Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	98	123

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	DETAIL	REMARKS
POC	POINT OF CONNECTION	PER COUNTY AND WATER DISTRICT SPECIFICATIONS	N/A	P.O.C. SHALL BE ESTABLISHED BY THE WATER DISTRICT IN THE LOCATIONS SHOWN ON THESE PLANS. (NIC) THE WATER DISTRICT IS RESPONSIBLE FOR ALL UPSTREAM CONNECTION COMPONENTS INCLUDING THE WATER METER AND GATE VALVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZING SYSTEM BY SHUTTING OFF GATE VALVE LOCATED ON THE UPSTREAM END OF EACH BACK FLOW PREVENTER, PER NOTES, DRAWINGS, AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS.
	BACKFLOW PREVENTER ASSEMBLY	PER COUNTY AND CALTRANS SPECIFICATIONS	N/A	BACKFLOW PREVENTER SHALL BE A 1" REDUCED PRESSURE ASSEMBLY PER COUNTY AND CALTRANS REQUIREMENTS. ASSEMBLY SHALL BE INSTALLED PER CALTRANS SPECIFICATIONS AND SHALL INCLUDE AN ENCLOSURE AND BLANKET.
	MANUAL ISOLATION VALVE (GATE VALVE)	KBI MODEL BRASS GATE VALVE OR EQUAL	01/ID-1	ALL GATE VALVES SHALL BE 2" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	QUICK COUPLING VALVE	RAINBIRD 3-RC OR APPROVED EQUAL	02/ID-1	ALL QUICK COUPLING VALVES SHALL BE ¾" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	CONTROL VALVE	HUNTER ICV-101G-DC & ICV-151G-DC OR APPROVED EQUAL	03/ID-1	CONTROL VALVES SHALL BE SIZED AS SHOWN ON DRAWINGS. ALL CONTROL VALVES ASSEMBLIES SHALL BE INSTALLED WITH A DC LATCHING SOLENOID AND BATTERY-POWERED CONTROLLER. A BASKET FILTER OR APPROVED EQUAL SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN CONCRETE BOX WITH A STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS.
NO SYMBOL	VALVE CONTROLLER	HUNTER SVC-100 & SVC-200 OR APPROVED EQUAL	03/ID-1	HUNTER SINGLE OR TWO STATION BATTERY-POWERED CONTROLLERS OR APPROVED EQUAL SHALL BE INSTALLED AS PER IRRIGATION PLANS AND VALVE LOCATIONS AND NUMBERS. PROGRAM BASED ON IRRIGATION SCHEDULE SHEET ID-1.
NO SYMBOL	BASKET FILTER	RAINBIRD PRB-QKCHK-100 OR APPROVED EQUAL	03/ID-1	BASKET FILTER SHALL BE A RAINBIRD PRESSURE REGULATING, QUICK-CHECK BASKET FILTER OR APPROVED EQUAL WITH MINIMUM 150 MESH SCREEN. EACH BASKET FILTER OR APPROVED EQUAL SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH A STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, APPROVED EQUAL. INSTALL FILTER AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFIATIONS
	WATERING WELL BUBBLER SYSTEM	HUNTER RZWS-18-25 AND RZWS-18-50 OR APPROVED EQUAL	04/ID-1	WATER WELL BUBBLER SYSTEMS SHALL USE HUNTER 18" ROOT ZONE WATERING SYSTEM WITH 0.50 GPM BUBBLERS FOR ALL TREEPOT 8 CONTAINERS AND 0.25 GPM FOR ALL 1 GALLON CONTAINER PLANTS OR APPROVED EQUAL. WATERING WELL AND BUBBLER SYSTEM SHALL BE INSTALLED ON ALL TREES AND SHRUBS EXCEPT FOR GROUNDCOVER AND HERBACEOUS PLANTING AREAS AT INTERSECTIONS AS IDENTIFIED ON THE IRRIGATION PLANS. WATER WELL AND BUBBLER SYSTEM SHALL BE INSTALLED PER DETAIL AND WRITTEN SPECIFICATIONS.
	SUB-SURFACE DRIPLINE	RAINBIRD XFS-09-12-500 & XFS-09-18-500 OR APPROVED EQUAL	05/ID-1	SUB-SURFACE DRIPLINE SHALL HAVE 0.9 GPH EMITTERS SPACED 12" OR 18" ALONG LENGTH OF DRIPLINE. LAY DRIPLINE IN LOCATIONS AS SHOWN ON IRRIGATION PLANS PRIOR TO PLACEMENT OF 3" LAYER OF MULCH AT INTERSECTION PLANTING AREAS. FOR ALL DRIPLINES IRRIGATING ALLIUM X 'GLOBEMASTER' PLANTING BEDS USE DRIPLINE WITH 12" EMITTER SPACING. FOR ALL OTHER DRIPLINE LENGTHS USE DRIPLINE WITH 18" EMITTER SPACING. INSTALL PER DETAIL 05/ID-1.
	PVC MAINLINE	2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL MAINLINE PIPE SHALL BE 2" SCHEDULE 40 PVC PIPE SET 24" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS AND PLANS.
	PVC LATERAL LINE	1" - 2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL LATERAL LINE PIPE SHALL BE LINE SIZED AS ACCORDING TO IRRIGATION PLANS, SCHEDULE 40 PVC PIPE SET 12" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS AND PLANS.
NO SYMBOL	DRAIN VALVE	RAINBIRD 16A-FDV FILTERED DRAIN VALVE OR APPROVED EQUAL	N/A	DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.

REFER TO SHEET ID-1 FOR IRRIGATION SCHEDULE, NOTES, AND DETAILS.

IT IS ASSUMED THAT EACH POINT OF CONNECTION WILL SUPPLY A MINIMUM 60 GPM AT 60 PSI. THE CONTRACTOR SHALL VERIFY THESE SPECIFICATIONS IN THE FIELD PRIOR TO WORK.

ALL CONTROL VALVES AND IRRIGATION PIPE SHALL BE SIZED AS SHOWN ON IRRIGATION PLAN DRAWINGS SHEETS IP-1 TO IP-7

DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.

CONTROLLER/ VALVE NUMBER
5 / 1.5" — 20 G.P.M.
VALVE SIZE

LUCAS RYE PIPER — 10/10/14
REGISTERED LANDSCAPE ARCHITECT — DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT — LUCAS R. PIPER — No. 5872 — Signature — 10-31-14 — Renewal Date 10-10-14 — Date — STATE OF CALIFORNIA

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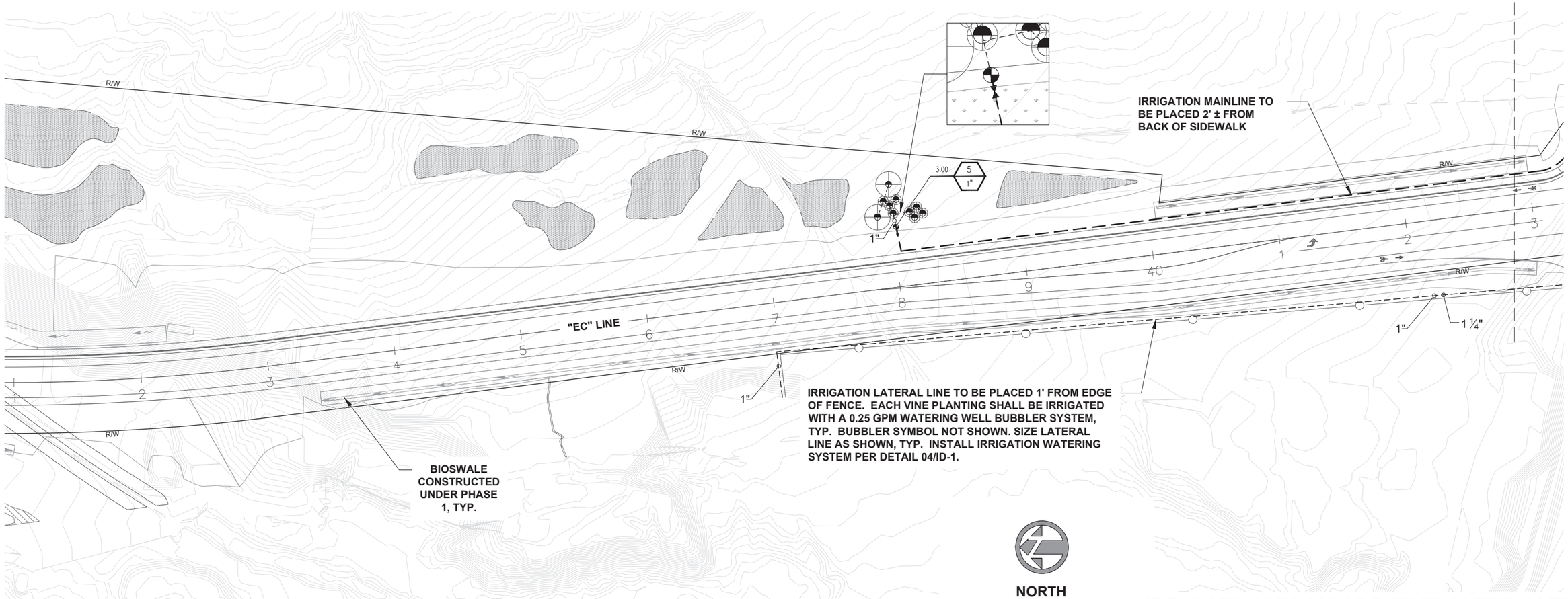

IRRIGATION PLAN ADDITIVE ALTERNATE

STATION 31+80 TO STATION 42+80

SCALE: 1" = 40'

IP-1

CALCULATED–DESIGNED BY	XX	XX	XX	REVISED BY	R. SWIFT & L.PIPER
CHECKED BY	XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED	R. SWIFT

CONSULTANT FUNCTIONAL SUPERVISOR: R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12–03–12 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	99	123

LUCAS RYE PIPER — 10/10/14
REGISTERED LANDSCAPE ARCHITECT — DATE

10/14/14
PLANS APPROVAL DATE

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REFER TO SHEET ID-1 FOR IRRIGATION SCHEDULE, NOTES, AND DETAILS.

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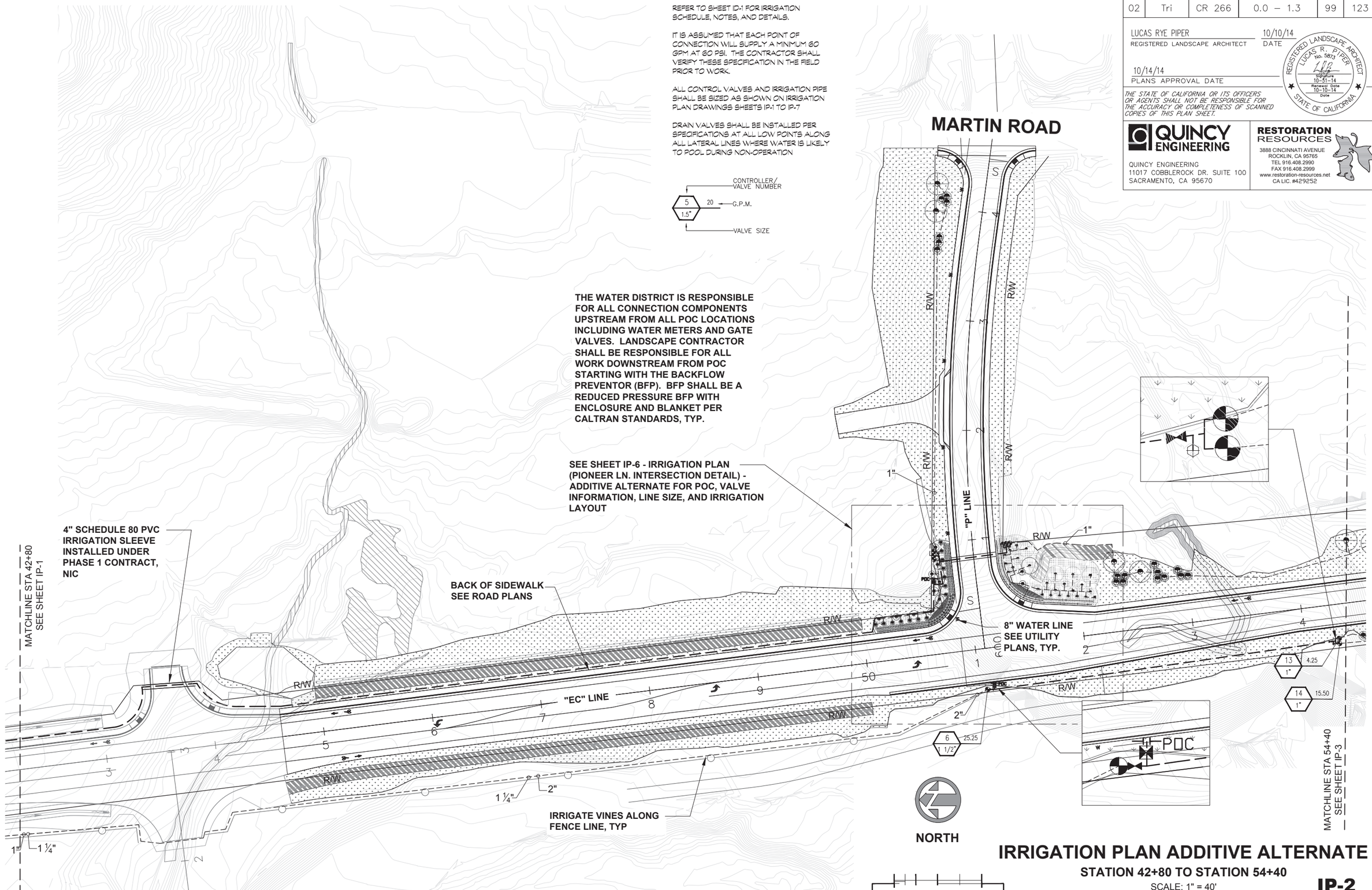
ALL CONTROL VALVES AND IRRIGATION PIPE SHALL BE SIZED AS SHOWN ON IRRIGATION PLAN DRAWINGS SHEETS IP-1 TO IP-7

DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION

CONTROLLER/ VALVE NUMBER
5 — 20 G.P.M.
1.5" — VALVE SIZE

THE WATER DISTRICT IS RESPONSIBLE FOR ALL CONNECTION COMPONENTS UPSTREAM FROM ALL POC LOCATIONS INCLUDING WATER METERS AND GATE VALVES. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK DOWNSTREAM FROM POC STARTING WITH THE BACKFLOW PREVENTOR (BFP). BFP SHALL BE A REDUCED PRESSURE BFP WITH ENCLOSURE AND BLANKET PER CALTRAN STANDARDS, TYP.



