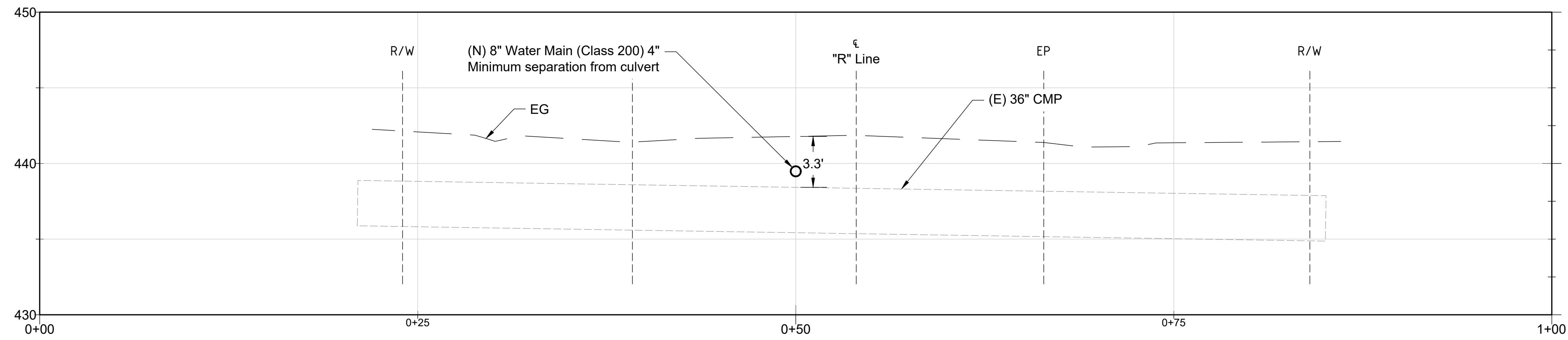


CITY OF SHASTA LAKE
 Public Works Department
 4477 Main Street, Shasta Lake, CA 96019
 (530) 275-7400 ph (530) 275-7462 fax

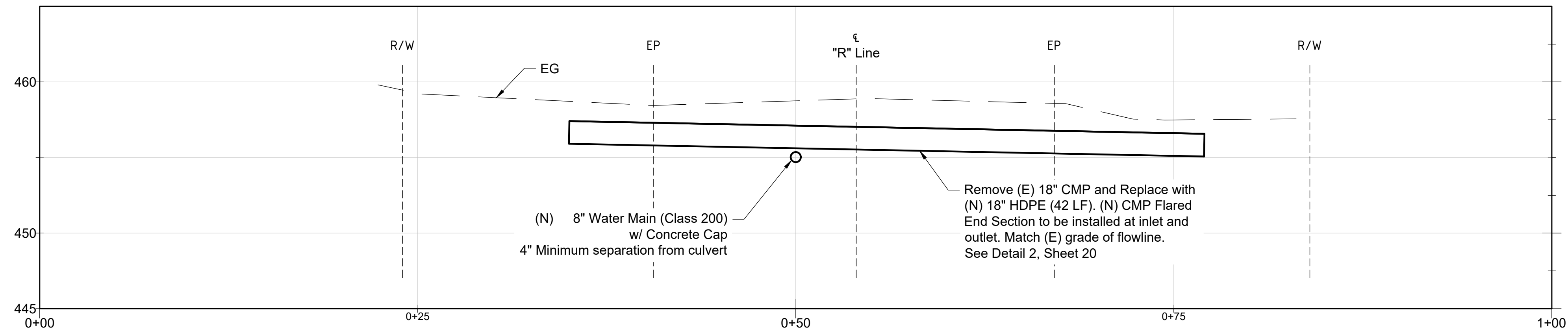


Ranchera Rd Water Main
 Replacement Project
 Bid No. 2023-05
 Drainage Details 2

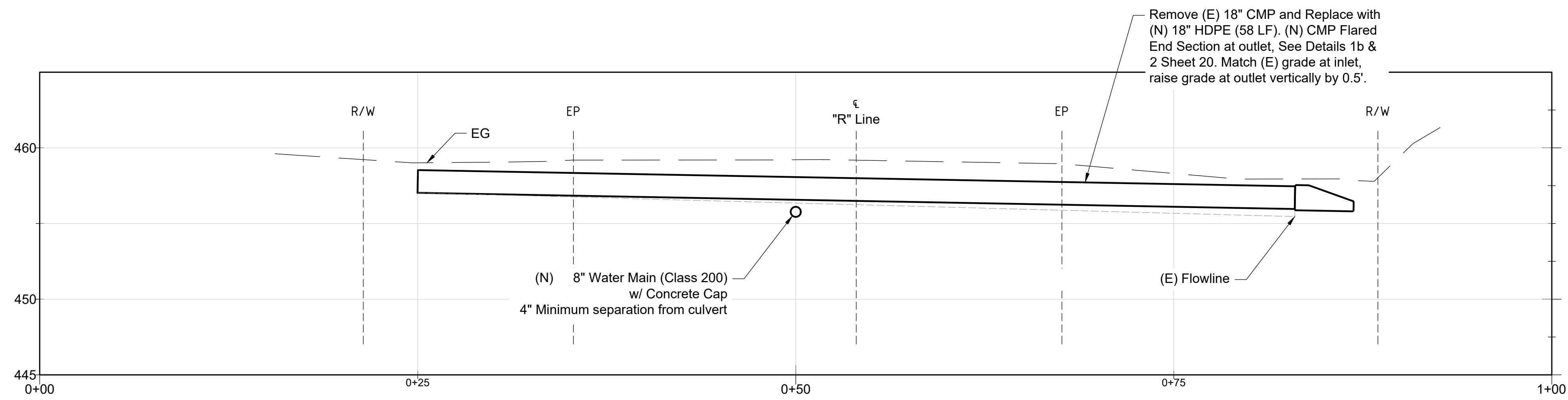
Scale:	1" = 5'
Date:	01/2023
Sheet	21 of 24



