





BOTANICAL NAME	COMMON NAME	GRADE CLASS	PLANT TYPE	SPACING	PLACEMENT IN ZONE	TOTAL
<b>UPLAND COMMUNITY</b>						
<b>Conifer Trees</b>						
<i>Libocedrus decurrens</i>	Incense cedar	6.4.2.5 Type 5	N5	As Shown		
<i>Pinus ponderosa</i>	Ponderosa pine	6.4.2.5 Type 5	CT, S	As Shown		
<i>Pseudotsuga menziesii</i>	Douglas fir	6.4.2.5 Type 5	ST, S	As Shown		
<b>Deciduous Trees</b>						
<i>Acer macrophyllum</i>	Big leaf maple	1.1.3.1 Type 1	DT	As Shown		
<i>Fraxinus latifolia</i>	Oregon ash	1.1.3.1 Type 1	DT, S	As Shown	See Note 7	
<i>Populus balsamifera v Trichocarpa</i>	Black cottonwood	1.1.3.1 Type 1	DT	As Shown	See Note 7	
<i>Quercus garryana</i>	Oregon white oak	1.1.3.1 Type 1	DT	As Shown		
<b>Shrubs</b>						
<i>Acer circinatum</i>	Vine maple	1.1.3.4 Type 4	N5	As Shown		
<i>Amelanchier alnifolia</i>	Serviceberry	2.1.3.2 Type 2	N1	6' o.c.		
<i>Berberis (mahonia) aquifolium</i>	Oregon grape	4.1.2.2 Type 2	N1	6' o.c.		
<i>Rosa gymnocarpa</i>	Bald hip rose	2.1.3.2 Type 2	N1	6' o.c.		
<i>Rubus spectabilis</i>	Salmonberry	2.1.3.2 Type 2	N1	6' o.c.		
<b>Herbaceous</b>						
<i>Anaphallis margaritacea</i>	Pearly everlasting		T	26" o.c., avg.	Irregular Spacing	
<i>Elymus glaucus</i>	Blue wild rye		T	26" o.c., avg.	Irregular Spacing	
<i>Eriogonum umbellatum</i>	Sulfur buckwheat		T	26" o.c., avg.	Irregular Spacing	
<i>Eriophyllum lanatum</i>	Oregon sunshine		T	26" o.c., avg.	Irregular Spacing	
<i>Pseudoroegneria spicata</i>	Blue bunch wheatgrass		T	26" o.c., avg.	Irregular Spacing	
<b>RIPARIAN COMMUNITY</b>						
<b>Conifer Trees</b>						
<i>Libocedrus decurrens</i>	Incense cedar	6.4.2.5 Type 5	CT	As Shown		
<b>Deciduous Trees</b>						
<i>Acer macrophyllum</i>	Big-leaf maple	1.1.3.1 Type 1	DT	As Shown		
<i>Alnus rubra</i>	Red alder	1.1.3.1 Type 1	S	As Shown		
<i>Fraxinus latifolia</i>	Oregon ash	1.1.3.1 Type 1	DT, S	As Shown	See Note 7	
<i>Populus balsamifera v Trichocarpa</i>	Black cottonwood	1.1.3.1 Type 1	DT	As Shown	See Note 7	
<i>Salix lasandra</i>	Pacific willow	1.1.3.4 Type 4	DT	As Shown		
<b>Shrubs</b>						
<i>Rosa nutkana</i>	Nootka rose	2.1.3.2 Type 2	N1	3' o.c.	Irregular Spacing	
<i>Rubus spectabilis</i>	Salmonberry	2.1.3.2 Type 2	N1	3' o.c.	Irregular Spacing	
<i>Salix scouleriana</i>	Scouler willow	2.1.3.2 Type 2	LC	3' o.c.	Irregular Spacing	
<b>Herbaceous</b>						
<i>Carex stipata</i>	Sawbeak sedge		T	See Note 8	Lower 1/2 of Zone	
<i>Juncus effusus</i>	Slender rush		T	See Note 8	Upper 1/2 of Zone	
<i>Juncus tenuis</i>	Soft rush		T	See Note 8	Upper 1/2 of Zone	
<i>Scirpus microcarpus</i>	Small-fruited bulrush		RZ	See Note 8	Lower 1/2 of Zone	
<b>SEEDING</b>						
	Wetland Seeding, Mix No. 1		Seed		See Special Provisions	
	Wetland Seeding, Mix No. 2		Seed		See Special Provisions	

**NOTES:**

See "American Standard For Nursery Stock" (ANSI 260.1-1996) For Minimum Plant Quantity Standards.