IRRIGATION PLAN ADDITIVE ALTERNATE

STATION 42+80 TO STATION 54+40

SCALE: 1" = 40'

IP-2

XX	XX	XX	XX
XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED

REVISED BY

R. SWIFT & L.PIPER

R. SWIFT

CALCULATED–DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

R.SWIFT

TRINITY COUNTY

DEPARTMENT OF TRANSPORTATION

LAST REVISION 12–03–12 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	100	123

LUCAS RYE PIPER — REGISTERED LANDSCAPE ARCHITECT — DATE 10/10/14

10/14/14 — PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT LUCAS R. PIPER No. 5872 — Signature 10-31-14 — Renewal Date 10-10-14 — Date — STATE OF CALIFORNIA

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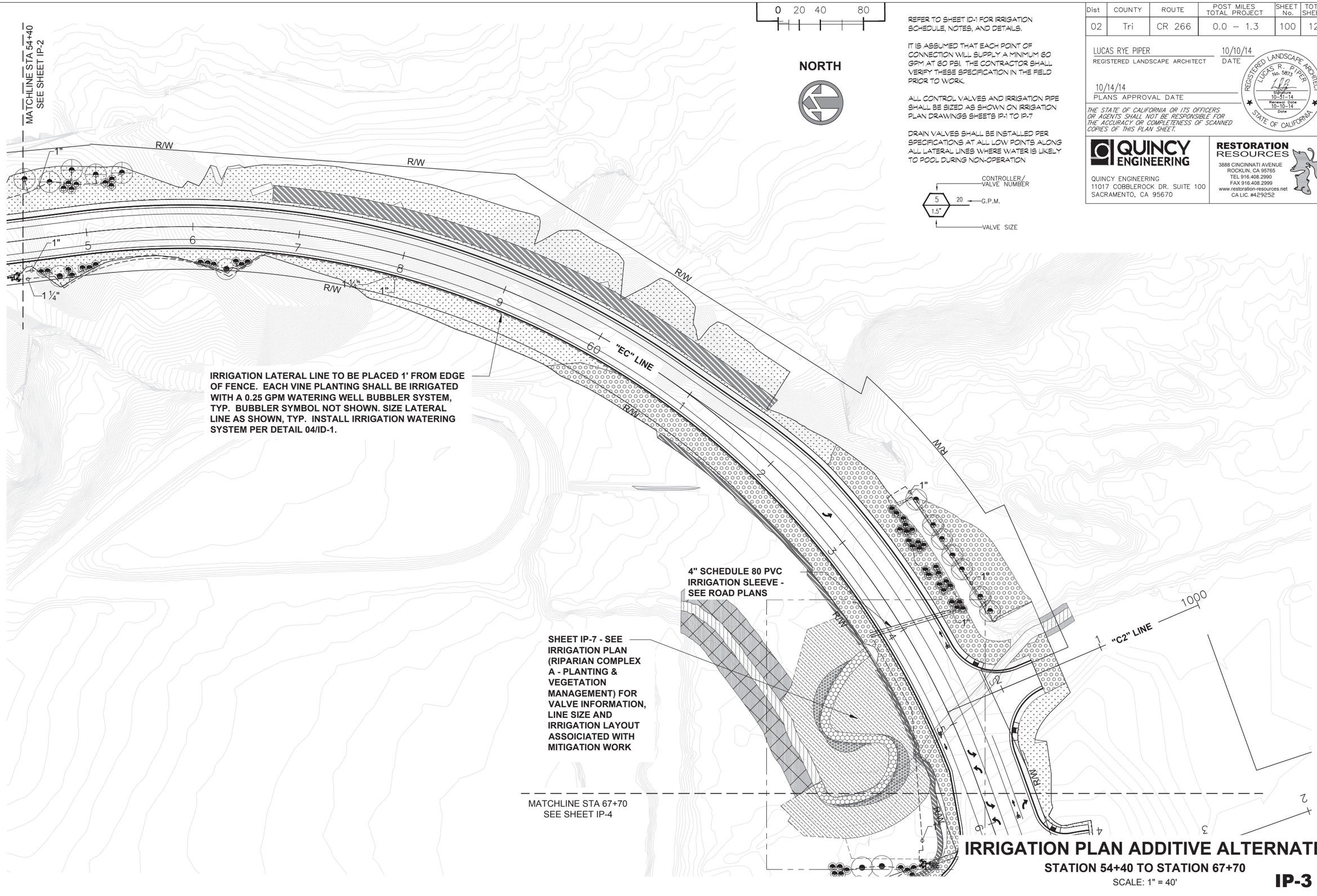
DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION



IRRIGATION PLAN ADDITIVE ALTERNATE

STATION 54+40 TO STATION 67+70

SCALE: 1" = 40'

IP-3

XX	XX	XX	XX
XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED
REVISED BY	R. SWIFT & L.PIPER	CALCULATED–DESIGNED BY	CONSULTANT FUNCTIONAL SUPERVISOR
R. SWIFT	CHECKED BY	R.SWIFT	

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12–03–12 | DATE PLOTTED => | TIME PLOTTED =>

BORDER LAST REVISED 3/11/2014 | USERNAME =>LPIPER DGN FILE => LTB.DWG | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | Contract No. 14–ROAD–01 | Federal Project # RPSTPL – 5905(102)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	101	123

REFER TO SHEET ID-1 FOR IRRIGATION SCHEDULE, NOTES, AND DETAILS.

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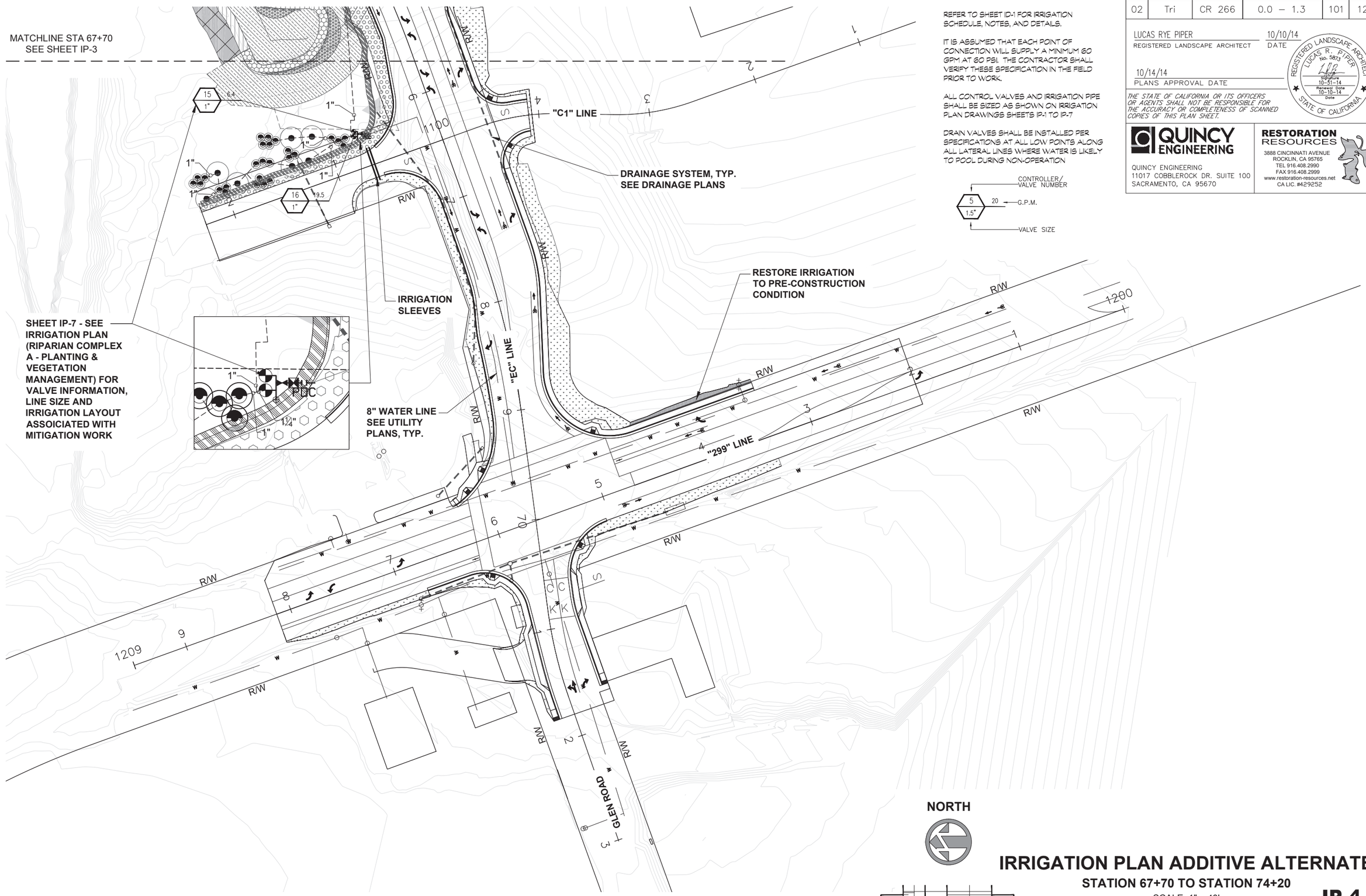
DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION



LUCAS RYE PIPER
REGISTERED LANDSCAPE ARCHITECT
10/10/14
DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT
LUCAS R. PIPER
No. 5875
Signature
10-31-14
Renewal Date
10-10-14
Date
STATE OF CALIFORNIA

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IRRIGATION PLAN ADDITIVE ALTERNATE

STATION 67+70 TO STATION 74+20

SCALE: 1" = 40'

IP-4

REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR
XX	XX/XX/XX	R. SWIFT & L.PIPER	R. SWIFT	R.SWIFT
XX	XX/XX/XX			
XX	XX/XX/XX			
XX	XX/XX/XX			

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12
DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	102	123

LUCAS RYE PIPER — REGISTERED LANDSCAPE ARCHITECT — DATE 10/10/14

10/14/14 — PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT — LUCAS R. PIPER — No. 5872 — Signature — 10-31-14 — Renewal Date — 10-10-14 — Date — STATE OF CALIFORNIA

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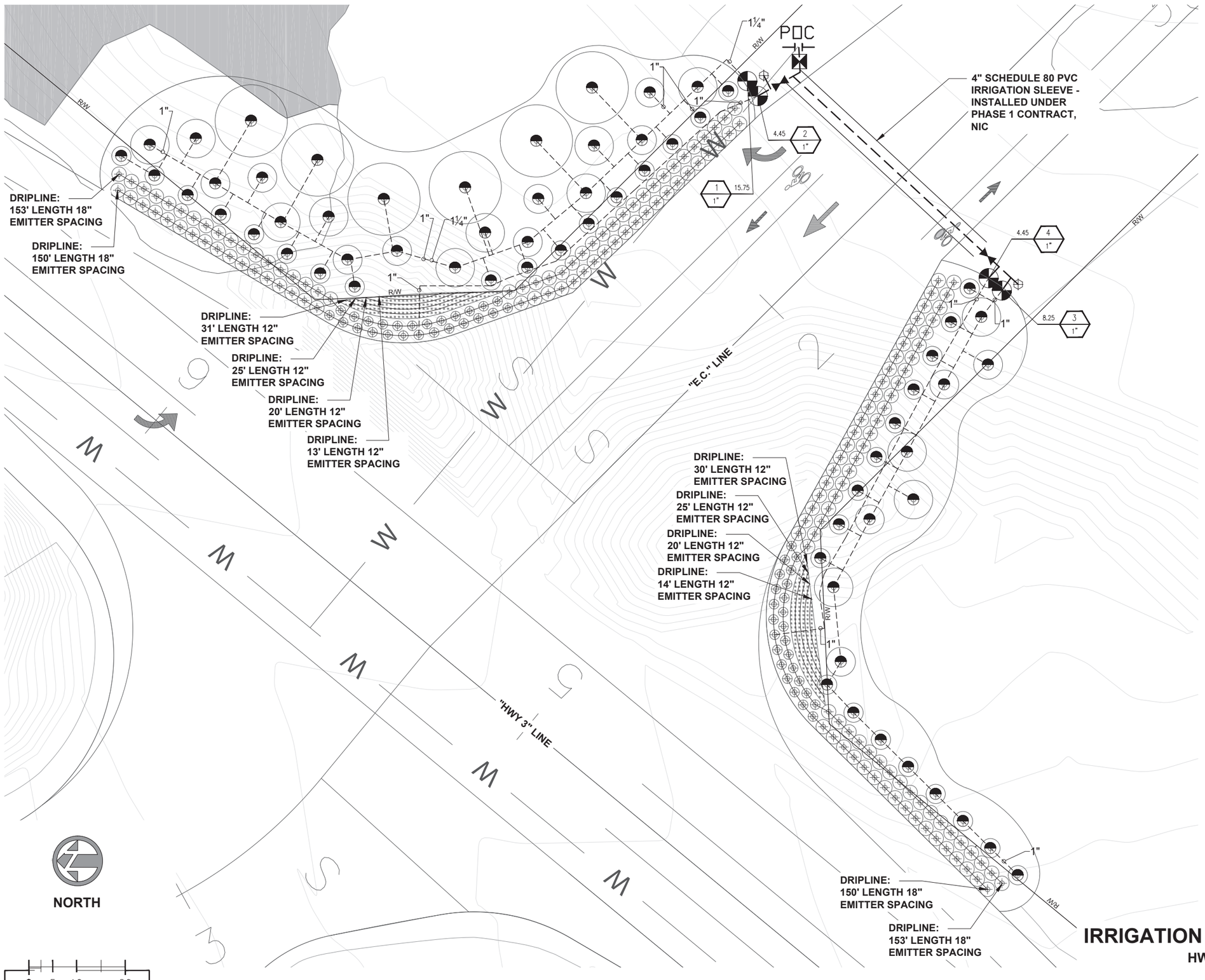

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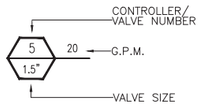

IRRIGATION PLAN ADDITIVE ALTERNATE

HWY 3 INTERSECTION DETAIL

SCALE: 1" = 10'

IP-5

XX	XX	XX	REVISED BY
XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED
R. SWIFT & L.PIPER			
R. SWIFT			
CALCULATED–DESIGNED BY			
CHECKED BY			
CONSULTANT FUNCTIONAL SUPERVISOR			
R.SWIFT			
TRINITY COUNTY			
DEPARTMENT OF TRANSPORTATION			

LAST REVISION 12-03-12 — DATE PLOTTED => — TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	103	123