DRAINAGE SYSTEM
 "R" 22+86, +/- 4' LT
 1" = 5' E



DRAINAGE SYSTEM
 "R" 27+29, +/- 4' LT
 1" = 5' F



DRAINAGE SYSTEM
 "R" 34+13, +/- 4' LT
 1" = 5' G



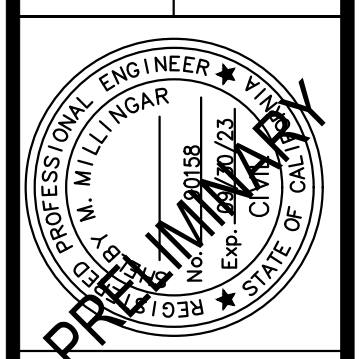
Know what's below.
 Call before you dig.

Contractor shall call
 Underground Service Alert at
 811 two working days prior
 to excavation

A-7369

No.	Date	Revisions	By	App.

Designed By: SM
 Drawn By: SM
 Checked By: WBJ/JT
 Approved: *Shelby Nadeau*
 Associate Civil Engineer
 RCEP 34158

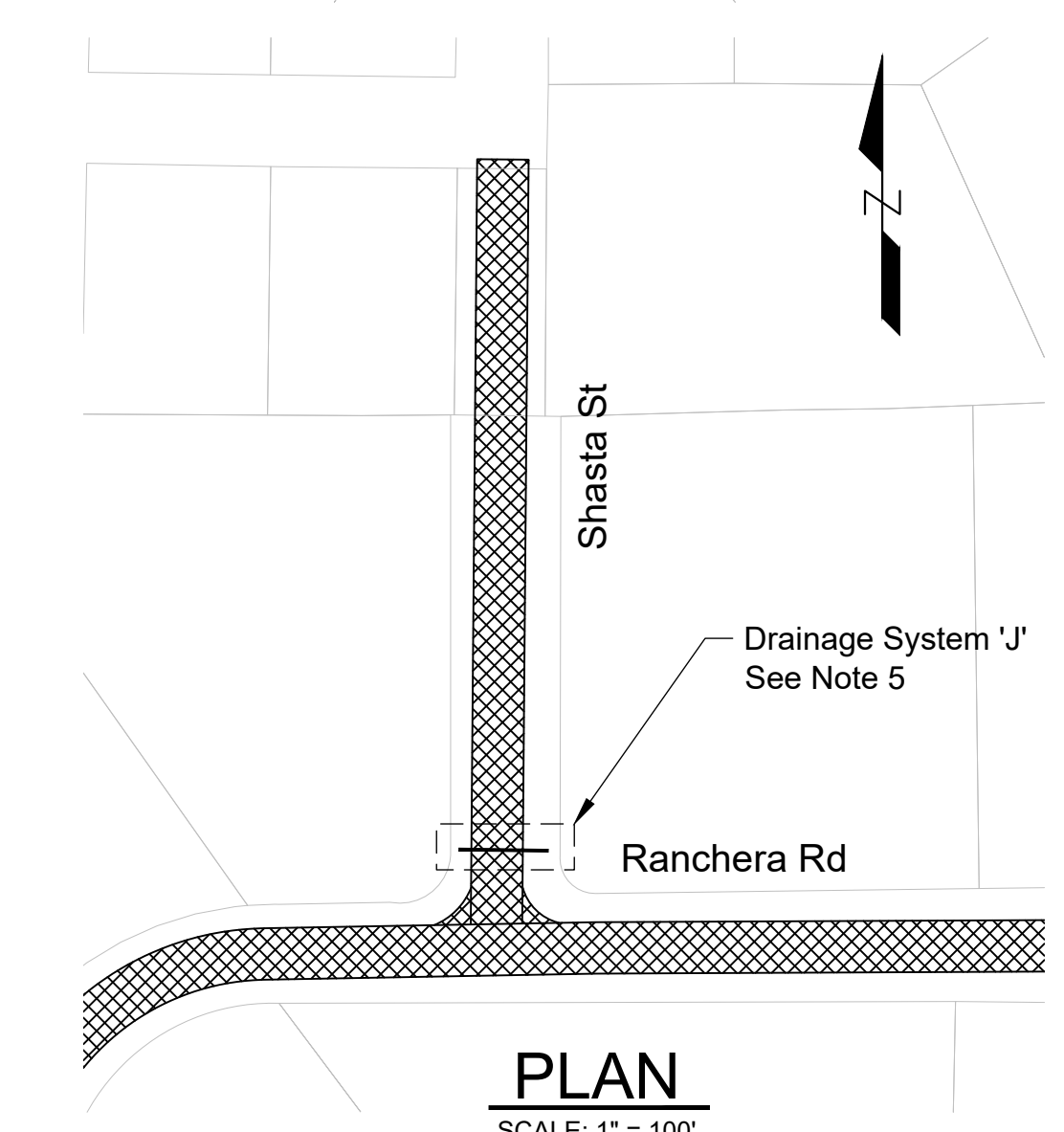
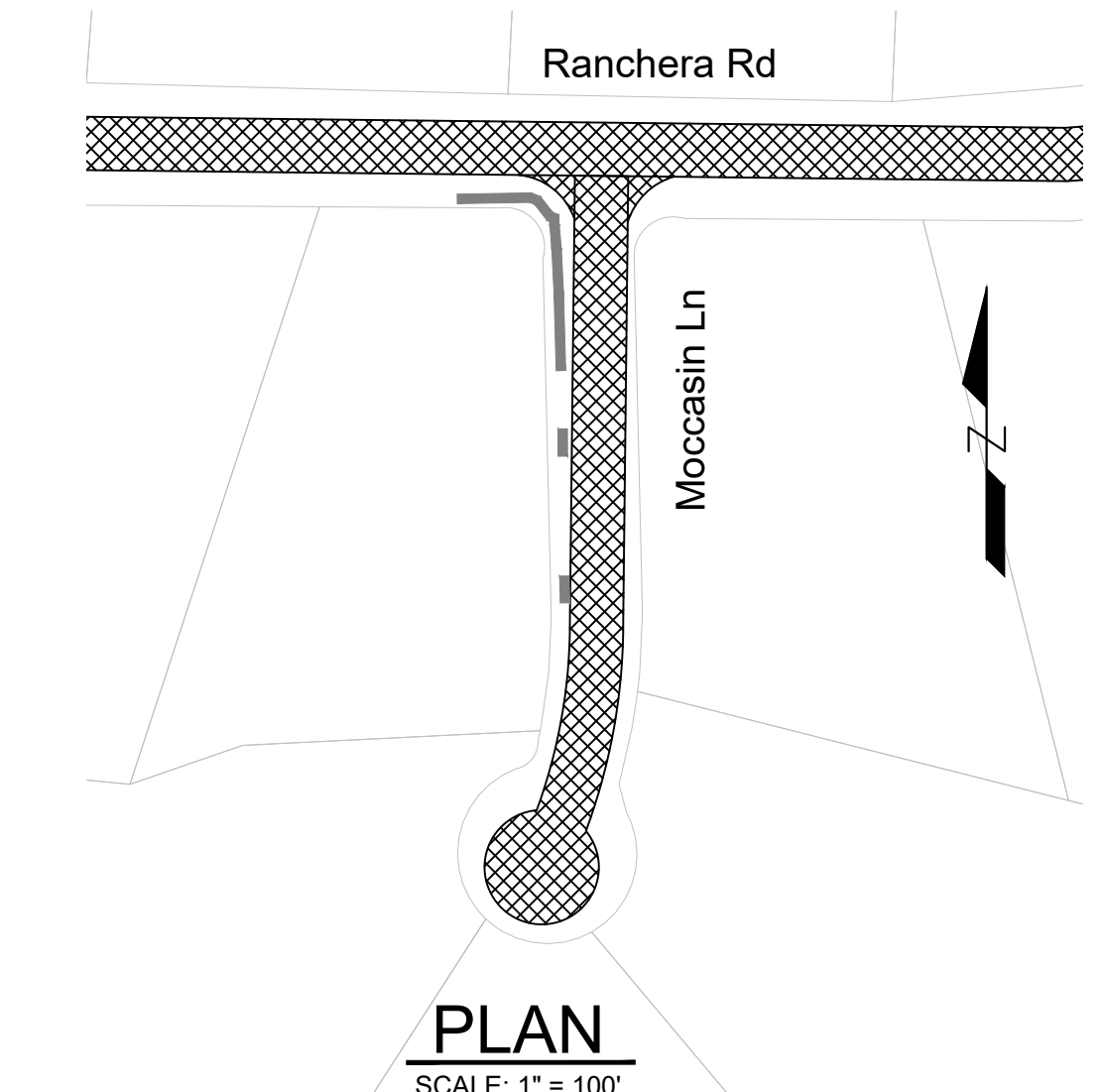
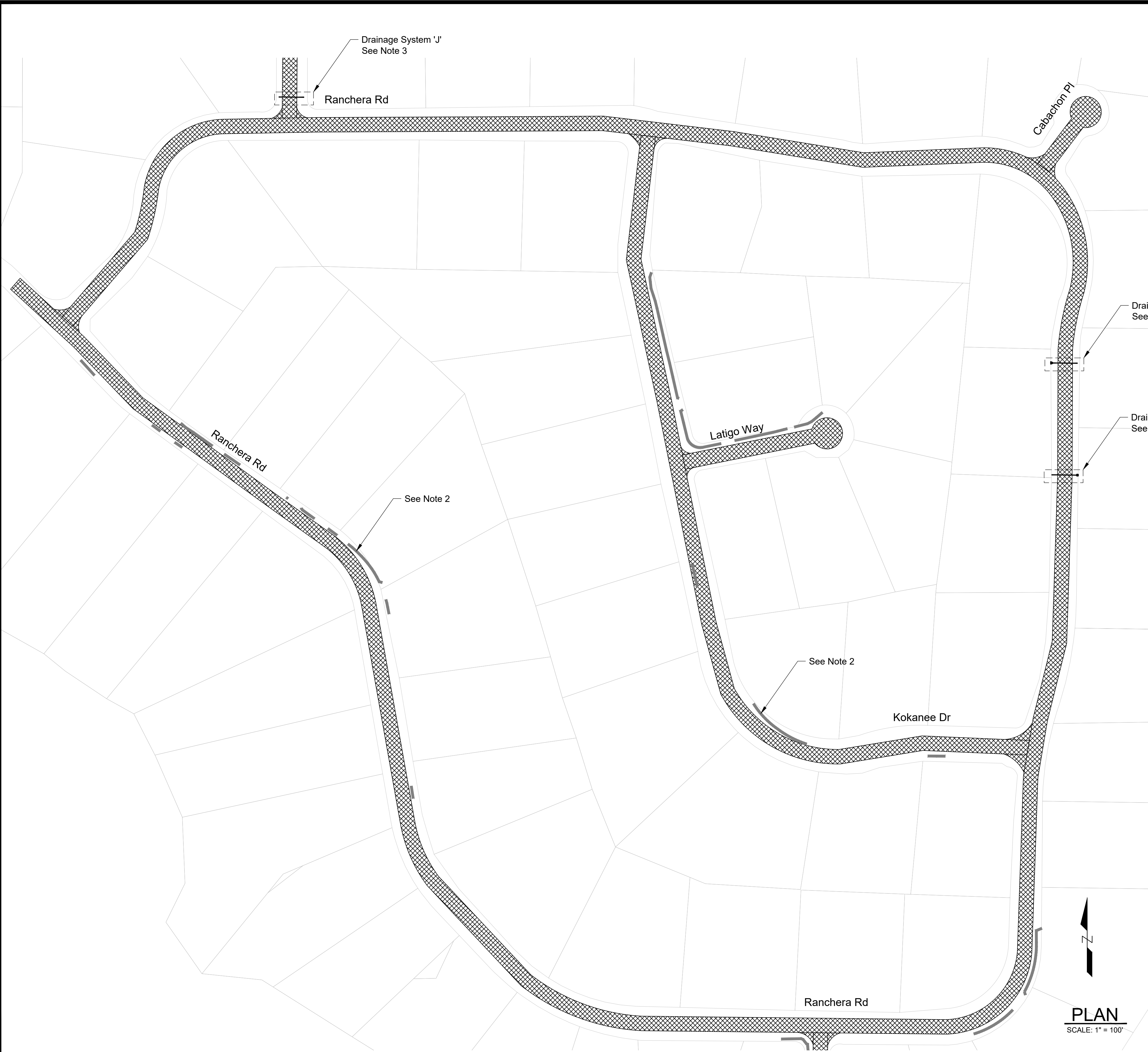