1. Notify ODFW One Week Prior To Beginning Work Within The Ordinary High Water.
2. In-Water Work Dates: X - X
3. Adjust Plant Locations To Avoid Conflict With Signs, Sightlines, Or Utilities. When Conflicts Occur, Notify The Engineer Immediately, Before Proceeding.
4. See Special Provisions Section x for In-Water Work Period Restrictions.
5. See Environmental Permit(s) For Planting Work In Or Near The River.
6. See Special Provisions for Large Woody Debris Selection (Recruitment) And Stockpiling.
7. Plant *Fraxinus latifolia* and *Populus balsamifera* A Minimum Of 30 Feet From Edge Of Pavement.
8. Space Plants Irregularly At 18" On-Center. Group Into Distinct Plant Types Of A Minimum Of 50 Plants Per Area, For Natural Appearance.

**PLANT TYPE KEY:**

CT = Conifer Trees, 5' Height  
 DT = Deciduous Trees, 3/4" Caliper  
 LC = Plant Cutting, Large  
 N1 = Shrubs, No. 1 Container  
 N5 = Shrubs, No. 5 Container  
 RZ = (Rhizome) Wetland Plant, Small Container  
 S = Trees, Deciduous And Conifer Trees, Seedlings  
 T = Tubeliling Plant 0.09 Gal. Container

	<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION
	<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME
	Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last
	<b>(WETLAND) MITIGATION PLANT LIST</b>
	SHEET NO. RD

BOTANICAL NAME	COMMON NAME	GRADE CLASS	PLANT TYPE	SPACING	TOTAL	
CONIFER TREE, 8' HT.						
<i>Abies grandis</i>	Grand Fir	3.1.2.4, Type 4	B & B	As Shown	5	
<i>Pinus ponderosa</i>	Ponderosa Pine	3.1.2.4, Type 4	B & B		9	
<i>Pseudotsuga menziesii</i>	Douglas Fir	3.1.2.4, Type 4	B & B		13	
<i>Tsuga heterophylla</i>	Western Hemlock	3.1.2.4, Type 4	B & B		4	
CONIFER TREE, 5' HT.						
<i>Abies grandis</i>	Grand Fir	3.1.2.4, Type 4	B & B	As Shown	46	
<i>Pinus ponderosa</i>	Ponderosa Pine	3.1.2.4, Type 4	B & B		31	
<i>Pseudotsuga menziesii</i>	Douglas Fir	3.1.2.4, Type 4	B & B		79	
<i>Tsuga heterophylla</i>	Western Hemlock	3.1.2.4, Type 4	B & B		46	
DECIDUOUS TREE, 1 1/2" Cal.						
<i>Alnus rubra</i>	Red Alder	1.1.3.1, Type 1	B & B	As Shown	43	
<i>Quercus garryana</i>	Oregon White Oak	1.1.3.1, Type 1	B & B		41	
DECIDUOUS TREE, 1" Cal.						
<i>Acer macrophyllum</i>	Big-leaf Maple	1.1.3.1, Type 1	B & B	As Shown	73	
<i>Alnus rubra</i>	Red Alder	1.1.3.1, Type 1	B & B		76	
<i>Quercus garryana</i>	Oregon White Oak	1.1.3.1, Type 1	B & B		82	
CONIFER TREES, 4' HT.						
<i>Abies grandis</i>	Grand Fir	3.1.2.4, Type 4	4' Ht.	As Shown	33	
<i>Pinus ponderosa</i>	Ponderosa Pine	3.1.2.4, Type 4	4' Ht.		33	
<i>Pseudotsuga menziesii</i>	Douglas Fir	3.1.2.4, Type 4	4' Ht.		103	
<i>Tsuga heterophylla</i>	Western Hemlock	3.1.2.4, Type 4	4' Ht.		33	
DECIDUOUS TREES, 3/4" Cal.						
<i>Acer circinatum</i>	Vine Maple	1.1.3.1, Type 1	3/4"	As Shown	103	
<i>Alnus rubra</i>	Red Alder	1.1.3.2, Type 2	3/4"		55	
<i>Cornus nuttallii</i>	Pacific Dogwood	1.1.3.1, Type 1	3/4"		17	
<i>Crataegus douglasii</i>	Black Hawthorne	1.1.3.1, Type 1	3/4"		27	
<i>Quercus garryana</i>	Oregon White Oak	1.1.3.1, Type 1	3/4"		84	
SEEDLING TREES, DECIDUOUS						
<i>Alnus rubra</i>	Red Alder	1.0.2.1	Seedling		See Planting Note 11	1244
<i>Arbutus menziesii</i>	Pacific Madrone	1.0.2.1	Seedling	680		
<i>Crataegus douglasii</i>	Black Hawthorne	1.0.2.1	Seedling	680		
CONIFER TREES, SEEDLING						
<i>Pinus ponderosa</i>	Ponderosa Pine	1.0.2.1	Seedling	See Planting Note 11	665	
<i>Prunus emarginata</i>	Bitter Cherry	1.0.2.1	Seedling		680	
<i>Pseudotsuga menziesii</i>	Douglas Fir	1.0.2.1	Seedling		3623	
<i>Taxus brevifolia</i>	Western Yew	1.0.2.1	Seedling		1832	
<i>Tsuga heterophylla</i>	Western Hemlock	1.0.2.1	Seedling		2965	
SHRUBS, No. 1 CONTAINER						
<i>Festuca ovina</i>	Clumping Blue Fescue	6.4.1, Type 1	No. 1 Container	As Noted	356	
<i>Potentilla fruticosa</i>	Fruiting Potentilla	6.4.2.4	No. 1 Container		189	
VINES, No. 1 CONTAINER						
<i>Parthenocissus tricuspidata</i>	Boston Ivy	6.4.7, Type 7	No. 1 Container	As Shown	211	