LUCAS RYE PIPER — REGISTERED LANDSCAPE ARCHITECT — DATE 10/10/14

10/14/14 — PLANS APPROVAL DATE

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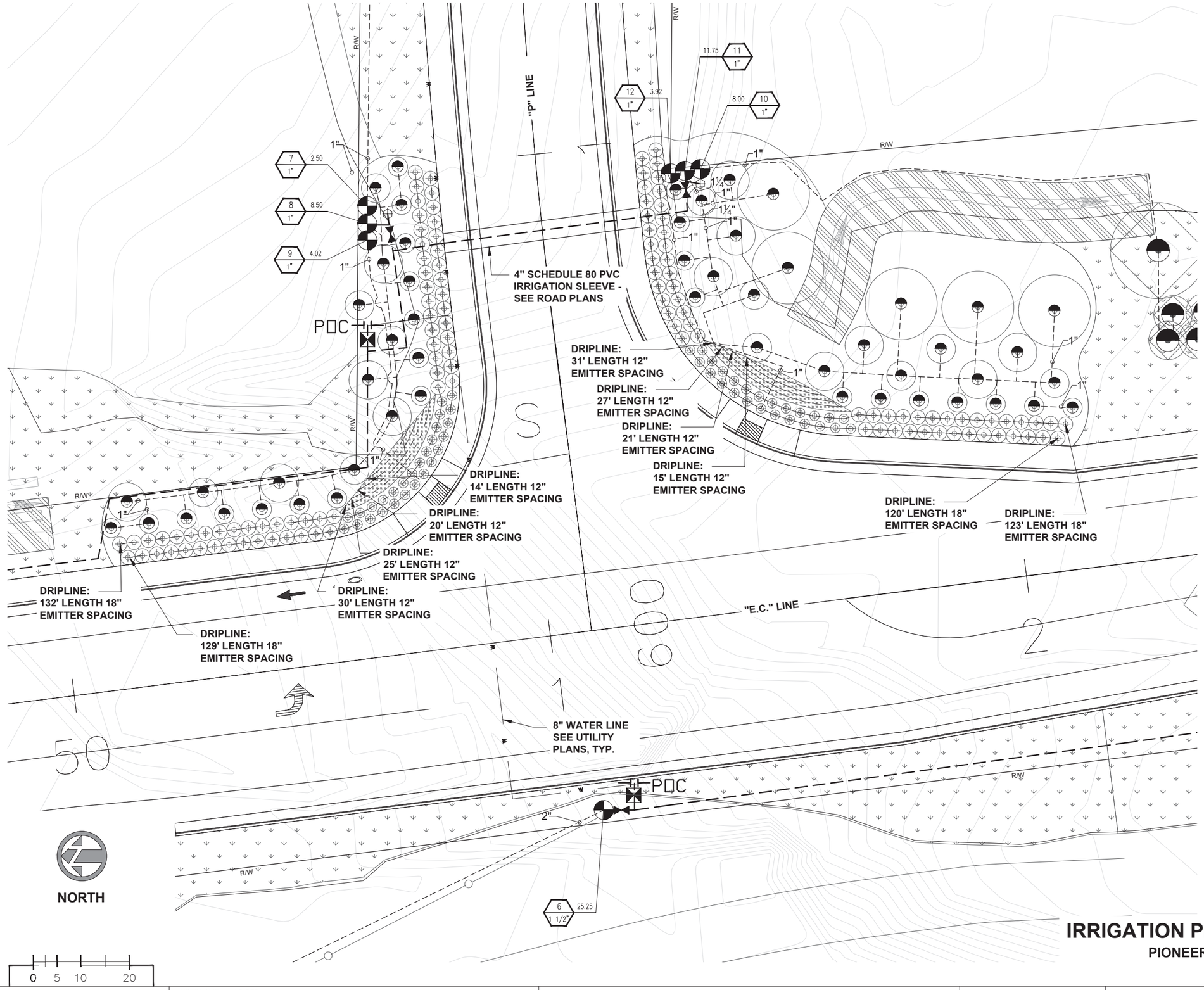

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5 — CONTROLLER/ VALVE NUMBER
20 — G.P.M.
1.5" — VALVE SIZE

IRRIGATION PLAN ADDITIVE ALTERNATE

PIONEER LN. INTERSECTION DETAIL

SCALE: 1" = 10'

IP-6

XX	XX	XX	XX	REVISED BY	R. SWIFT & L.PIPER	CALCULATED–DESIGNED BY
XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED	R. SWIFT	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: R.SWIFT

TRINITY COUNTY — DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12 — DATE PLOTTED => — TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	104	123

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	DETAIL	REMARKS
POC	POINT OF CONNECTION	PER COUNTY AND WATER DISTRICT SPECIFICATIONS	N/A	P.O.C. SHALL BE ESTABLISHED BY THE WATER DISTRICT IN THE LOCATIONS SHOWN ON THESE PLANS. (NIC) THE WATER DISTRICT IS RESPONSIBLE FOR ALL UPSTREAM CONNECTION COMPONENTS INCLUDING THE WATER METER AND GATE VALVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZING SYSTEM BY SHUTTING OFF GATE VALVE LOCATED ON THE UPSTREAM END OF EACH BACK FLOW PREVENTER, PER NOTES, DRAWINGS, AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS.
	BACKFLOW PREVENTER ASSEMBLY	PER COUNTY AND CALTRANS SPECIFICATIONS	N/A	BACKFLOW PREVENTER SHALL BE A 1" REDUCED PRESSURE ASSEMBLY PER COUNTY AND CALTRANS REQUIREMENTS. ASSEMBLY SHALL BE INSTALLED PER CALTRANS SPECIFICATIONS AND SHALL INCLUDE AN ENCLOSURE AND BLANKET.
	MANUAL ISOLATION VALVE (GATE VALVE)	KBI MODEL BRASS GATE VALVE OR EQUAL	01/ID-2	ALL GATE VALVES SHALL BE 2" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	CONTROL VALVE	HUNTER ICV-101G-DC & ICV-151G-DC OR APPROVED EQUAL	02/ID-2	CONTROL VALVES SHALL BE SIZED AS SHOWN ON DRAWINGS. ALL CONTROL VALVES ASSEMBLIES SHALL BE INSTALLED WITH A DC LATCHING SOLENOID AND BATTERY-POWERED CONTROLLER. A BASKET FILTER OR APPROVED EQUAL SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH WITH A STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS
NO SYMBOL	VALVE CONTROLLER	HUNTER SVC-100 & SVC-200 OR APPROVED EQUAL	02/ID-2	HUNTER SINGLE OR TWO STATION BATTERY-POWERED CONTROLLERS OR APPROVED EQUAL SHALL BE INSTALLED PER IRRIGATION PLANS AND VALVE LOCATIONS AND NUMBERS. PROGRAM BASED ON IRRIGATION SCHEDULE SHEET ID-1.
NO SYMBOL	BASKET FILTER	RAINBIRD PRB-QKCHK-100 OR APPROVED EQUAL	02/ID-2	BASKET FILTER SHALL BE A RAINBIRD PRESSURE REGULATING, QUICK-CHECK BASKET FILTER OR APPROVED EQUAL WITH MINIMUM 150 MESH SCREEN. EACH BASKET FILTER SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH A STEEL VANDAL PROOF LID PER CALTRANS SPECIFICATIONS, OR APPROVED EQUAL. INSTALL FILTER AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFIATIONS
D2	DUAL PORT DRIP ASSEMBLY	AS PER DETAIL	03/ID-2	DETERMINE AND LOCATE IN FIELD. DUAL PORT DRIP ASSEMBLES SHALL INCLUDE A RISER AND PRESSURE REGULATOR TO SUPPLY WATER FROM BELOW GRADE LATERAL LINE TO ON-GRADE POLY DISTRIBUTION TUBING. DUAL PORT DRIP ASSEMBLIES SHALL BE CONSTRUCTED AS PER DETAIL 07/ID-1.
NO SYMBOL	DRIP EMITTER	NETAFIM 1GPH & 2GPH OR APPROVED EQUAL	04/ID-2	INSTALL 2 EMITTERS PER TREE AND SHRUB WITHIN THE RESTORED MONTANE RIPARIAN MITIGATION ZONE. ALL TREEPOT 8 CONTAINERS SHALL HAVE TWO 2GPH EMITTERS INSTALLED PER CONTAINER PLANT. ALL 1 GALLON CONTAINERS SHALL HAVE TWO 1GPH EMITTERS INSTALLED PER CONTAINER PLANT. EMITTERS SHALL BE PRESSURE COMPENSATING AND ANTI-DRAIN. VERIFY LOCATIONS IN FIELD.
NO SYMBOL	FLUSHING END CAP	AS APPROVED	04/ID-2	DETERMINE AND LOCATE IN FIELD. EACH END CAP SHALL BE TIED TO A 30"X2"Ø PTW STAKE PAINTED WITH WHITE EXTERIOR GRADE PAIN.
— — —	PVC MAINLINE	2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL MAINLINE PIPE SHALL BE 2" SCHEDULE 40 PVC PIPE SET 24" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
– – – – – –	PVC LATERAL LINE	1" - 2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL LATERAL LINE PIPE SHALL BE LINE SIZED AS ACCORDING TO IRRIGATION PLANS, SCHEDULE 40 PVC PIPE SET 12" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
	DISTRIBUTION LINE	½" POLY DRIP TUBE AS APPROVED	04/ID-2	ON-GRADE ½" POLY DRIP TUBE SHALL BE INSTALLED IN THE FIELD TO ACCOMMODATE ECOLOGIST PLACED RIPARIAN PLANTINGS. EACH SECTION SHALL NOT EXCEED 500' IN LENGTH OR 3' IN ELEVATION CHANGE.
NO SYMBOL	DRAIN VALVE	RAINBIRD 16A-FDV FILTERED DRAIN VALVE OR APPROVED EQUAL	N/A	DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.

LUCAS RYE PIPER
REGISTERED LANDSCAPE ARCHITECT
10/10/14
DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT
LUCAS R. PIPER
No. 5872
Signature
10-14-14
Renewal Date
10-10-14
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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QUINCY ENGINEERING
11017 COBBLEROCK DR. SUITE 100
SACRAMENTO, CA 95670

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FAX 916.408.2999
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CA LIC. #429252

0 10 20 40

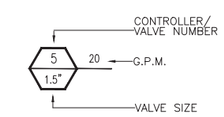
NORTH

REFER TO SHEET ID-2 FOR IRRIGATION SCHEDULE, NOTES, AND DETAILS.

IT IS ASSUMED THAT EACH POINT OF CONNECTION WILL SUPPLY A MINIMUM 60 GPM AT 60 PSI. THE CONTRACTOR SHALL VERIFY THESE SPECIFICATIONS IN THE FIELD PRIOR TO WORK.

ALL CONTROL VALVES AND IRRIGATION PIPE SHALL BE SIZED AS SHOWN ON IRRIGATION PLAN DRAWINGS

DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG ALL LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.



IRRIGATION PLAN

RIPARIAN MITIGATION COMPLEX A

SCALE: 1" = 20'

IP-7

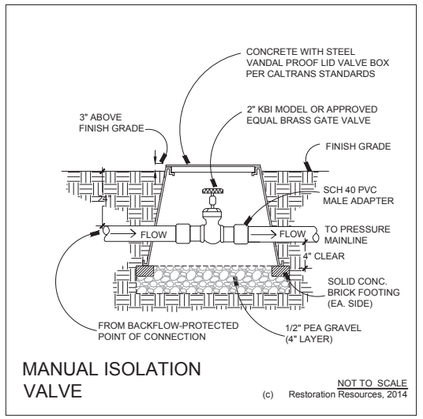
REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR
R. SWIFT & L.PIPER	R. SWIFT			R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	105	123

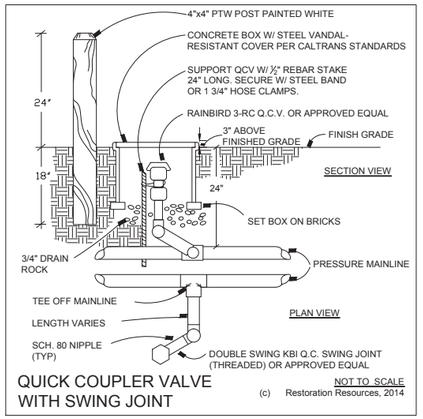
ROADSIDE LANDSCAPING IRRIGATION DETAILS



MANUAL ISOLATION VALVE

NOT TO SCALE
(c) Restoration Resources, 2014

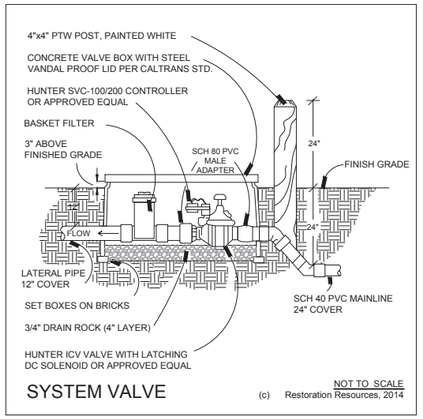
1
ID-1



QUICK COUPLER VALVE WITH SWING JOINT

NOT TO SCALE
(c) Restoration Resources, 2014

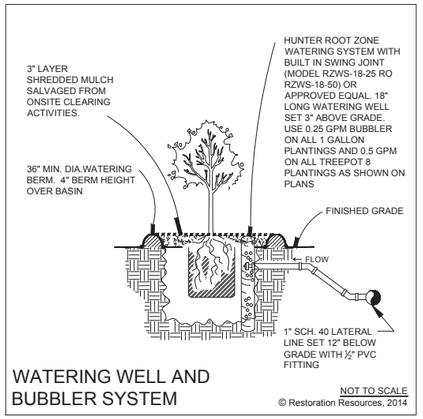
2
ID-1



SYSTEM VALVE

NOT TO SCALE
(c) Restoration Resources, 2014

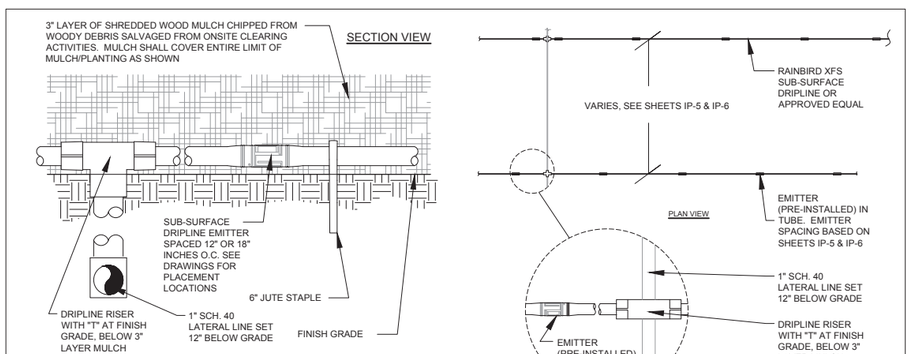
3
ID-1



WATERING WELL AND BUBBLER SYSTEM

NOT TO SCALE
© Restoration Resources, 2014

4
ID-1



BUB-SURFACE INLINE DRIP LAYOUT

NOT TO SCALE
© Restoration Resources, 2014

5
ID-1

ROADSIDE LANDSCAPING IRRIGATION SCHEDULE

ROADSIDE AND INTERSECTION PLANT IRRIGATION REQUREMENTS (PP-3 TO PP-8 & IP-1 TO IP-6)

YEARS 1, 2, & 3 :

MARCH 15 - APRIL 30:
IRRIGATE 1 TIME PER WEEK (6 GAL. PER TREEPOT 8 PLANT/APPLICATION AND 3 GAL. PER 1 GALLON PLANT/APPLICATION)

MAY 1 - JUNE 30:
IRRIGATE 2 TIMES PER WEEK (6 GAL. PER TREEPOT 8 PLANT/APPLICATION AND 3 GAL. PER 1 GALLON PLANT/APPLICATION)

JULY 1 - SEPTEMBER 30:
IRRIGATE 4 TIME PER WEEK (3 GAL. PER TREEPOT 8 PLANT/APPLICATION AND 1 ½ GAL. PER 1 GALLON PLANT/APPLICATION)

OCTOBER 1 - OCTOBER 30:
IRRIGATE 1 TIME PER WEEK (6 GAL. PER TREEPOT 8 PLANT/APPLICATION AND 3 GAL. PER 1 GALLON PLANT/APPLICATION)

ROADSIDE LANDSCAPING IRRIGATION NOTES

IRRIGATION SHALL ONLY RUN DURING OFF-PEAK HOURS. OFF-PEAK HOURS ARE SET BY WEAVERVILLE COMMUNITY SERVICE DISTRICT (WCSD).