CITY OF SHASTA LAKE
 Public Works Department
 4477 Main Street, Shasta Lake, CA 96019
 (530) 275-7400 ph (530) 275-7462 fax



Ranchera Rd Water Main
 Replacement Project
 Bid No. 2023-05
 Drainage Details 3

Scale:	None
Date:	01/2023
Sheet	22 of 24



Notes:

1. Overlay work at these locations generally consists of installation of paving fabric in driving lanes (12' wide rolls), installation of a 0.17' thick HMA overlay, pavement striping and marking placement, adjustment of traffic boxes to grade. (E) Decorative landscaping materials adjacent to edge of pavement must be removed prior to paving operations and replaced to existing or better condition after shoulder backing installation.
2. Drainage System 'H': Remove (E) 18" CMP (+/- 50 LF) and replace with (N) 18" HDPE (+/- 50 LF), see Detail 2, Sheet 20. (N) CMP Flared End Section to be installed at inlet, see Detail 1B, Sheet 20. Install (N) 30" x 30" Catch Basin (Cook Concrete Products, Inc. or equal) at property line of 18125 Ranchera Rd.
3. Drainage System 'I': Remove (E) 18" CMP (+/- 50 LF) and Flared End Section and replace with (N) 18" HDPE (+/- 50 LF), see Detail 2, Sheet 20. (N) CMP Flared End Section to be installed at outlet, see Detail 1B, Sheet 20. Match (E) grade of flowline.
4. Drainage System 'J': Remove (E) 18" CMP (+/- 50 LF) and replace with (N) 18" HDPE (+/- 50 LF), see Detail 2, Sheet 20. Match (E) grade of flowline.

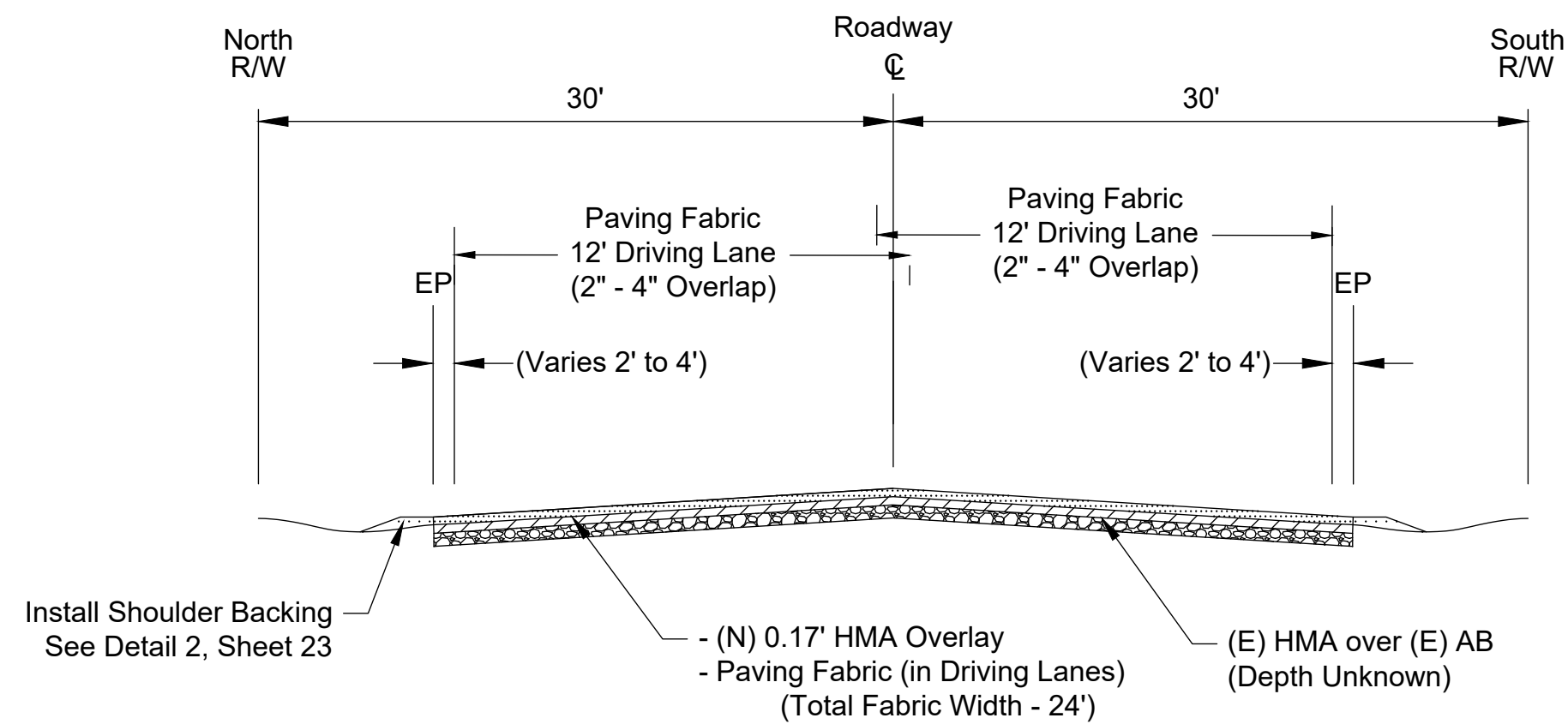


Know what's below.
Call before you dig.
Contractor shall call Underground Service Alert at 811 two working days prior to excavation