**METHOD "A" AREA PLANTING SEQUENCE**

1. Place Topsoil In Landscape Beds, Depth As Specified.
2. Place Soil Conditioner Over Topsoil, Depth As Specified.
3. Mix (Except On Slopes) Soil Conditioner And Topsoil To 12" Depth.
4. Plant Trees, Shrubs, And Groundcover.
5. Broadcast Permanent Seed Where Specified, Hand Rate Seed Into Top 1/4" Of Tilled Soil.
6. Mulch Over Top Seed (Method "B" Areas Only.)
7. Place Bark Mulch, Depth As Specified.

**GENERAL PLANTING NOTES:**

- 1.0 See "American Standard For Nursery Stock" (ANSI 260.1-1996) For Minimum Plant Quality Standards Such As Size Of Rootball Or Caliper Of Trunk.
- 2.0 With Engineer's Prior Approval, Adjust Planting Locations To Avoid Conflicts With Utilities. Verify Utility Locations Prior To Planting.
- 3.0 Planting Backfill Mix To Be 1/3 Soil Conditioner & 2/3 Native Topsoil. Mix And Wet Backfill Soil Thoroughly While Planting.
- 4.0 Wrap All Deciduous Tree Trunks Larger Than No.5 Container.
- 5.0 Ensure New Trees Are Planted Outside Clearzone Limits. Verify With Engineer Prior To Planting.
- 6.0 Adjust Plant Locations To Avoid Conflict With Signs, Sight Lines, Utility Poles And Lines, And Other Appurtenances. In Case Of Conflict, Defer To Engineer For Placement.
- 7.0 Plans Are Schematic. The Planting Design May Be Adjusted To Fit Site Conditions, With Prior Engineer Approval.
- 8.0 Use Good Judgement In Plant Placement, And Group Massings For Optimal Survival.
- 9.0 Plant Seedling Trees In Irregular Spacings, A Minimum Of 6' - 6" Feet On-Center And 13' From Pavement Edges.
- 10.0 Plant Shrubs And Groundcover Plants In Irregular Spacings, A Minimum Of 3' - 3" From Pavement Edges.
- 11.0 Space Plants Irregularly At 18" On-Center. Group Individual Plant Types For Natural Appearance, In Minimum Clusters Of XX Plants Per Area.