ROADSIDE LANDSCAPING IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	DETAIL	REMARKS
POC	POINT OF CONNECTION	PER COUNTY AND WATER DISTRICT SPECIFICATIONS	N/A	P.O.C. SHALL BE ESTABLISHED BY THE WATER DISTRICT IN THE LOCATIONS SHOWN ON THESE PLANS. (NIC) THE WATER DISTRICT IS RESPONSIBLE FOR ALL UPSTREAM CONNECTION COMPONENTS INCLUDING THE WATER METER AND GATE VALVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZING SYSTEM BY SHUTTING OFF GATE VALVE LOCATED ON THE UPSTREAM END OF EACH BACK FLOW PREVENTER, PER NOTES, DRAWINGS, AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS.
	BACKFLOW PREVENTER ASSEMBLY	PER COUNTY AND CALTRANS SPECIFICATIONS	N/A	BACKFLOW PREVENTER SHALL BE A 1" REDUCED PRESSURE ASSEMBLY PER COUNTY AND CALTRANS REQUIREMENTS. ASSEMBLY SHALL BE INSTALLED PER CALTRANS SPECIFICATIONS AND SHALL INCLUDE AN ENCLOSURE AND BLANKET.
	MANUAL ISOLATION VALVE (GATE VALVE)	KBI MODEL BRASS GATE VALVE OR EQUAL	01/ID-1	ALL GATE VALVES SHALL BE 2" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	QUICK COUPLING VALVE	RAINBIRD 3-RC OR APPROVED EQUAL	02/ID-1	ALL QUICK COUPLING VALVES SHALL BE ¾" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	CONTROL VALVE	HUNTER ICV-101G-DC & ICV-151G-DC OR APPROVED EQUAL	03/ID-1	CONTROL VALVES SHALL BE SIZED AS SHOWN ON DRAWINGS. ALL CONTROL VALVES ASSEMBLIES SHALL BE INSTALLED WITH A DC LATCHING SOLENOID AND BATTERY-POWERED CONTROLLER. A BASKET FILTER OR APPROVED EQUAL SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH WITH A STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS
NO SYMBOL	VALVE CONTROLLER	HUNTER SVC-100 & SVC-200 OR APPROVED EQUAL	03/ID-1	HUNTER SINGLE OR TWO STATION BATTERY-POWERED CONTROLLERS OR APPROVED EQUAL SHALL BE INSTALLED PER IRRIGATION PLANS AND VALVE LOCATIONS AND NUMBERS. PROGRAM BASED ON IRRIGATION SCHEDULE SHEET ID-1.
NO SYMBOL	BASKET FILTER	RAINBIRD PRB-QKCHK-100 OR APPROVED EQUAL	03/ID-1	BASKET FILTER SHALL BE A RAINBIRD PRESSURE REGULATING, QUICK-CHECK BASKET FILTER OR APPROVED EQUAL WITH MINIMUM 150 MESH SCREEN. EACH BASKET FILTER SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH A STEEL VANDAL PROOF LID PER CALTRANS SPECIFICATIONS, OR APPROVED EQUAL. INSTALL FILTER AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFIATIONS
	WATERING WELL BUBBLER SYSTEM	HUNTER RZWS-18-25 AND RZWS-18-50 OR APPROVED EQUAL	04/ID-1	WATER WELL BUBBLER SYSTEMS SHALL USE HUNTER 18" ROOT ZONE WATERING SYSTEM OR APPROVED EQUAL. 0.50 GPM BUBBLERS SHALL BE USED FOR ALL TREEPOT 8 CONTAINERS AND 0.25 GPM FOR ALL 1 GALLON CONTAINERS. BUBBLER SYSTEM SHALL BE INSTALLED ON ROADWAY LANDSCAPE TREES AND SHRUBS EXCEPT FOR GROUNDCOVERS AND HERBACEOUS PLANTING AREAS AT INTERSECTIONS AND IN MITIGATION AREAS AS IDENTIFIED ON THE IRRIGATION PLANS. WATER WELL AND BUBBLER SYSTEM SHALL BE INSTALLED PER DETAIL AND WRITTEN SPECIFICATIONS.
	SUB-SURFACE DRIPLINE	RAINBIRD XFS-09-12-500 & XFS-09-18-500 OR APPROVED EQUAL	05/ID-1	SUB-SURFACE DRIPLINE SHALL HAVE 0.9 GPH EMITTERS SPACED 12" OR 18" ALONG LENGTH OF DRIPLINE. LAY DRIPLINE IN LOCATIONS AS SHOWN ON IRRIGATION PLANS PRIOR TO PLACEMENT OF 3" LAYER OF MULCH AT INTERSECTION PLANTING AREAS. FOR ALL DRIPLINES IRRIGATING ALLIUM X 'GLOBEMASTER' PLANTING BEDS USE DRIPLINE WITH 12" EMITTER SPACING. FOR ALL OTHER DRIPLINE LENGTHS USE DRIPLINE WITH 18" EMITTER SPACING. INSTALL PER DETAIL 05/ID-1.
	PVC MAINLINE	2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL MAINLINE PIPE SHALL BE 2" SCHEDULE 40 PVC PIPE SET 24" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
	PVC LATERAL LINE	1" - 2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL LATERAL LINE PIPE SHALL BE LINE SIZED AS ACCORDING TO IRRIGATION PLANS, SCHEDULE 40 PVC PIPE SET 12" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
NO SYMBOL	DRAIN VALVE	RAINBIRD 16A-FDV FILTERED DRAIN VALVE OR APPROVED EQUAL	N/A	DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.

LUCAS RYE PIPER
REGISTERED LANDSCAPE ARCHITECT
10/10/14
DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT
LUCAS R. PIPER
No. 5872
Signature
10-31-14
Renewal Date
10-10-14
Date
STATE OF CALIFORNIA

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CA LIC. #429252

IRRIGATION DETAIL ADDITIVE ALTERNATE

ROADSIDE LANDSCAPING IRRIGATION SCHEDULE, NOTES, AND DETAILS

ID-1

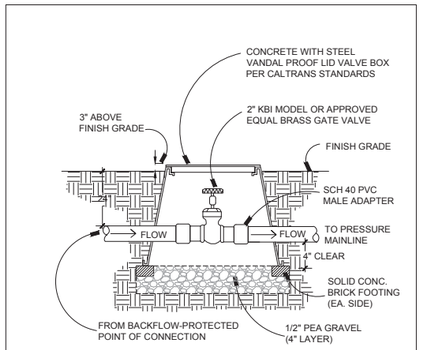
CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED	CONSULTANT FUNCTIONAL SUPERVISOR	
R. SWIFT & L.PIPER	R. SWIFT	XX	XX/XX/XX	R.SWIFT	
		XX	XX/XX/XX		
		XX	XX/XX/XX		

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12
DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	106	123

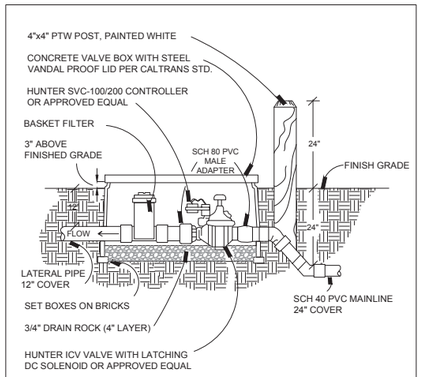
HABITAT RESTORATION IRRIGATION DETAILS



MANUAL ISOLATION VALVE

NOT TO SCALE
(c) Restoration Resources, 2014

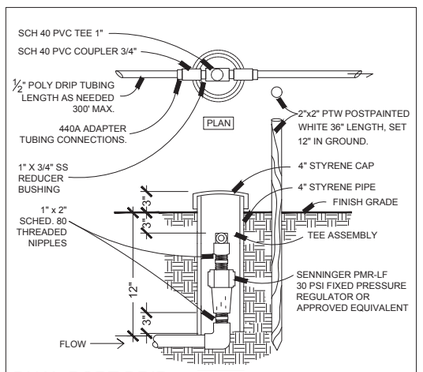
1
ID-2



SYSTEM VALVE

NOT TO SCALE
(c) Restoration Resources, 2014

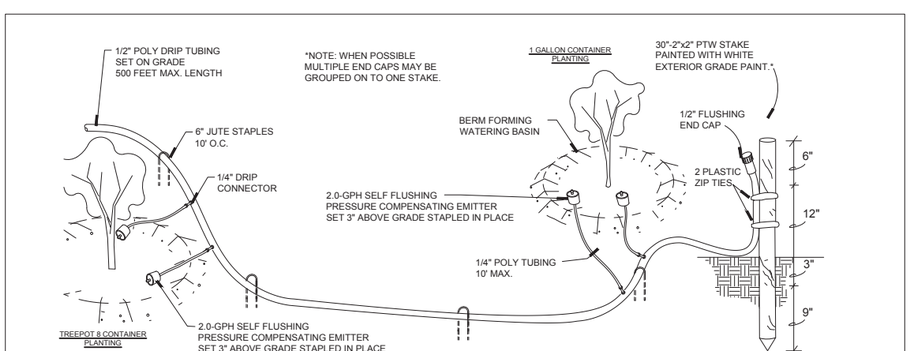
2
ID-2



DUAL-PORT DRIP ASSEMBLY

NOT TO SCALE
(c) Restoration Resources, 2014

3
ID-2



DRIP EMITTER AND TUBING LAYOUT

NOT TO SCALE
(c) Restoration Resources, 2014

4
ID-2

HABITAT RESTORATION IRRIGATION SCHEDULE

INDIVIDUAL WOODY PLANT DRIP IRRIGATION - MONTANE RIPARIAN RESTORATION MITIGATION AREA (C-1 & IP-7)

YEAR 1 (VALVE 15): APRIL:
IRRIGATE EVERY 2 WEEKS (6 GAL. PER TREEPOT 8 PLANT/APPLICATION & 3 GAL. PER 1 GALLON PLANT/APPLICATION)

MAY - OCT. 15:
IRRIGATE EVERY 2 WEEKS (10 - 12 GAL. PER TREEPOT 8 PLANT/APPLICATION & 5 - 6 GAL. PER 1 GALLON PLANT/APPLICATION)

YEAR 2 (VALVE 15): APRIL - OCT. 15:
IRRIGATE EVERY 2 WEEKS (15 GAL. PER TREEPOT 8 PLANT/APPLICATION & 7.5 GAL. PER 1 GALLON PLANT/APPLICAITON)

YEAR 3 (VALVE 15): APRIL - OCT. 15:
IRRIGATE EVERY 1 MONTH (20 - 25 GAL. PER TREEPOT 8 PLANT/APPLICATION & 10 - 12.5 GAL. PER 1 GALLON PLANT/APPLICATION)

HABITAT RESTORATION IRRIGATION NOTES

IRRIGATION SHALL ONLY RUN DURING OFF-PEAK HOURS. OFF-PEAK HOURS ARE SET BY WEAVERVILLE COMMUNITY SERVICE DISTRICT (WCSD).

HABITAT RESTORATION IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	DETAIL	REMARKS
POC	POINT OF CONNECTION	PER COUNTY AND WATER DISTRICT SPECIFICATIONS	N/A	P.O.C. SHALL BE ESTABLISHED BY THE WATER DISTRICT IN THE LOCATIONS SHOWN ON THESE PLANS. (NIC) THE WATER DISTRICT IS RESPONSIBLE FOR ALL UPSTREAM CONNECTION COMPONENTS INCLUDING THE WATER METER AND GATE VALVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZING SYSTEM BY SHUTTING OFF GATE VALVE LOCATED ON THE UPSTREAM END OF EACH BACK FLOW PREVENTER, PER NOTES, DRAWINGS, AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS.
	BACKFLOW PREVENTER ASSEMBLY	PER COUNTY AND CALTRANS SPECIFICATIONS	N/A	BACKFLOW PREVENTER SHALL BE A 1" REDUCED PRESSURE ASSEMBLY PER COUNTY AND CALTRANS REQUIREMENTS. ASSEMBLY SHALL BE INSTALLED PER CALTRANS SPECIFICATIONS AND SHALL INCLUDE AN ENCLOSURE AND BLANKET.
	MANUAL ISOLATION VALVE (GATE VALVE)	KBI MODEL BRASS GATE VALVE OR EQUAL	01/ID-2	ALL GATE VALVES SHALL BE 2" SIZE AND HOUSED IN A CONCRETE BOX WITH STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD SPECIFICATIONS.
	CONTROL VALVE	HUNTER ICV-101G-DC & ICV-151G-DC OR APPROVED EQUAL	02/ID-2	CONTROL VALVES SHALL BE SIZED AS SHOWN ON DRAWINGS. ALL CONTROL VALVES ASSEMBLIES SHALL BE INSTALLED WITH A DC LATCHING SOLENOID AND BATTERY-POWERED CONTROLLER. A BASKET FILTER OR APPROVED EQUAL SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH WITH A STEEL VANDAL PROOF LID PER CALTRANS STANDARDS, OR APPROVED EQUAL. INSTALL VALVE AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFICATIONS
NO SYMBOL	VALVE CONTROLLER	HUNTER SVC-100 & SVC-200 OR APPROVED EQUAL	02/ID-2	HUNTER SINGLE OR TWO STATION BATTERY-POWERED CONTROLLERS OR APPROVED EQUAL SHALL BE INSTALLED PER IRRIGATION PLANS AND VALVE LOCATIONS AND NUMBERS. PROGRAM BASED ON IRRIGATION SCHEDULE SHEET ID-1.
NO SYMBOL	BASKET FILTER	RAINBIRD PRB-QKCHK-100 OR APPROVED EQUAL	02/ID-2	BASKET FILTER SHALL BE A RAINBIRD PRESSURE REGULATING, QUICK-CHECK BASKET FILTER OR APPROVED EQUAL WITH MINIMUM 150 MESH SCREEN. EACH BASKET FILTER SHALL BE INSTALLED DOWNSTREAM OF EACH VALVE. CONTROL VALVE AND BASKET FILTER SHALL BE HOUSED IN A CONCRETE BOX WITH A STEEL VANDAL PROOF LID PER CALTRANS SPECIFICATIONS, OR APPROVED EQUAL. INSTALL FILTER AND BOX AS PER DETAIL AND CALTRANS STANDARD AND PROVISIONAL SPECIFIATIONS
D2	DUAL PORT DRIP ASSEMBLY	AS PER DETAIL	03/ID-2	DETERMINE AND LOCATE IN FIELD. DUAL PORT DRIP ASSEMBLES SHALL INCLUDE A RISER AND PRESSURE REGULATOR TO SUPPLY WATER FROM BELOW GRADE LATERAL LINE TO ON-GRADE POLY DISTRIBUTION TUBING. DUAL PORT DRIP ASSEMBLIES SHALL BE CONSTRUCTED AS PER DETAIL 07/ID-1.
NO SYMBOL	DRIP EMITTER	NETAFIM 1GPH & 2GPH OR APPROVED EQUAL	04/ID-2	INSTALL 2 EMITTERS PER TREE AND SHRUB WITHIN THE RESTORED MONTANE RIPARIAN MITIGATION ZONE. ALL TREEPOT 8 CONTAINERS SHALL HAVE TWO 2GPH EMITTERS INSTALLED PER CONTAINER PLANT. ALL 1 GALLON CONTAINERS SHALL HAVE TWO 1GPH EMITTERS INSTALLED PER CONTAINER PLANT. EMITTERS SHALL BE PRESSURE COMPENSATING AND ANTI-DRAIN. VERIFY LOCATIONS IN FIELD.
NO SYMBOL	FLUSHING END CAP	AS APPROVED	04/ID-2	DETERMINE AND LOCATE IN FIELD. EACH END CAP SHALL BE TIED TO A 30"X2"Ø PTW STAKE PAINTED WITH WHITE EXTERIOR GRADE PAIN.
	PVC MAINLINE	2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL MAINLINE PIPE SHALL BE 2" SCHEDULE 40 PVC PIPE SET 24" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
	PVC LATERAL LINE	1" - 2" PVC SCH. 40 OR APPROVED EQUAL	N/A	ALL LATERAL LINE PIPE SHALL BE LINE SIZED AS ACCORDING TO IRRIGATION PLANS, SCHEDULE 40 PVC PIPE SET 12" BELOW GRADE. TRENCH AND BACKFILL ACCORDING TO CALTRANS STANDARD OR PROVISIONAL SPECIFICATIONS.
	DISTRIBUTION LINE	½" POLY DRIP TUBE AS APPROVED	04/ID-2	ON-GRADE ½" POLY DRIP TUBE SHALL BE INSTALLED IN THE FIELD TO ACCOMMODATE ECOLOGIST PLACED RIPARIAN PLANTINGS. EACH SECTION SHALL NOT EXCEED 500' IN LENGTH OR 3' IN ELEVATION CHANGE.
NO SYMBOL	DRAIN VALVE	RAINBIRD 16A-FDV FILTERED DRAIN VALVE OR APPROVED EQUAL	N/A	DRAIN VALVES SHALL BE INSTALLED PER SPECIFICATIONS AT ALL LOW POINTS ALONG LATERAL LINES WHERE WATER IS LIKELY TO POOL DURING NON-OPERATION.