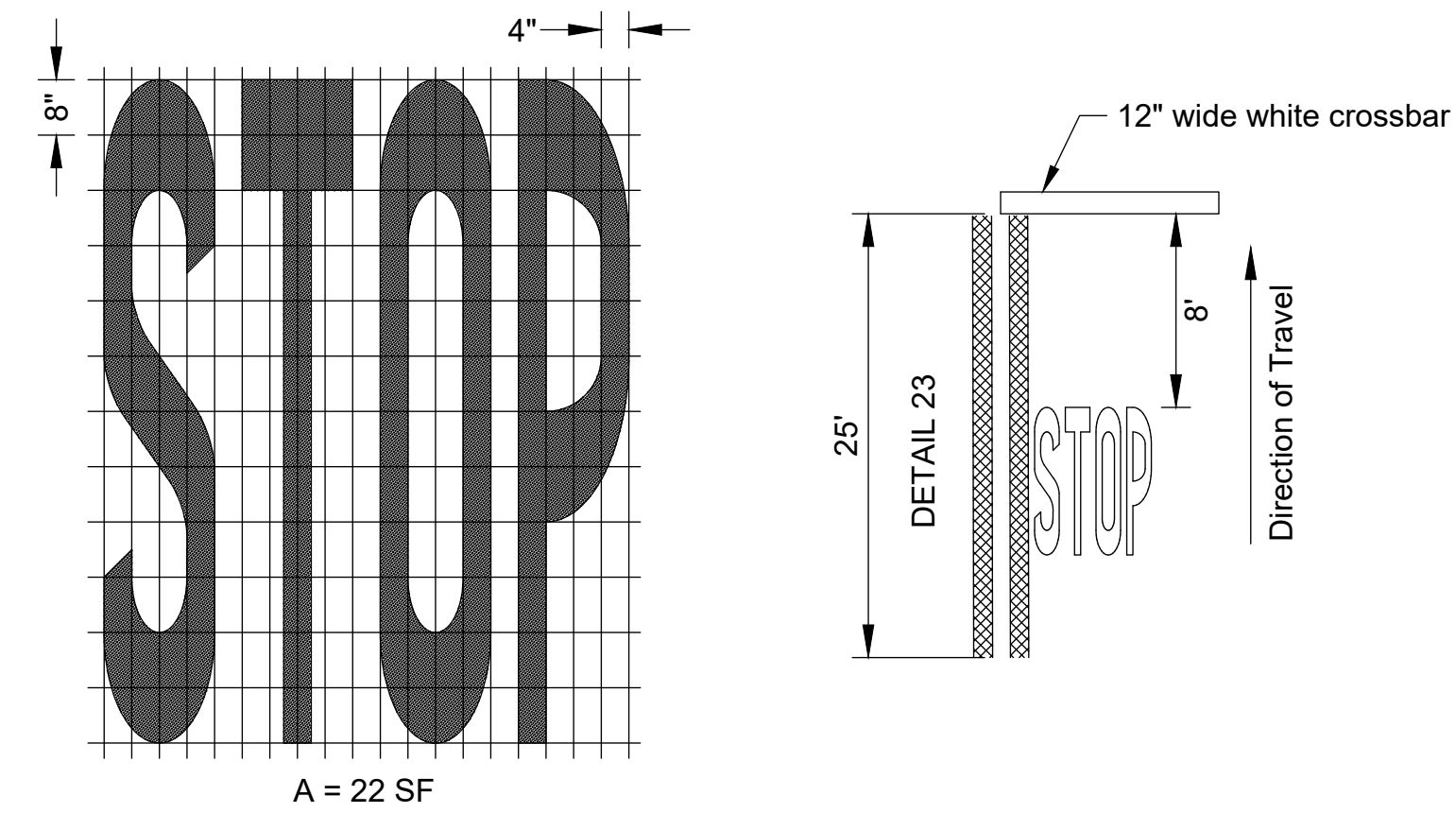
PLAN
SCALE: 1" = 100'

A-7370

Designed By: SM	Checked By: SM	Approved: <i>Shelby Goble</i>	No.	Date	Revisions	By	App.
Drawn By: WBJ/JT		Associate Civil Engineer					
<p>CITY OF SHASTA LAKE Public Works Department 4477 Main Street, Shasta Lake, CA 96019 (530) 275-7400 ph (530) 275-7462 fax</p>							
<p>Ranchera Rd Water Main Replacement Project Bid No. 2023-05</p>							
<p>Paving and Delineation 1</p>							
<p>Scale: 1" = 100'</p>							
<p>Date: 01/2023</p>							
<p>Sheet 23 of 24</p>							