	<b>REGISTERED</b> 000 First M. Last OREGON 00/00/00 <b>LANDSCAPE ARCHITECT</b>	<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION
	<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME	
	Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last	
<b>PLANT LIST</b>		SHEET NO. RD

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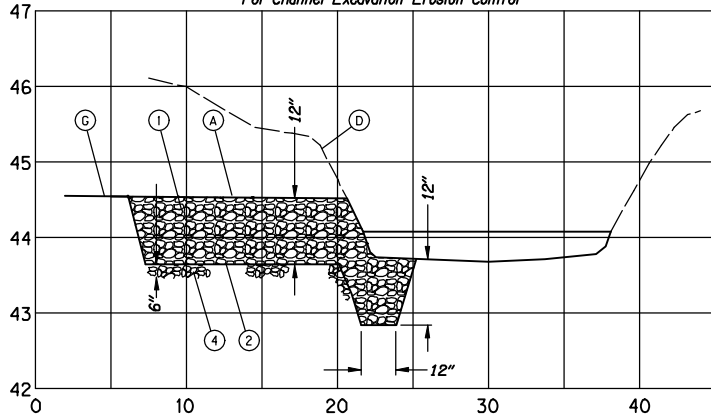
*Refer To The Roadside Development "Typical Details"  
For Irrigation Details (Ex: e\_detail850.dgn)  
(See Section 12.2.2, Volume 1)*

		<b>OREGON DEPARTMENT OF TRANSPORTATION ENVIRONMENTAL SECTION</b>	
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<b>IRRIGATION DETAILS</b>			SHEET NO. <b>RD</b>

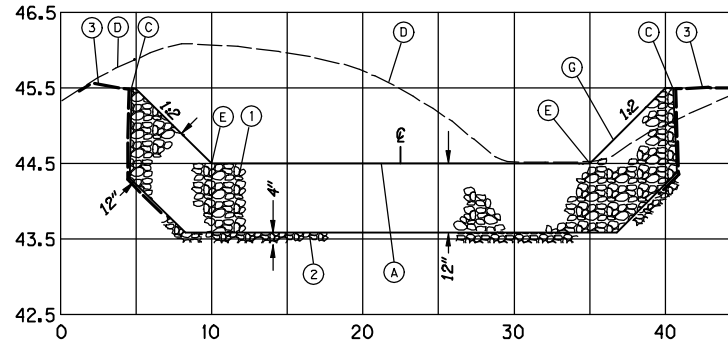
Refer To The Roadside Development "Typical Details"  
For Planting Details (Ex: e\_detail810.dgn)  
(See Section 12.2.2, Volume 1)

		<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION
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		<b>PLANTING DETAILS</b>
		SHEET NO. <b>RD</b>

NOTE: See Special Provisions Section X  
For Channel Excavation Erosion Control



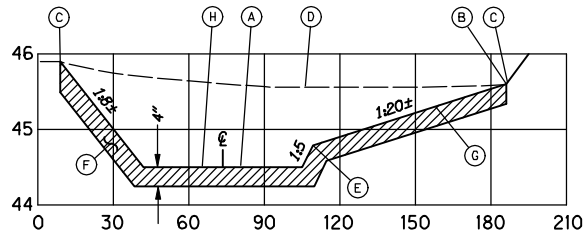
SECTION A-A



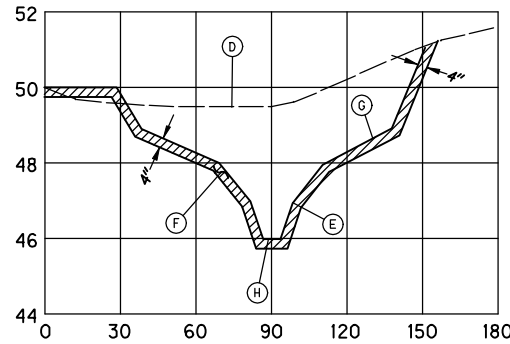
SECTION B-B

- ① Loose Riprap, Class 100, See Construction Notes. Loose Riprap, Class 100 - 465 C.Y.
- ② Provide And Place Filter Blanket Overtop 4" Minus Stone. See Construction Notes. Filter Blanket - 660 C.Y.
- ③ Provide And Place Erosion Control Fabric At The Top Of Channel Outfall Banks. See Const. Notes. Erosion Control Fabric - 590 C.Y.
- ④ Provide And Place 4" Minus Filter Blanket Drain Rock. See Construction Notes. Filter Blanket Drain Rock - 80 C.Y.