LUCAS RYE PIPER 10/10/14
REGISTERED LANDSCAPE ARCHITECT DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT LUCAS R. PIPER No. 5872 Signature 10-31-14 Renewal Date 10-10-14 Date STATE OF CALIFORNIA

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IRRIGATION DETAIL

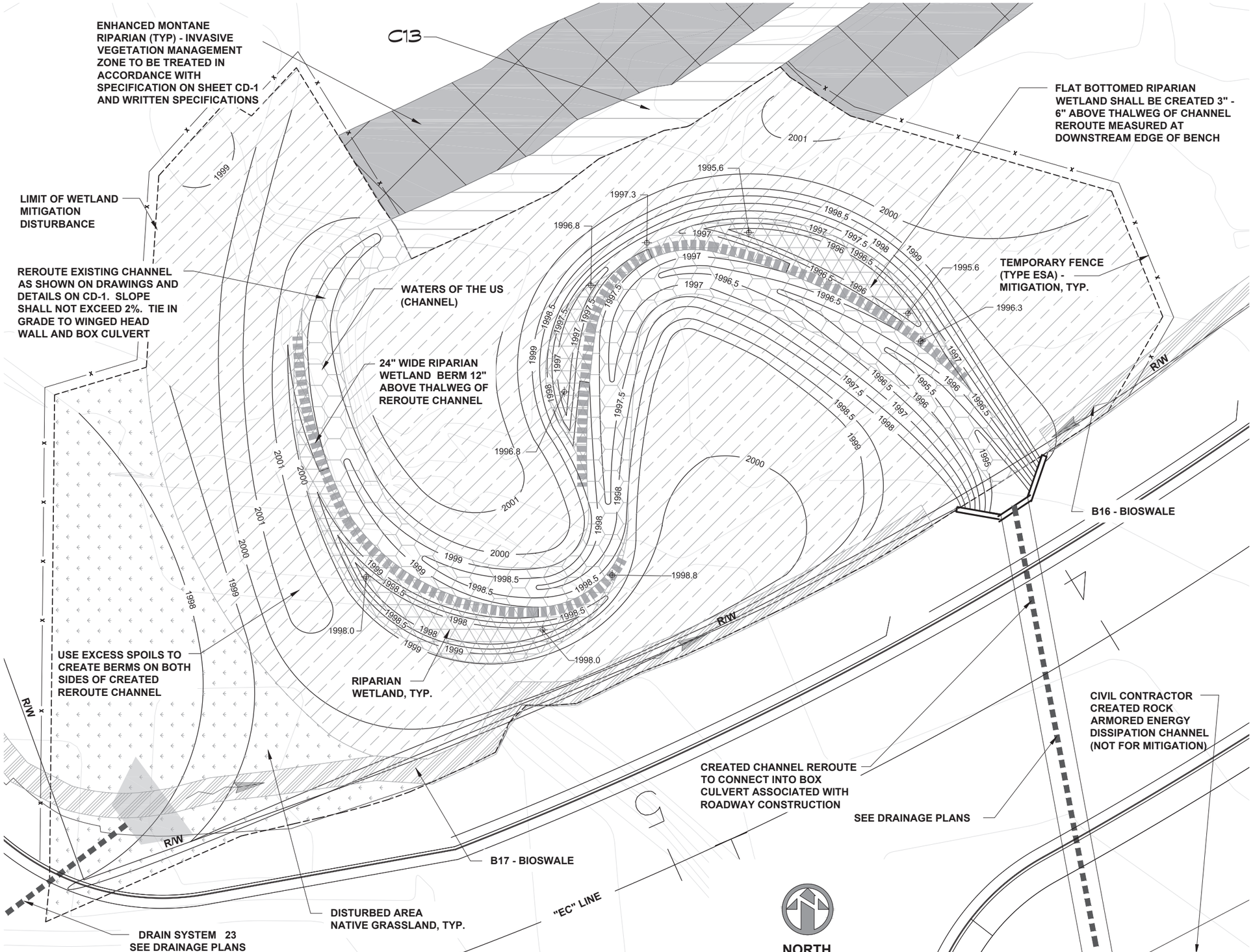
HABITAT RESTORATION IRRIGATION SCHEDULE, NOTES, AND DETAILS

ID-2

XX	XX	XX	REVISED BY	R. SWIFT & L.PIPER	CALCULATED-DESIGNED BY	CONSULTANT FUNCTIONAL SUPERVISOR	TRINITY COUNTY
XX/XX/XX	XX/XX/XX	XX/XX/XX	DATE REVISED	R. SWIFT	CHECKED BY	R.SWIFT	DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12 | DATE PLOTTED => TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	107	123



LUCAS RYE PIPER — 10/10/14
REGISTERED LANDSCAPE ARCHITECT — DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT — LUCAS R. PIPER No. 5872 — Signature — 10-31-14 — Renewal Date — 10-10-14 — Date — STATE OF CALIFORNIA

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NOTES:

REFER TO SHEET LD-2 FOR PLANT SPECIES AND QUANTITIES PER ACRE PER HABITAT TYPE.

REFER TO SHEETS LD-2 & CD-1 FOR HABITAT AND CONSTRUCTION NOTES, DETAILS, AND X-SECTIONS.

PROPOSED CONTOURS ARE BASED ON EXISTING ELEVATION SURVEY. CONTRACTOR SHALL VERIFY EXISTING GRADE PRIOR TO CONSTRUCTION.

ALL DITCHES AND OTHER SURFACE FEATURES NOT SHOWN ON EXISTING CONTOURS SHALL BE FILLED WITHIN THE LIMIT OF DISTURBANCE. TO PROVIDE A SMOOTH TRANSITION INTO EXISTING GRADE AND MINIMIZE EROSION POTENTIAL.

MITIGATION CONTRACTOR SHALL CLEAR AND GRUB ENTIRE AREA WITHIN THE LIMIT OF DISTURBANCE WHILE TAKING EVERY EFFORT TO PRESERVE HEALTHY NATIVE TREES. PRIOR TO CLEARING AND GRUBBING THE PROJECT RESTORATION ECOLOGIST SHALL MARK ALL NATIVE TREES 12" DBH OR LARGER. PRIOR TO CLEARING, GRUBBING, AND EARTHWORK, CONTRACTOR SHALL HAVE LAYOUT AND TREE REMOVAL/PRESERVATION APPROVED BY THE PROJECT RESTORATION ECOLOGIST AND COUNTY REPRESENTATIVE.

FOR ADDITIONAL INFORMATION REGARDING VEGETATION MAINTENANCE AND MONITORING WITHIN THE ENHANCED MONTANE RIPARIAN HABITAT TYPE REFER TO THE CALTRANS PROVISIONAL SPECIFICATIONS.

REFER TO SHEET CD-1 FOR CONTRACTOR ROLES, RESPONSIBILITIES, AND ORDER OF WORK.

EXISTING WETLANDS AND WATERS OF THE US

SYM.	DESCRIPTION
	AVOIDED JURISDICTIONAL WATERS OF THE US

EXISTING SENSITIVE HABITATS

AVOIDED MONTANE RIPARIAN

PROPOSED WETLANDS AND WATERS OF THE US

WATERS OF THE US (CHANNEL)

RIPARIAN WETLAND (FLOODPLAIN)

PROPOSED SENSITIVE HABITATS

RESTORED MONTANE RIPARIAN

ENHANCED MONTANE RIPARIAN (TOTAL 0.7 ACRES)

DISTURBED AREA NATIVE GRASSLAND

CONSTRUCTION PLAN

RIPARIAN COMPLEX A

SCALE: 1" = 10'

C-1

REVISED BY	DATE REVISED
XX	XX/XX/XX
XX	XX/XX/XX
XX	XX/XX/XX

CALCULATED–DESIGNED BY: R. SWIFT & L.PIPER
CHECKED BY: R. SWIFT
CONSULTANT FUNCTIONAL SUPERVISOR: R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12–03–12 — DATE PLOTTED => — TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	108	123

LUCAS RYE PIPER
REGISTERED LANDSCAPE ARCHITECT

10/10/14
DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT
LUCAS R. PIPER
No. 5872
Signature
10-31-14
Renewal Date
10-10-14
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
QUINCY ENGINEERING
11017 COBBLEROCK DR. SUITE 100
SACRAMENTO, CA 95670

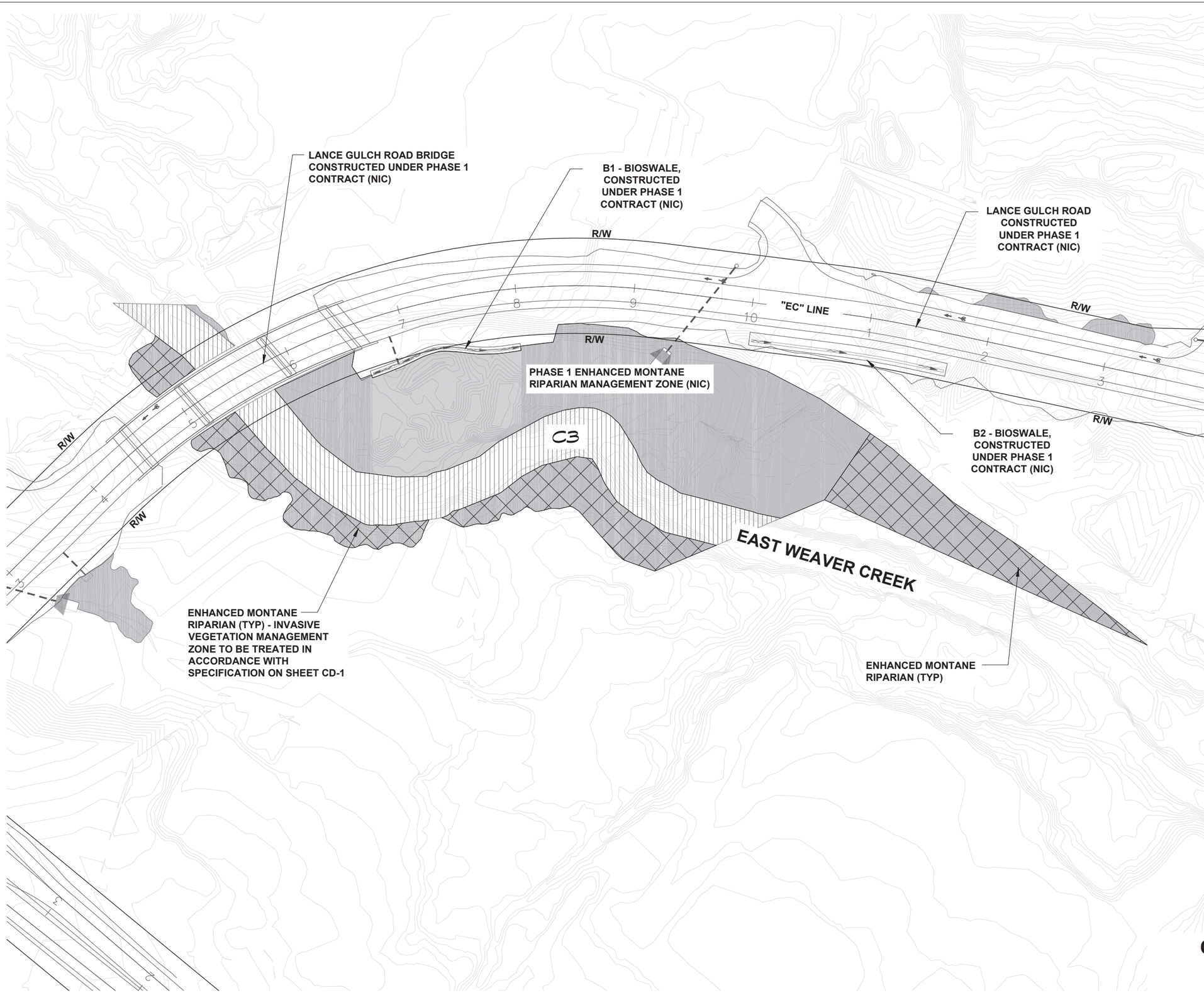
RESTORATION RESOURCES
3888 CINCINNATI AVENUE
ROCKLIN, CA 95765
TEL 916.408.2990
FAX 916.408.2999
www.restoration-resources.net
CA LIC. #429252

NOTES:

REFER TO SHEETS LD-2 & CD-1 FOR HABITAT AND CONSTRUCTION NOTES, DETAILS, AND X-SECTIONS.