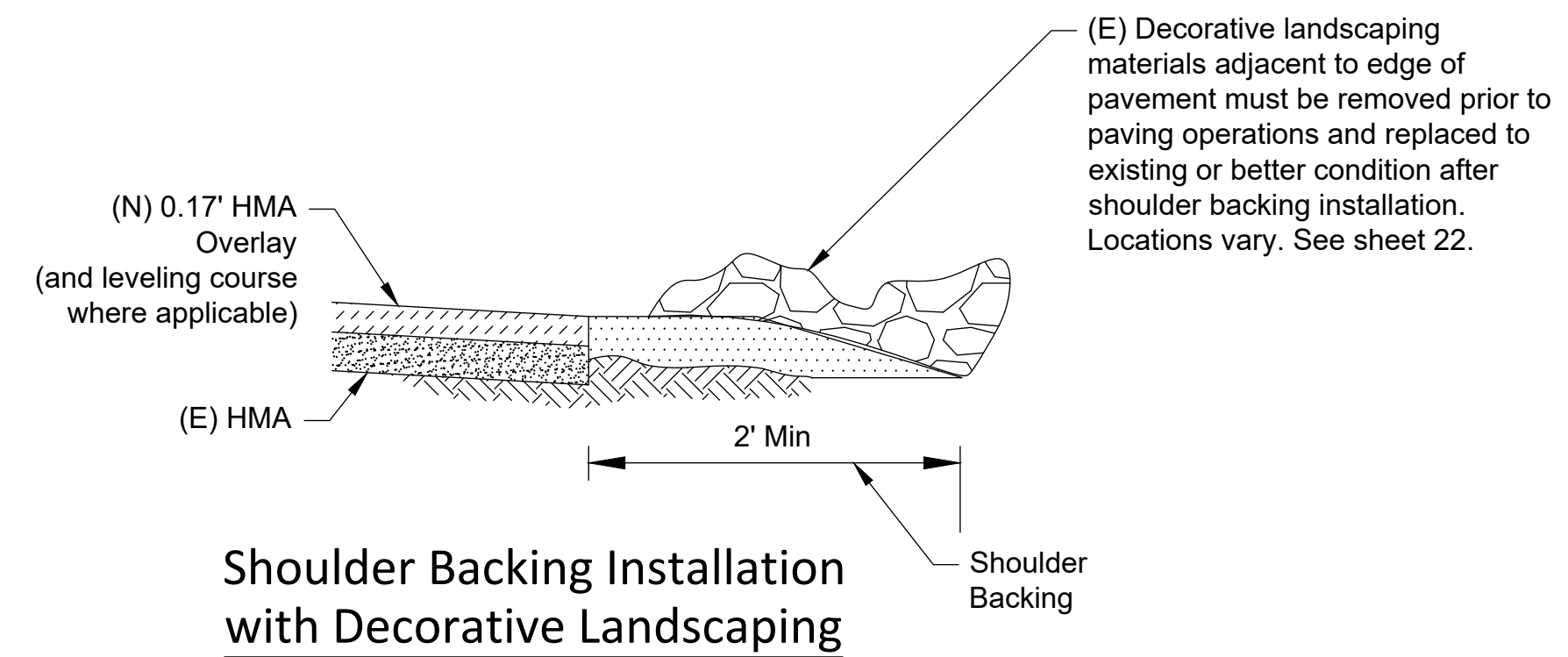


3
24
Typical Road Cross-Section
No Scale

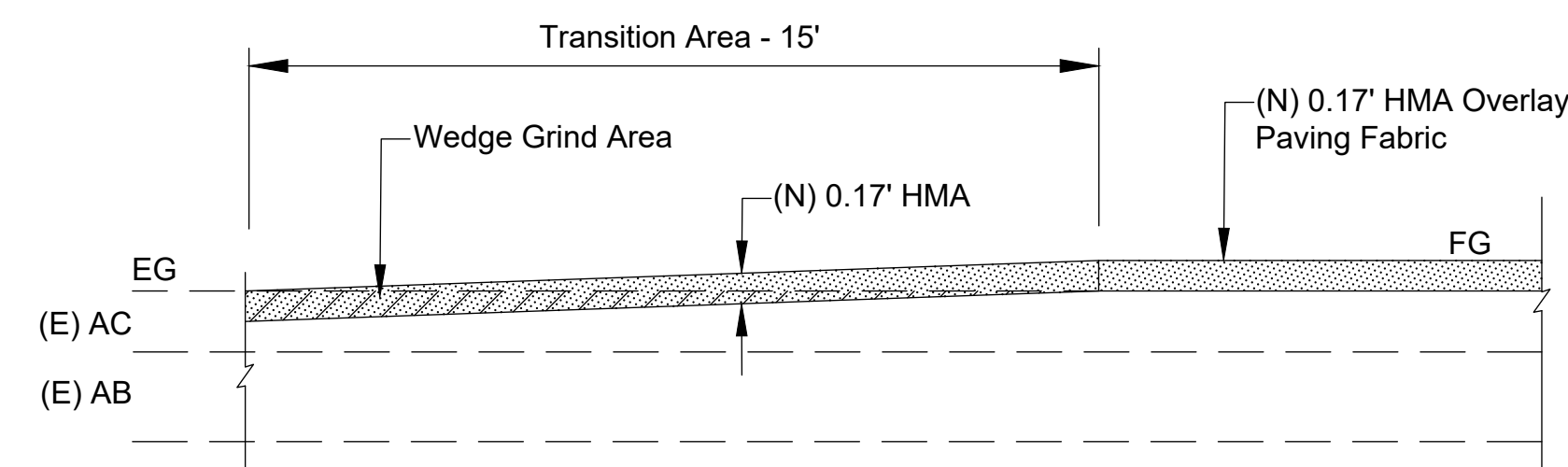


- Notes:**
- All words and markings shown in this Detail shall be applied with white or yellow thermoplastic as noted on the Plans.
 - All marking templates shall conform to the 2018 Caltrans Standard Plans.