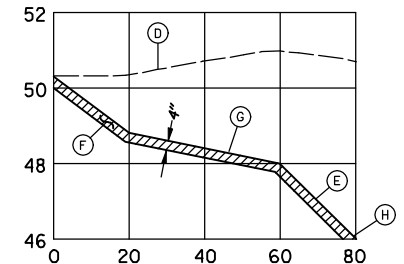
- Ⓐ Bottom Of Proposed Swale Elevation Varies
- Ⓑ Proposed Wetland Boundary (Approx.) Elevation 45.6
- Ⓒ Grading Limits
- Ⓓ Approx. Existing Grade
- Ⓔ Edge Of Swale
- Ⓕ Soil Conditioner (4" Depth)
- Ⓖ Proposed Finished Grade
- Ⓗ Channel Bottom
- Ⓘ Ordinary Low Water Elevation 44.1



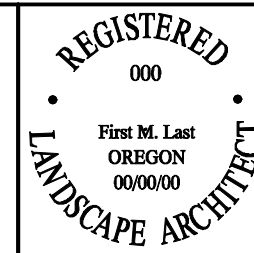
SECTION C-C



SECTION D-D



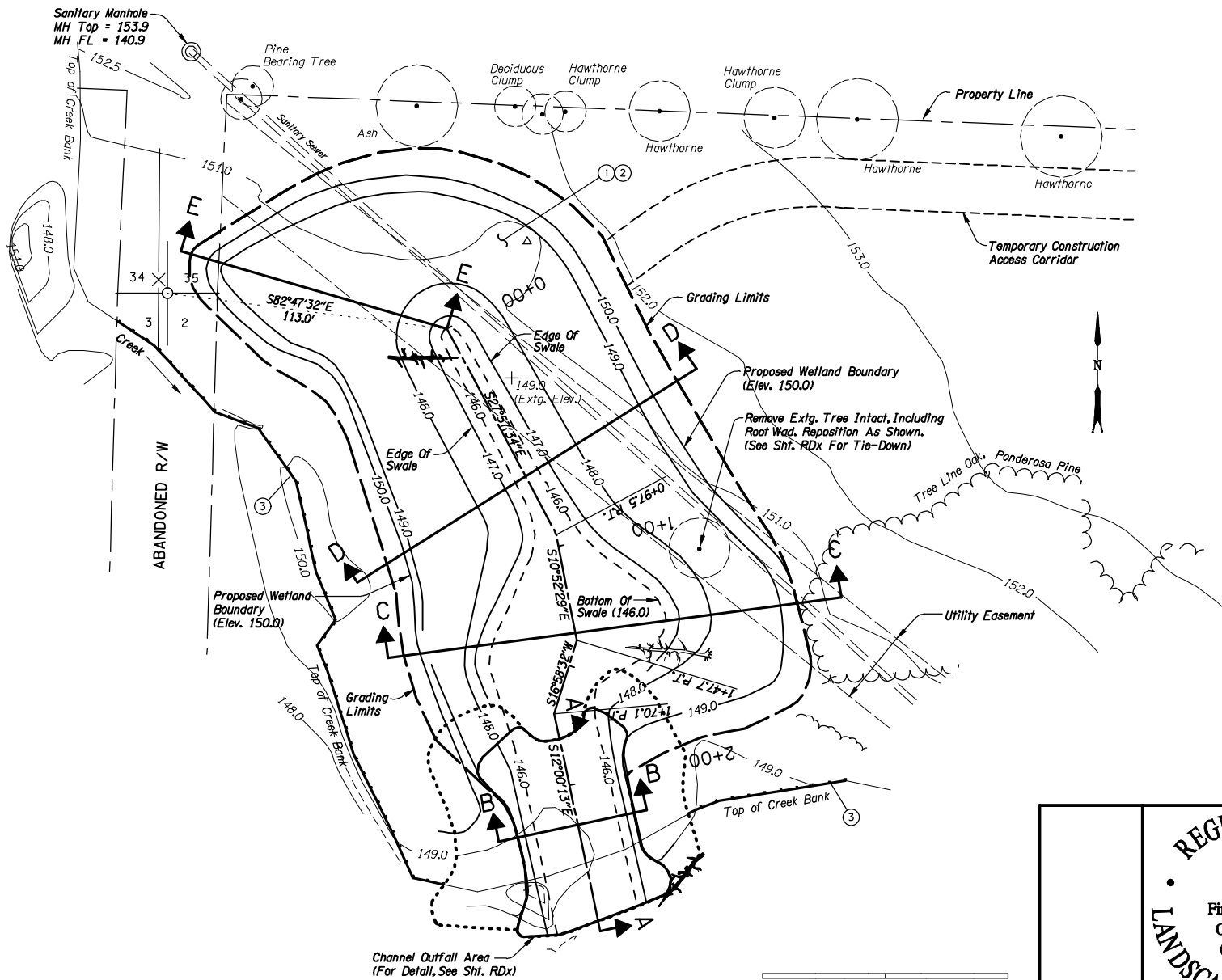
SECTION E-E



<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION	
<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME	
Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last	
<b>CONTOUR GRADING SECTIONS</b>	SHEET NO. RD

Sec. 35, T. 1S, R. 1W, W.M.  
 Sec. 2, T. 2S, R. 1W, W.M.