PROPOSED CONTOURS ARE BASED ON EXISTING ELEVATION SURVEY. CONTRACTOR SHALL VERIFY EXISTING GRADE PRIOR TO CONSTRUCTION.

FOR ADDITIONAL INFORMATION REGARDING VEGETATION MAINTENANCE AND MONITORING WITHIN THE ENHANCED MONTANE RIPARIAN HABITAT TYPE REFER TO THE CALTRANS PROVISIONAL SPECIFICATIONS.



NORTH

0 20 40 80

EXISTING WETLANDS AND WATERS OF THE US

SYM.	DESCRIPTION
	AVOIDED JURISDICTIONAL WATERS OF THE US

EXISTING SENSITIVE HABITATS

	PHASE 1 ENHANCED MONTANE RIPARIAN MANAGEMENT AREA (NIC)

PROPOSED SENSITIVE HABITATS

	ENHANCED MONTANE RIPARIAN (TOTAL 0.7 ACRES)

CONSTRUCTION PLAN

RIPARIAN COMPLEX C

SCALE: 1" = 40'

C-2

XX	XX/XX/XX
XX	XX/XX/XX
XX	XX/XX/XX
REVISED BY	DATE REVISED
R. SWIFT & L.PIPER	R. SWIFT
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12
DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	109	123

LUCAS RYE PIPER 10/10/14
REGISTERED LANDSCAPE ARCHITECT DATE

10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT LUCAS R. PIPER No. 5872 Signature 10-31-14 Renewal Date 10-10-14 Date STATE OF CALIFORNIA

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ADDITIVE ALTERNATE PLANT PALETTES

ADDITIVE ALTERNATE TREE AND SHRUB PLANTING

PLANT ZONE: VEGETATION SCREEN / BUFFER — SYMBOL:

CODE	BOTANICAL NAME/COMMON NAME	CONTAINER SIZE	QTY. REQ.
CADE	CALOCEDRUS DECURRENS / INCENSE CEDAR	TREEPOT 8	2
PIPO	PINUS PONDEROSA / PONDEROSA PINE	TREEPOT 8	1
PSME	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	TREEPOT 8	4
QUCH	QUERCUS CHRYSOLEPIS / CANYON LIVE OAK	TREEPOT 8	2
ARPA	ARCTOSTAPHYLOS PATULA / GREENLEAFED MANZANITA	1 GALLON	17
CECU	CEANOTHUS CUNEATUS / BUCKBRUSH	1 GALLON	8
FRCA	FRANGULA CALIFORNICA / CALIFORNIA COFFEEBERRY	1 GALLON	14
		TOTAL	48

PLANT ZONE: VEGETATION SCREEN (FENCE PLANTINGS) — LINEAR FEET: 2,264 FT

CODE	BOTANICAL NAME/COMMON NAME	CONTAINER SIZE	QTY. REQ.
N/A	LONICERA HISPIDULA / PINK HONEYSUCKLE	1 GALLON	62
N/A	VITIS CALIFORNICA / CALIFORNIA GRAPE	1 GALLON	101
		TOTAL	163

PLANT ZONE: ROADSIDE INTERSECTION (SEE NOTE 3) — SYMBOL:

CODE	BOTANICAL NAME/COMMON NAME	CONTAINER SIZE	QTY. REQ.
BERA	BERBERIS AQUIFOLIUM VAR RAPENS / CREEPING OREGON GRAPE	1 GALLON	134
BEOR	BERBERIS AQUIFOLIUM ORANGE FLAME / ORANGE FLAME OREGON GRAPE	1 GALLON	142
CECO	CEANOTHUS CORDULATUS / MOUNTAIN WHITETHORN	TREEPOT 8	23
CEOC	CERCIS OCCIDENTALIS / WESTERN REDBUD	TREEPOT 8	11
LUAL	LUPINUS ALBIFRONS / SILVER BUSH LUPINE	1 GALLON	59
PHLE	PHILADELPHUS LEWISII GOOSE CREEK / GOOSE CREEK MOCK ORANGE	TREEPOT 8	25
ALGL	ALLIUM X GLOBEMASTER / ORNAMENTAL ONION	BULB	439
FECA	FESTUCA CALIFORNICA SERPENTINE BLUE / SERPENTINE BLUE CALIFORNIA FESCUE	1 GALLON	102
		TOTAL	935

PLANT ZONE: UPLAND ROADSIDE CLUSTERS — SYMBOL:

CODE	BOTANICAL NAME/COMMON NAME	CONTAINER SIZE	QTY. REQ.
ARME	ARBUTUS MENZIESII / PACIFIC MADRONE	TREEPOT 8	3
PIPO	PINUS PONDEROSA / PONDEROSA PINE	TREEPOT 8	2
QUGA	QUERCUS GARRYANA / OREGON WHITE OAK	TREEPOT 8	2
QUKE	QUERCUS KELLOGGII / BLACK OAK	TREEPOT 8	2
ARPA	ARCTOSTAPHYLOS PATULA / GREENLEAFED MANZANITA	1 GALLON	7
CEIN	CEANOTHUS INTEGERRIMUS / DEER BRUSH	1 GALLON	4
CEOC	CERCIS OCCIDENTALIS / WESTERN REDBUD	1 GALLON	5
FRCA	FRANGULA CALIFORNICA / CALIFORNIA COFFEEBERRY	1 GALLON	5
		TOTAL	30

PLANT ZONE: LOWLAND ROADSIDE CLUSTERS — SYMBOL:

CODE	BOTANICAL NAME/COMMON NAME	CONTAINER SIZE	QTY. REQ.
ACMA	ACER MACROPHYLLUM / BIG LEAF MAPLE	TREEPOT 8	3
CONU	CORNUS NUTTALLII / PACIFIC DOGWOOD	TREEPOT 8	2
FRLA	FRAXINUS LATIFOLIA / OREGON ASH	TREEPOT 8	2
PIPO	PINUS PONDEROSA / PONDEROSA PINE	TREEPOT 8	2
COGL	CORNUS GLABRATA / BROWN DOGWOOD	1 GALLON	10
COCO	CORYLUS CORNUTA / CALIFORNIA HAZELNUT	1 GALLON	8
RUPA	RUBUS PARVIFLORUS / WESTERN THIMBLEBERRY	1 GALLON	7
SYMO	SYMPHORICARPOS MOLLIS / SNOWBERRY	1 GALLON	10
		TOTAL	44

PHASE 2 PLANT PALETTES

HERBACEOUS SEED AND TREEBAND PLUG PLANTING

PLANT ZONE: UPLAND ROADSIDE — AREA (acres): 2.68 AC

BOTANICAL NAME / COMMON NAME	HYDROSEED RATES (LBS./ACRE)	SEED REQUIRED (LBS)
BROMUS CARINATUS VAR. CARINATUS / CALIFORNIA BROME	5	13
ELYMUS GLAUCUS / BLUE WILD RYE	4	11
FESTUCA IDAHOENSIS / IDAHO FESCUE	4	11
MELICA CALIFORNICA / CALIFORNIA MELIC	2	5
POA SECUNDA / PINE BLUEGRASS	2	5
STIPA PULCHRA / PURPLE NEEDLEGRASS	4	11
ACHILLEA MILLEFOLIUM / COMMON YARROW	2	5
ESCHSCHOLZIA CALIFORNICA / CALIFORNIA POPPY	2	5
LUPINUS BICOLOR / PIGMY-LEAF LUPINE	2	5
NEMOPHILA MENZIESII / BABY BLUE EYES	3	8

PLANT ZONE: LOWLAND ROADSIDE — AREA (acres): 0.55 AC

BOTANICAL NAME / COMMON NAME	HYDROSEED RATES (LBS./ACRE)	SEED REQUIRED (LBS)
ELYMUS GLAUCUS / BLUE WILD RYE	6	3.5
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	4	2
FESTUCA IDAHOENSIS / IDAHO FESCUE	5	3
HORDEUM BRACHYANTHERUM VAR. CALIFORNICUM / CALIFORNIA MEADOW BARLEY	6	3.5
LEYMUS TRITICOIDES / CREEPING WILD RYE	8	4.5

PLANT ZONE: GRASSY BIOSWALE — AREA (acres): 0.54 AC

BOTANICAL NAME / COMMON NAME	BROADCAST SEED (LBS./ACRE)	SEED REQUIRED (LBS)
BROMUS CARINATUS VAR. CARINATUS / CALIFORNIA BROME	6	3.0
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	6	3.0
HORDEUM BRACHYANTHERUM VAR. BRACHYANTHERUM / MEADOW BARLEY	6	3.0
ELYMUS TRITICOIDES / CREEPING WILD RYE	8	4.5
VULPIA MICROSTACHYS / SMALL FESCUE	6	3.0
	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ.
CAREX BARBARAE / SANTA BARBARA SEDGE	700	378
ELEOCHARIS MACROSTACHYA / COMMON SPIKE-RUSH	200	108
JUNCUS EFFUSUS / PACIFIC RUSH	500	270
ELYMUS TRITICOIDES / CREEPING WILD RYE	400	216
STIPA PULCHRA / PURPLE NEEDLEGRASS	200	108
TOTAL	2,000	1080

PHASE 2 BIOSWALE FABRIC REQUIREMENTS

ID	Rt/Lt Dline	Begin STA	End STA	Long Slope	V (ft/sec)	FABRIC REQUIRED?	FABRIC AMOUNT (SQFT)
B11	Lt	44+50	50+00	0.58%	0.30	NO	0
B12	Rt	44+60	50+00	0.58%	0.30	NO	0
B13	Lt	56+50	62+50	5.92%	0.87	YES	8004
B14	Lt	51+50	52+30	2.00%	0.32	YES	1067
B15	Dline	1000+50	1002+25	1.00%	N/A	NO	0
B16	Lt	61+00	63+80	3.00%	N/A	YES	3735
B17	Lt	64+20	66+00	3.00%	N/A	YES	2401
						TOTAL:	15207

PLANTING NOTES

1. Plants to be installed will be relatively small container stock, but with high root-to-shoot ratios to assist rapid plant establishment. Woody plant locations will be flagged (indicating each species) by the Contractor and approved by the Project Restoration Ecologist before plant installation. All trees shall be treepot 8 container size or approved equal. All shrubs and vines shall be 1 gallon container size or approved equal. All herbaceous plugs shall be tree bands or approved equal. Water all plants (including bulbs) immediately after planting.

2. For all roadside plantings (excluding vines and intersection plantings) plant holes will be excavated and amended per the specifications and details. Each woody plant shall be placed in a shallow water retention basin 30" in diameter (constructed of site soil) such that irrigation water may fill around the plant but not submerge the crown of the root area. The basin will be filled with wood mulch to a depth of 3". All woody plants will be fitted with animal protection screens as shown in detail 01 and described in the specifications.

3. All intersection plantings shall be installed per specifications and per planting detail 01/LD-1 with the exception of a watering basin, berm, and insect screen. Entire identified limit of mulch/planting for each intersection shall be cleared and grubbed per specifications. A 3" layer of onsite chipped wood mulch shall be placed within the entire limit of mulch/planting after plant and irrigation is installed. Intersection planting zones (limit of mulch/planting) shall be mulched with shredded wood mulch from onsite tree removal and chipping. No grass or forb seeding is scheduled for this planting area.

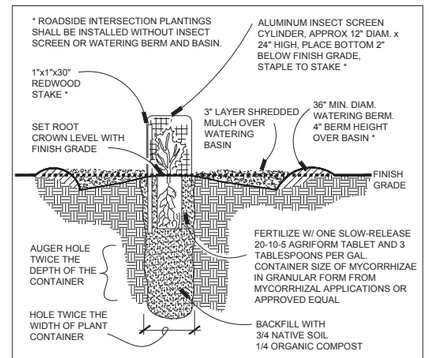
4. All vine plantings shall be installed per detail 02/LD-1 and per the specification. Watering berm shall be a half circle with plant installed 6" from edge of fence.

5. Herbaceous plants (sedges, rushes, and grasses) will be installed in small patches located along all bioswales, generally composed of multiple-species patches of varying size and shape. Plants shall be placed in a triangular pattern. See detail 03 & 04/LD-1 for clarification. The Project Restoration Ecologist shall mark out all patch locations and limits in the field prior to planting.

6. *Allium x 'globemaster'* shall be planted per specifications in areas identified on the intersection planting detail plan sheets. Plant twice the depth of the bulb (roughly 8") placed 12" O.C. triangular spacing within identified planting area. Plant bulb with the pointed end facing up.

7. Refer to the planting palette and the details on this page for specific planting instructions.

PLANTING DETAILS

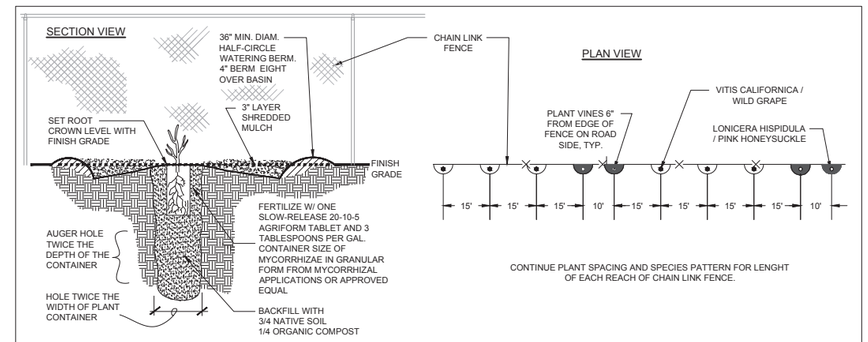


TREE & SHRUB PLANTINGS
TREEPOT 8 & 1 GALLON CONTAINERS

NOT TO SCALE

ADDITIVE ALTERNATE

1 LD-1

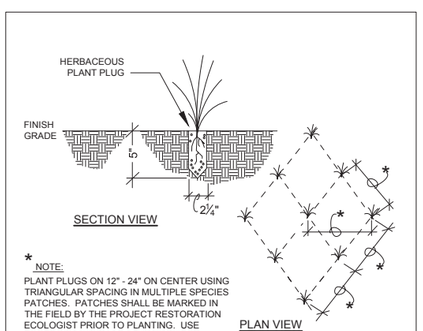


FENCE VINE PLANTING LAYOUT

NOT TO SCALE

ADDITIVE ALTERNATE

2 LD-1

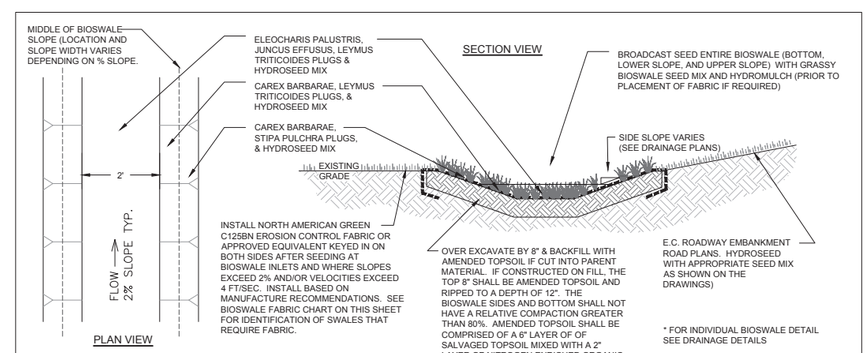


* NOTE:
PLANT PLUGS ON 12" - 24" ON CENTER USING TRIANGULAR SPACING IN MULTIPLE SPECIES PATCHES. PATCHES SHALL BE MARKED IN THE FIELD BY THE PROJECT RESTORATION ECOLOGIST PRIOR TO PLANTING. USE PLANTING DIBBLE OR SPADE SIZED TO MATCH PLUG CONTAINER.