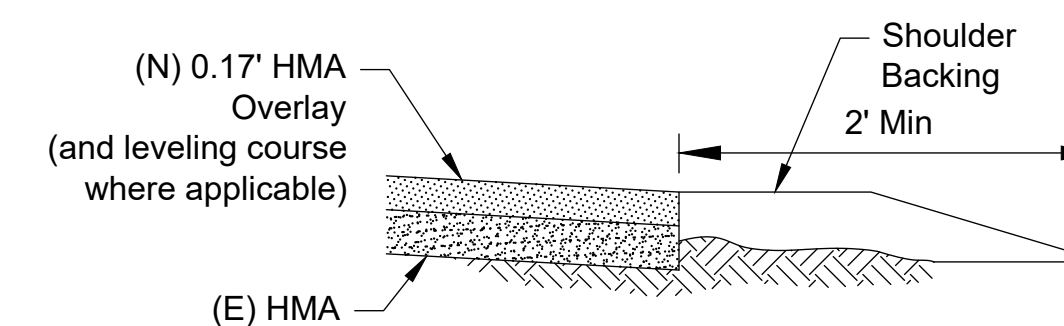
1
24
PAVEMENT MARKINGS
No Scale



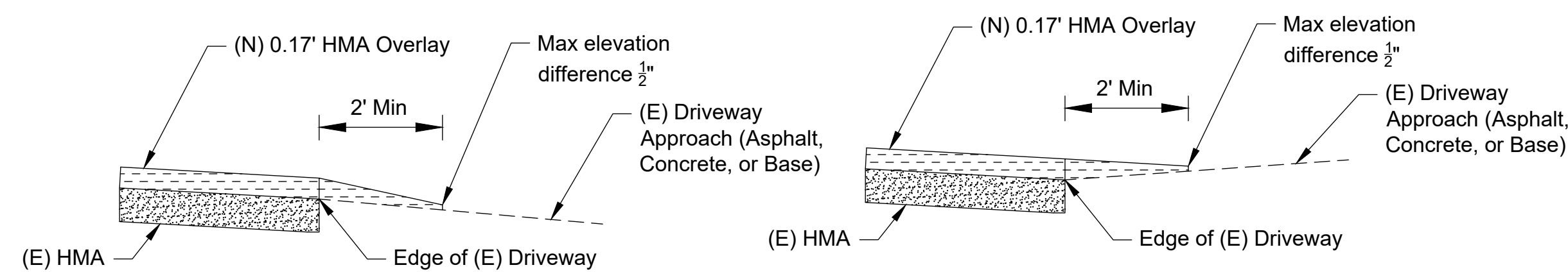
Shoulder Backing Installation with Decorative Landscaping



Transition Area Installation



Shoulder Backing Installation



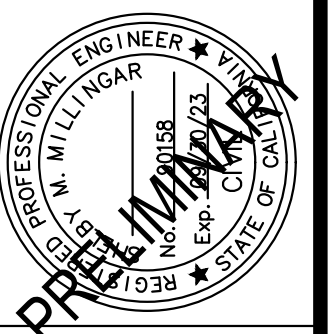
Driveway Conform Detail at Locations with no curb and gutter

- Notes:**
- Transition from (N) HMA to (E) HMA:** Contractor shall transition taper grind across entire width of street. Transition taper grind shall transition from 0" to 2" over noted distance or 15', whichever is greater. Overlay depth of 0.17" (2") shall be maintained.
 - Transition @ (E) Driveway:** Contractor shall taper overlay along driveway frontage such that the edge dropoff at the driveway does not exceed 0.04' (1/2").
 - Shoulder Backing Installation:** Contractor shall install shoulder backing along all unbounded paving edges. Shoulder backing shall taper from (N) finished grade to (E) ground over 2' as shown. Shoulder backing thickness varies.

2
24
PAVEMENT EDGE TREATMENTS
No Scale

A-7371

Designed By: SM	Checked By: WB	Approved: <i>Shelby Loda</i>	No.	Date	Revisions	By	App.
Drawn By: SM	Checked By: WB	Approved: <i>Shelby Loda</i>					
		Associate Civil Engineer					



CITY OF SHASTA LAKE
Public Works Department
4477 Main Street, Shasta Lake, CA 96019
(530) 275-7400 ph (530) 275-7462 fax



Ranchera Rd Water Main Replacement Project
Bid No. 2023-05
Paving and Delineation 2

Scale: None

Date: 01/2023

Sheet 24 of 24