XXV-XX



- ① Excavate Site Soil As General Excavation. Additional Grading Information Available In Electronic InRoads Format From ODOT Construction Managers Office. General Excavation - 3965 C.Y.
- ② Place And Spread 4" Depth Of Soil Conditioner Soil Conditioner - 105 C.Y.
- ③ Install Supported Sediment Fence Sediment Fence - 340'

**LEGEND**

- 150.0 - Proposed Contours
- - - 150.0 - Existing Contours
- Proposed Wetland Boundary
- Protected Existing Tree, Unless Otherwise Noted
- ~ Protected Existing Vegetation, Unless Otherwise Noted
- - - - Channel Outfall Clearing Limits (Approx.)
- ⌵ Down Tree
- ⌵ Snag - Cut And Remove Extg. Snag, Leave Stump And Root Wad In Place, Reposition As Shown. (See Sht. RDx For Tie-Down)

**CONSTRUCTION NOTES**

- Confine Use Of All Equipment Within Wetland Mitigation Area And Construction Access Corridor Only.
- Verify Location And Limits Of Wetland Mitigation Site With Engineer Prior To Construction.
- Coordinate Construction Of The Temporary Construction Access Corridor With Engineer And City Representative Prior To Construction.
- Protect Area Outside Grading Limits Against Erosion Control As Specified In Section x
- Provide Erosion Control Protection At The Channel Outfall And Creek. See Special Provisions For Wetland Erosion Control.

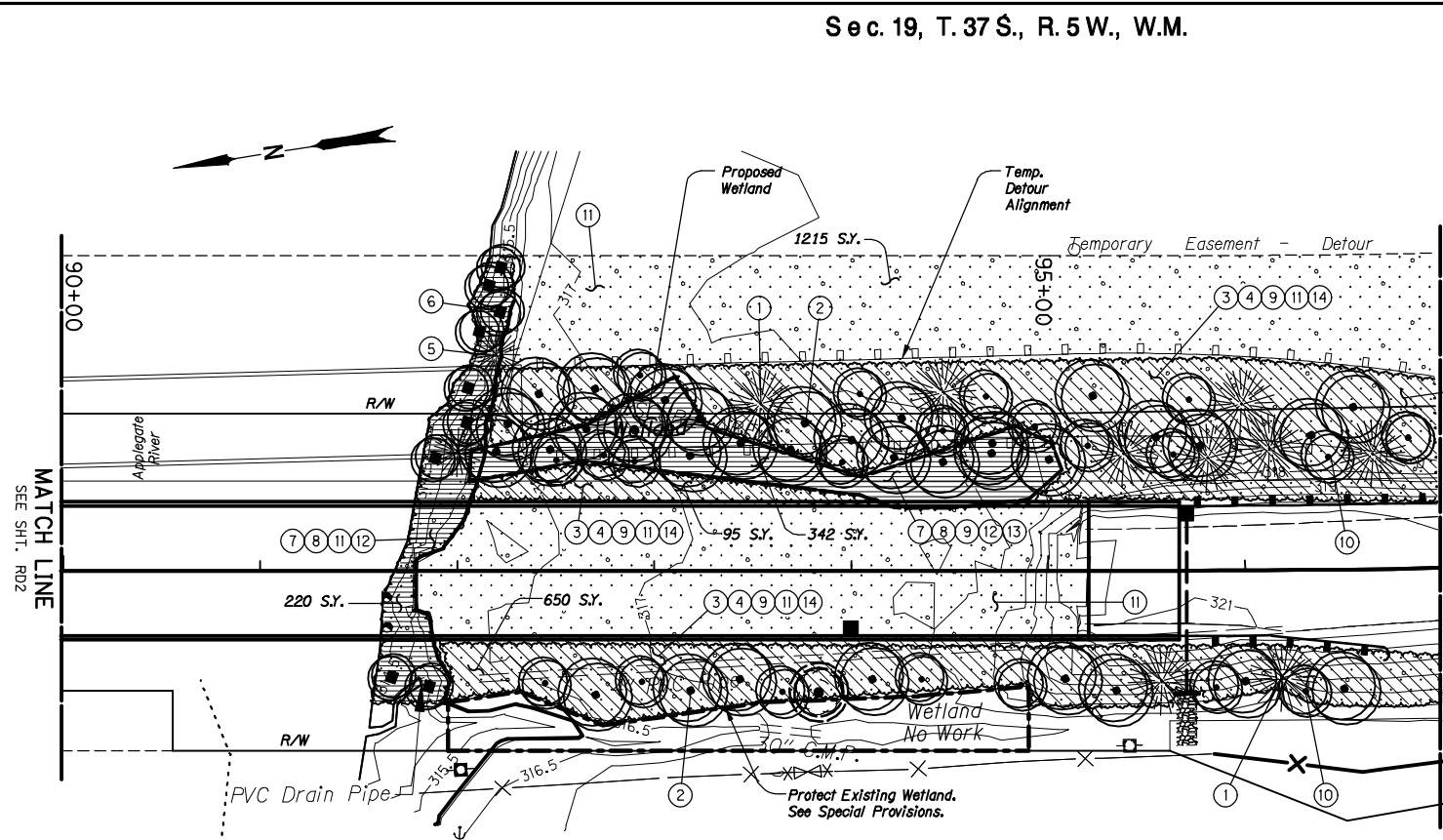
	<b>OREGON DEPARTMENT OF TRANSPORTATION          ENVIRONMENTAL SECTION</b>	
	<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME	
	Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last	
<b>(WETLAND) MITIGATION          DEVELOPMENT PLAN</b>		SHEET NO. <b>RD</b>