HERBACEOUS PLUG PLANTING
TREE BAND CONTAINERS

NOT TO SCALE

3 LD-1



* FOR INDIVIDUAL BIOSWALE DETAIL SEE DRAINAGE DETAILS

TYPICAL BIOSWALE DESIGN

NOT TO SCALE

4 LD-1

LANDSCAPE DETAIL

ROADSIDE AND INTERSECTION PLANT PALETTE, NOTES, & DETAILS

LD-1

TRINITY COUNTY — DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: R. SWIFT

CALCULATED–DESIGNED BY: R. SWIFT & L. PIPER — CHECKED BY: R. SWIFT

REVISED BY: XX XX XX XX — DATE REVISED: XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX

LAST REVISION 12–03–12 — DATE PLOTTED => TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	110	123

PLANT PALETTES

TREE, SHRUB, AND POLE PLANTING

HABITAT TYPE: RESTORED MONTANE RIPARIAN — AREA (acres): 0.43 AC

BOTANICAL NAME/COMMON NAME	QTY./AC.	QTY. REQ.
ACER CIRCINATUM / VINE MAPLE	10	4
ALNUS RHOMBIFOLIA / WHITE ALDER	10	4
FRAXINUS LATIFOLIA / OREGON ASH	20	9
PRUNUS VIRGINIANA VAR DEMISSA / CHOKE CHERRY	10	4
POPULUS TRICHACARPA / BLACK COTTONWOOD [1]	30	13
SALIX LAEVIGATA / RED WILLOW	20	9
SALIX LASIANDRA / SHINY WILLOW	20	9
PHYSOCARPUS CAPITATUS - PACIFIC NINEBARK	20	9
ROSA CALIFORNICA / CALIFORNIA ROSE	30	13
RUBUS URSINUS / CALIFORNIA BLACKBERRY	30	13
VITUS CALIFORNICA / CALIFORNIA GRAPE	20	9
TOTAL	220	96

HABITAT TYPE: RIPARIAN WETLAND (floodplain) — AREA (acres): .04 AC

BOTANICAL NAME/COMMON NAME	QTY./AC.	QTY. REQ.
ALNUS RHOMBIFOLIA / WHITE ALDER	50	2
POPULUS TRICHACARPA / BLACK COTTONWOOD	25	1
SALIX LAEVIGATA / RED WILLOW	50	2
SALIX LASIANDRA / SHINY WILLOW	50	2
SALIX LASIOLEPIS / ARROYO WILLOW	75	3
CEPHALANTHUS OCCIDENTALIS - BUTTON BUSH	100	4
TOTAL	350	14

[1] ROSA CALIFORNICA & RUBUS URSINUS SHALL BE PLANTED AROUND BASE OF POPULUS TRICHACARPA TO PROTECT AGAINST BEAVER DAMAGE

HERBACEOUS SEED AND TREEBAND PLUG PLANTING

HABITAT TYPE: DISTURBED AREA NATIVE GRASSLAND — AREA (acres): 0.09 AC

BOTANICAL NAME / COMMON NAME	BROADCAST SEED (LBS./ACRE)	SEED REQUIRED (LBS./ACRE)
BROMUS CARINATUS / CALIFORNIA BROME	5	0.50
ELYMUS GLAUCUS / BLUE WILD RYE	5	0.50
FESTUCA IDAHOENSIS / IDAHO FESCUE	3	0.25
MELICA CALIFORNICA / CALIFORNIA MELIC	3	0.25
POA SECUNDA / PINE BLUEGRASS	5	0.50
STIPA PULCHRA / PURPLE NEEDLEGRASS	5	0.50
ACHILLEA MILLEFOLIUM / COMMON YARROW	2	0.25
ESCHSCHOLZIA CALIFORNICA / CALIFORNIA POPPY	2	0.25
LUPINUS BICOLOR / PIGMY-LEAF LUPINE	3	0.25
NEMOPHILA MENZIESII / BABY BLUE EYES	4	0.50

HABITAT TYPE: RESTORED MONTANE RIPARIAN / ENHANCED MONTANE RIPARIAN — AREA (acres): 1.13 AC

BOTANICAL NAME / COMMON NAME	HYDROSEED (LBS./ACRE)	SEED REQUIRED (LBS./ACRE)
ELYMUS GLAUCUS / BLUE WILD RYE	5	5.50
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	5	5.50
FESTUCA IDAHOENSIS / IDAHO FESCUE	7	8.00
HORDEUM BRACHYANTHERUM VAR. CALIFORNICUM / CALIFORNIA MEADOW BARLEY	5	5.50
ELYMUS TRITICOIDES / CREEPING WILD RYE	7	8.00

HABITAT TYPE: ENHANCED MONTANE RIPARIAN — AREA (acres): 0.20 AC

BOTANICAL NAME / COMMON NAME	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ.
CAREX BARBARAE / SANTA BARBARA SEDGE	2,000	400
ELEOCHARIS MACROSTACHYA / COMMON SPIKE-RUSH	2,000	400
JUNCUS EFFUSUS / PACIFIC RUSH	1,000	200
TOTAL	5,000	1,000

ENHANCED MONTANE RIPARIAN TREE BAND PLUG PLANTINGS SHALL BE INSTALLED DURING MAINTENANCE OPERATIONS IN THE FALL OF YEAR 1 PLANT ESTABLISHMENT PERIOD. INCLUDE IN THE PLANT ESTABLISHMENT WORK - MITIGATION BID ITEM.

HABITAT TYPE: RIPARIAN WETLAND — AREA (acres): 0.04 AC

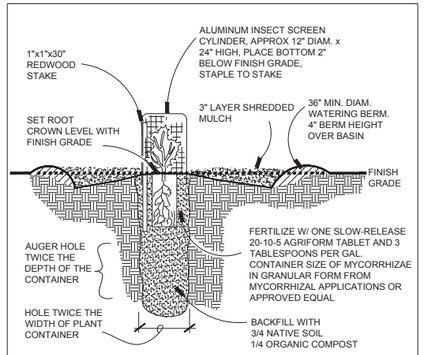
BOTANICAL NAME / COMMON NAME	BROADCAST SEED (LBS./ACRE)	SEED REQUIRED (LBS./ACRE)
DESCHAMPSIA CESPITOSA / TUFTED HAIR GRASS	6	0.25
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	6	0.25
HORDEUM BRACHYANTHERUM VAR. BRACHYANTHERUM / MEADOW BARLEY	8	0.50
ELYMUS TRITICOIDES / CREEPING WILD RYE	10	0.50
GRINDELIA HIRSUTULA / GUM PLANT	6	0.25
MIMULUS GUTTATUS / SEEP MONKEY-FLOWER	6	0.25

	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ.
CAREX BARBARAE / SANTA BARBARA SEDGE	800	32
ELEOCHARIS MACROSTACHYA / COMMON SPIKE-RUSH	300	12
JUNCUS EFFUSUS / PACIFIC RUSH	600	24
MIMULUS GUTTATUS / SEEP MONKEY-FLOWER	100	4
SCIRPUS MICROCARPUS / SMALL FRUITED BULRUSH	200	8
TOTAL	2,000	80

PLANTING NOTES

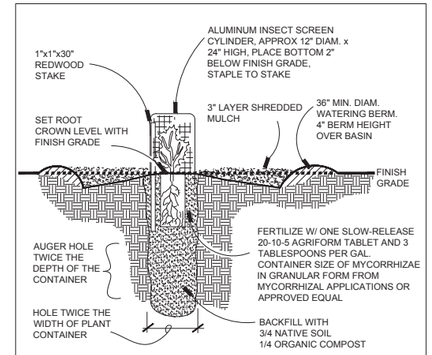
1. Plants to be installed will be relatively small container stock, but with high root-to-shoot ratios to assist rapid plant establishment. Woody plant locations will be flagged (indicating each species) by the Contractor and approved by the Project Restoration Ecologist before plant installation. All trees except willow species (*Salix*) shall be treepot 8 container size or approved equal. All willows shall be installed as pole cuttings. All shrubs shall be 1 gallon container size or approved equal. All herbaceous plugs shall be tree bands or approved equal.
2. Plant holes will be excavated and amended per the specifications and details. Each woody plant shall be placed in a shallow water retention basin 30" in diameter (constructed of site soil) such that irrigation water may fill around the plant but not submerge the crown of the root area. The basin will be filled with wood mulch to a depth of 3". All woody plants will be fitted with animal protection screens as shown in detail 01 & 3 and described in the specifications.
3. Herbaceous plants (sedges, rushes, and grasses) will be installed in small patches located across their designated planting areas, generally composed of single-species clusters of varying size and shape plants placed in a triangular pattern. See detail 06 for clarification. The Project Restoration Ecologist shall mark out all patch locations and limits in the field prior to planting.
4. Refer to the planting palette and the details on this page for specific planting instructions.
5. Woody plants shall be maintained for five years. Basins shall be hand weeded, or a minimum of 4 times per year (April, June, August, & October). In a 6' minimum distance from the plant basins, grass shall be kept mowed or string-trimmed to a height of approximately 6 inches. Woody plants shall be watered adequately to ensure survival and vigorous growth. The site shall be monitored on or about October 15th following or nearing the end of every maintenance year. Any dead woody plants found at the time of monitoring shall be replaced to plans and specifications during the fall and winter following the first and second growing seasons.
6. Enhanced Montane Riparian habitat area to be managed and replanted in accordance with specifications and schedule outlined on Sheet CD-1 and written technical specifications. Of the 0.7 acres of riparian enhancement area approximately 0.2 acres will require plug (treeband) planting revegetation as shown on the planting palette. The contractor shall hydroseed entire enhancement area after invasive vegetation removal and acceptance from the County's Representative and Project Restoration Ecologist. Plug planting revegetation will occur at the end of year 1 establishment period after secondary removal efforts and will be focused on areas disturbed due to follow-up invasive vegetation removal (see sheet CD-1 for management outline). The Enhanced Montane Riparian plug (treeband) plantings including contract growing, purchase, delivery, layout, and installation shall be included in the lump sum Plant Establishment Work - Mitigation bid item.

PLANTING DETAILS



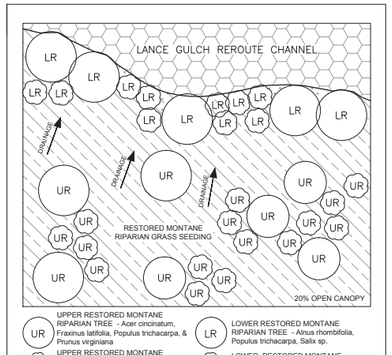
TREE SEEDLING PLANTING
TREEPOT 8 CONTAINERS
NOT TO SCALE
(c) Restoration Resources, 2014

1 / LD-2



SHRUB SEEDLING PLANTING
1 GALLON CONTAINERS
NOT TO SCALE
(c) Restoration Resources, 2014

3 / LD-2



RESTORED MONTANE RIPARIAN PLANT LAYOUT
NOT TO SCALE
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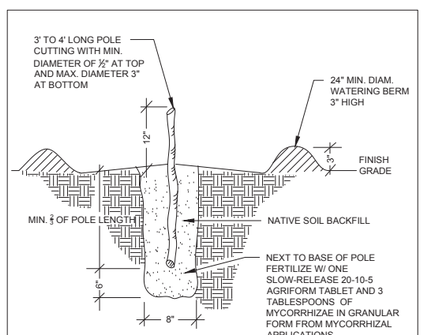
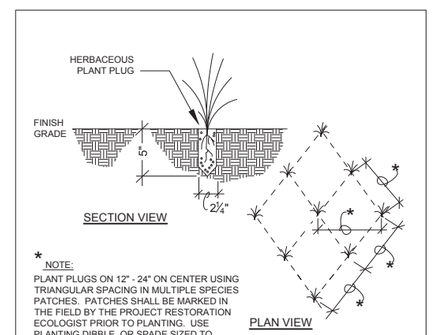
5 / LD-2



POLE CUTTING PLANTING
NOT TO SCALE
(c) Restoration Resources, 2014

2 / LD-2



HERBACEOUS PLUG PLANTING
TREE BAND CONTAINERS
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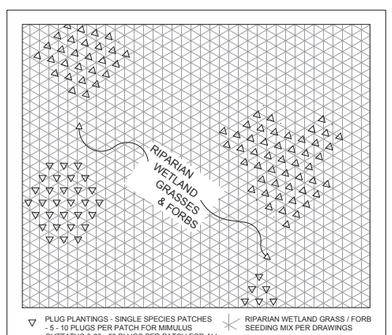
4 / LD-2



RIPARIAN WETLAND LAYOUT
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6 / LD-2

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LUCAS RYE PIPER — 10/10/14
REGISTERED LANDSCAPE ARCHITECT — DATE
10/14/14
PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT — LUCAS R. PIPER — No. 5872 — Signature — 10-31-14 — Renewal Date — 10-10-14 — Date — STATE OF CALIFORNIA

QUINCY ENGINEERING
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LANDSCAPE DETAIL
MITIGATION PLANT PALETTE, NOTES, & DETAILS

6 / LD-2

LD-2

REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY	SUPERVISOR	CONSULTANT FUNCTIONAL SUPERVISOR
R. SWIFT & L.PIPER	R. SWIFT	R. SWIFT			R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12 — DATE PLOTTED => — TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	CR 266	0.0 – 1.3	111	123

LUCAS RYE PIPER — REGISTERED LANDSCAPE ARCHITECT — DATE 10/10/14

10/14/14 — PLANS APPROVAL DATE

REGISTERED LANDSCAPE ARCHITECT LUCAS R. PIPER No. 5872 Signature 10-31-14 Renewal Date 10-10-14 Date STATE OF CALIFORNIA

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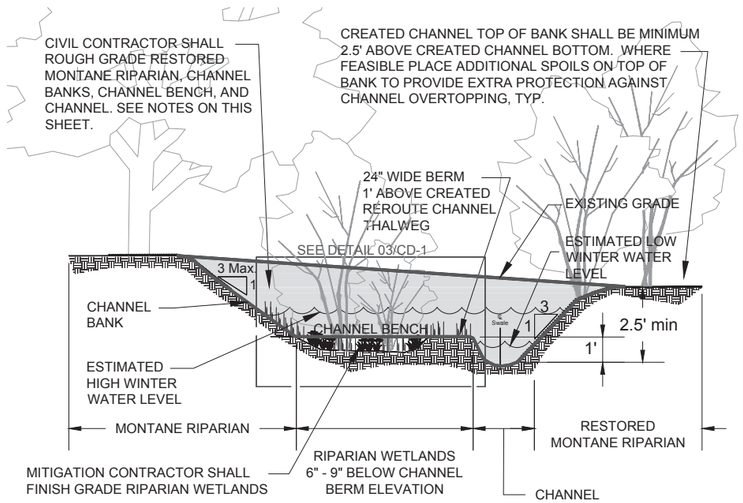
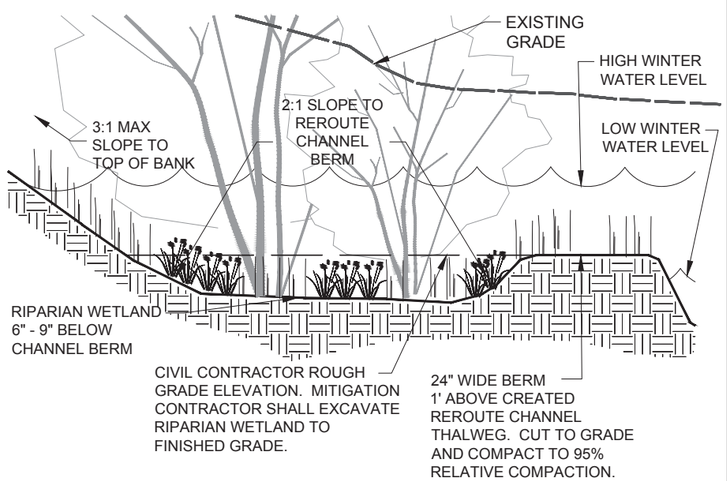
CONSTRUCTION DETAILS



RIPARIAN WETLAND BENCH SECTION

NOT TO SCALE

1
CD-1



RIPARIAN WETLAND BENCH DETAIL

NOT TO SCALE

2
CD-1

CONSTRUCTION NOTES

1. THE CIVIL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A STAGING AREA AND ACCESS ROUTE THAT CAN BE UTILIZED BY THE MITIGATION CONTRACTOR AS NEEDED.
2. THE MITIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ESA FENCING ADJACENT TO RIPARIAN HABITAT MITIGATION WORK (OUTSIDE LIMIT OF CUT/FILL ASSOCIATED WITH ROADWAY CONSTRUCTION).
3. THE MITIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING OPERATIONS WITHIN THE LANCE GULCH REROUTE WORK AREA. WASTE MATERIALS SHALL BE PLACED IN APPROPRIATE AREA AS DETERMINED BY THE CIVIL CONTRACTOR.
4. THE CIVIL CONTRACTOR SHALL BE RESPONSIBLE FOR THE ROUGH EXCAVATION AND GRADING OF THE RIPARIAN COMPLEX A - LANCE GULCH REROUTE MITIGATION AREA. THESE RESPONSIBILITIES INCLUDE: TOPSOIL SALVAGE (TOP 4" OF EXCAVATION ACROSS THE ENTIRE LIMIT OF WETLAND MITIGATION DISTURBANCE (SEE LABELED, DASHED LINE ON SHEET C-1); THE ROUGH AND FINISH GRADING AND ROCK ARMORING OF THE REROUTED CHANNEL (SEE SHEET C-1 AND DETAILS 1 & 2 SHEET CD-1); THE ROUGH GRADING OF THE CHANNEL BENCHES; AND, THE ROUGH GRADING INCLUDING 4" OVER EXCAVATION OF THE CHANNEL BANKS AND SURROUNDING RESTORED MONTANE RIPARIAN UPLAND CUT AREAS ADJACENT TO THE LANCE GULCH REROUTE CHANNEL (SEE SHEET C-1 AND DETAILS 1 & 2 SHEET CD-1).
5. THE CIVIL CONTRACTOR SHALL BE RESPONSIBLE FOR PLACEMENT OF 4" OF SALVAGED TOPSOIL ACROSS ALL DISTURBED AREAS TO MEET PRESCRIBED FINISH GRADES WITH THE EXCEPTION OF THE RIPARIAN WETLANDS.
6. THE MITIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISH GRADING ACTIVITIES DIRECTLY TIED TO THE MITIGATION HABITAT AREAS. FINISH WORK SHALL BE PERFORMED OR OVERSEEN BY THE MITIGATION CONTRACTOR AND ITS QUALIFIED BIOLOGIST. THESE ACTIVITIES INCLUDE THE MITIGATION SITE CLEARING AND GRUBBING, THE EXCAVATION AND GRADING OF THE RIPARIAN WETLANDS (INCLUDING 4" OVER EXCAVATION FOR TOPSOIL PLACEMENT) AND THE GRADING AND COMPACTION OF THE RIPARIAN WETLAND BERM (BETWEEN THE RIPARIAN WETLAND BENCH AND REROUTED LANCE GULCH CHANNEL).
7. THE MITIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINISH GRADING OF THE RIPARIAN WETLANDS AND THE PLACEMENT OF 4" OF STOCKPILED TOPSOIL OVER THE RIPARIAN WETLANDS TO MEET FINAL GRADE.
8. THE CIVIL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OR BURYING OF THE CLEARED AND GRUBBED MATERIAL ASSOCIATED WITH MITIGATION CONSTRUCTION. MATERIAL SHALL BE HAULED OFFSITE OR BURIED UNDER MINIMUM 3' OF FILL TO REDUCE LIKELIHOOD OF RE-GROWTH OF WEEDY MATERIAL.

ENHANCED MONTANE RIPARIAN WEED MANAGEMENT PROTOCOL

THE PRIMARY TARGET SPECIES FOR WEED MANAGEMENT SHALL BE HIMALAYAN BLACKBERRY (*RUBUS ARMENIACUS*) DUE TO ITS PREVALENCE WITHIN THE ENHANCED MONTANE RIPARIAN AREAS; HOWEVER, ALL NON-NATIVE PLANTS DEEMED INVASIVE BY THE CALIFORNIA INVASIVE PLANT COUNCIL (CALIPC) WITHIN THE ENHANCED MONTANE RIPARIAN AREAS SHALL BE CONSIDERED FOR TREATMENT.

Initial Weed Management During Construction Period:

1. Remove Himalayan Blackberry mechanically throughout the Enhanced Montane Riparian areas during construction period with hand-held tools (mattock, Pulaski, pick hammer) and/or small equipment (mowers, masticators, rubber-tracked loaders, midi-excavators, etc.). Removal is best achieved when the field personnel simply follow blackberry canes and runners to basal root masses (slightly below ground with large root nodules) and then remove the basal root mass and all above ground plant material. The small roots that come off the basal mass do not need to be removed to effectively control blackberry. All removed Himalayan blackberry shall disposed of legally at an approved off-site location.

2. After the blackberry is removed, the ground surface shall be graded using hand-held tools to create a smooth transition to undisturbed surfaces. Holes and small pockets shall be filled with site soils and lightly compacted prior to raking the surface smooth.

3. The smoothed and evened ground surface should then be harrowed to prepare a seedbed prior to seeding.

4. All areas disturbed by the initial removal event shall be hydroseeded with the native grass seed mix on sheet LD-2 during late summer (Sept. 15 to Oct. 15) utilizing the two-step hydroseed method described below:
   - 4.1. Hydroseed Application Step 1 includes the following components:
     - 4.1.1. Pounds of seed mix per acre per habitat zone (pounds per acre per zone shown sheet LD-2)
     - 4.1.2. Myccorhizal inoculum in fine powder form (Mycorrhizal Applications or approved equal) at a rate of 10 pounds per acre
     - 4.1.3. Green dyed cellulose fiber mulch at a rate of 500 pounds per acre
     - 4.1.4. Water
   - 4.2. Hydrostraw Application Step 2 includes the following components:
     - 4.2.1. Commercially available weed free straw at a rate of 4,000 pounds per acre
     - 4.2.2. Green dyed cellulose fiber mulch at a rate of 500 pounds per acre
     - 4.2.3. Tackifier at a rate of 150 pounds per acre
     - 4.2.4. Water

Weed Maintenance and Monitoring During Establishment Years 1 - 3:

1. The project restoration ecologist shall conduct a site inspection in mid-April and develop a punch-list of tasks for the May maintenance site visit.
   - 1.1. The ecologist shall map the locations of any re-sprouting Himalayan blackberry and mark them in the field with flagging tape or non-toxic marking paint.
   - 1.2. Other punchlist items may include the following:
     - 1.2.1. Recommendations for weed management actions for non-native invasive plants besides Himalayan blackberry.
     - 1.2.2. Remedial actions for erosion control.

2. A field maintenance crew shall complete all punch-list items by the end of May.
   - 2.1. All re-sprouting Himalayan blackberry shall be removed with hand tools and disposed of legally off-site.
   - 2.2. All other punchlist items identified by the restoration ecologist shall be completed during the maintenance event.

3. The project restoration ecologist shall conduct a second site inspection in mid-september and shall develop a punch-list of tasks for an October maintenance site visit
   - 3.1. The ecologist shall map the locations of any re-sprouting Himalayan blackberry and mark them in the field with flagging tape or non-toxic marking paint
   - 3.2. Project restoration ecologist shall identify and field mark "patches" to be planted with plug size containers as follows:
     - 3.2.1. Year 1 - The project restoration ecologist shall flag locations for plug planting patches for installation during the fall for the first year of establishment. Species, quantity, and layout shall be in accordance with sheet LD-2.
     - 3.2.2. Years 2 & 3 - If the site fails to meet performance standards during the Sept. monitoring event, the project restoration ecologist shall identify locations for installation of new individual plug plantings with pin flags or non-toxic paint. Quantity of new plug plants required shall be at the discretion of the County's representative and project restoration ecologist.
   - 3.3. Other punchlist items may include the following:
     - 3.3.1. Recommendations for weed management actions for non-native invasive plants besides Himalayan blackberry.
     - 3.3.2. Remedial actions for erosion control.

4. Field maintenance crews shall complete all punch-list items by Oct. 15th.
   - 4.1. All re-sprouting Himalayan blackberry shall be removed with hand tools and disposed of legally at an approved off-site location.
   - 4.2. Plug plants shall be installed in the locations identified by the project restoration ecologist and in accordance with planting Detail 01/LD-2.
   - 4.3. All other punchlist items identified by the restoration ecologist shall be completed by October 15th.

Weed Maintenance and Monitoring During Establishment Years 1 - 3 Continued:

5. Monitoring shall include qualitative surveys during the April and September site inspections.
   - 5.1. At each survey event, the entire project site shall be walked in meandering transects and data shall be recorded on the following vegetation parameters using ocular estimates:
     - 5.1.1. Native vegetation absolute cover.
     - 5.1.2. Native vegetation absolute cover of plug planting patches greater than 50 square feet.
     - 5.1.3. Non-native vegetation absolute cover.
     - 5.1.4. Bare ground absolute cover including rocks and soil
     - 5.1.5. Thatch absolute cover.
     - 5.1.6. Invasive weed presence and locations.
   - 5.2. Representative photos from fixed photo documentation stations shall be taken by the restoration ecologist at each site visit.
   - 5.3. Annual reports shall be prepared by the restoration ecologist and shall include the following:
     - 5.3.1. Summary of maintenance activities undertaken during the previous year.
     - 5.3.2. Results of qualitative ocular estimates of cover.
     - 5.3.3. A comparison of results to annual performance criteria.
     - 5.3.4. Photos from photo-documentation.
   - 5.4. Reports shall be delivered to the County's representative by December 31st of each year.
   - 5.5. Monitoring and reporting shall be completed by a qualified biologist with at least a four-year degree in biological sciences and a working knowledge of the flora and fauna of the Pacific Northwest.

Maintenance and Monitoring During Establishment Years 4 and 5:

1. The project restoration ecologist shall conduct a site inspection in mid-April and develop a punch-list of tasks for the May maintenance site visit.
   - 1.1. The ecologist shall map the locations of any re-sprouting Himalayan blackberry and mark them in the field with flagging tape or non-toxic marking paint.
   - 1.2. Other punchlist items may include the following:
     - 1.2.1. Recommendations for weed management actions for non-native invasive plants besides Himalayan blackberry.
     - 1.2.2. Remedial actions for erosion control.

2. Field maintenance crews shall complete all punch-list items by the end of May.
   - 2.1. All re-sprouting Himalayan blackberry shall be removed with hand tools and disposed of legally off-site.
   - 2.2. All other punchlist items identified by the restoration ecologist shall be completed during the maintenance event.

3. The project restoration ecologist shall conduct a second site inspection in mid-September and shall develop a punch-list of tasks for an October maintenance site visit.
   - 3.1. The ecologist shall map the locations of any re-sprouting Himalayan blackberry and mark them in the field with flagging tape or non-toxic marking paint.
   - 3.2. Other punchlist items may include the following:
     - 3.2.1. Recommendations for weed management actions for non-native invasive plants besides Himalayan blackberry.
     - 3.2.2. Remedial actions for erosion control.

4. A field maintenance crew shall complete all punch-list items by Oct. 15th.
   - 4.1. All re-sprouting Himalayan blackberry shall be removed with hand tools and disposed of legally off-site.
   - 4.2. All other punchlist items identified by the restoration ecologist shall be completed by October 15th

5. Monitoring shall include qualitative surveys during the April and September site inspections.
   - 5.1. At each survey event, the entire project site shall be walked in meandering transects and data shall be recorded on the following vegetation parameters using ocular estimates:
     - 5.1.1. Invasive weed presence and locations.
   - 5.2. Representative photos from fixed photo documentation stations shall be taken by the restoration ecologist at each site visit.
   - 5.3. Annual reports shall be prepared by the restoration ecologist and shall include the following:
     - 5.3.1. Summary of maintenance activities undertaken during the previous year.
     - 5.3.2. Results of qualitative ocular estimates of cover.
     - 5.3.3. A comparison of results to previous surveys.
     - 5.3.4. Photos from photo-documentation.
   - 5.4. Reports shall be delivered to the County's representative by December 31st of each year.
   - 5.5. Monitoring and reporting shall be completed by a qualified biologist with at least a four-year degree in biological sciences and a working knowledge of the flora and fauna of the Pacific Northwest.

CONSTRUCTION DETAIL
HABITAT MITIGATION CONSTRUCTION NOTES AND DETAILS

CD-1

XX	XX/XX/XX
XX	XX/XX/XX
XX	XX/XX/XX
REVISED BY	DATE REVISED
R. SWIFT & L.PIPER	R. SWIFT
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	R.SWIFT

TRINITY COUNTY
DEPARTMENT OF TRANSPORTATION

LAST REVISION 12-03-12 | DATE PLOTTED => | TIME PLOTTED =>