12-8



Sec. 19, T. 37 S., R. 5 W., W.M.

XXV-XX



- ① Plant The Following Upland Community Evergreen Trees Above OHW:  
*Pinus ponderosa* - 4  
*Pseudotsuga menziesii* - 5  
 Conifer Trees, 5' Height - 9



- ② Plant The Following Upland Community Deciduous Trees Above OHW:  
*Acer macrophyllum* - 13  
*Fraxinus latifolia* - 8  
*Populus balsamifera* - 8  
*Quercus garryana* - 5  
 Deciduous Trees, 3/4" Cal. - 34



- ③ Plant No. 1 Container Shrubs (Upland Community) Above OHW, In Random Spacing, At 6' o.c. (Approx. 1854 S.Y.):  
*Amelanchier alnifolia* - 92  
*Berberis (mahonia) aquifolium* - 92  
*Rosa gymnocarpa* - 92  
*Rubus spectabilis* - 92  
 Shrubs, No. 1 Container - 368



- ④ Plant The Following Upland Community Tubeling Herbaceous Plants Above OHW In Random Spacing At 2' o.c. (Approx. 1854 S.Y.):  
*Anaphalis margaritacea* - 736  
*Elymus glaucus* - 736  
*Eriogonum umbellatum* - 736  
*Eriophyllum lanatum* - 736  
*Pseudoroegneria spicata* - 736  
 Tubeling Plants, 0.14 Gal. - 3680

- ⑤ Plant The Following Wetland/Riparian Community Evergreen Trees Below OHW:  
*Libocedrus decurrens* - 2  
 Conifer Trees, 5' Height - 2



- ⑥ Plant The Following Wetland/Riparian Community Deciduous Trees Below OHW:  
*Acer macrophyllum* - 2  
*Fraxinus latifolia* - 2  
*Populus balsamifera* - 3  
*Salix lasiandra* - 2  
 Deciduous Trees, 3/4" Cal. - 9



- ⑦ Plant The Following Wetland/Riparian Community Shrubs Below OHW, Or In Wetland, In Random Spacing, At 3' o.c. (Approx. 562 S.Y.):  
*Rosa nutkana* - 125 (No. 1 Cont.)  
*Rubus spectabilis* - 170 (No. 1 Cont.)  
*Salix scouleriana* - 175 (Plant Cutting, Large)  
 Shrubs, No. 1 Container - 295  
 Plant Cutting, Large - 175



- ⑩ Plant The Following No. 5 Container Trees:  
*Acer circinatum* - 13  
*Libocedrus decurrens* - 8  
 Deciduous Trees, No. 5 - 21



- ⑭ Plant The Following Seedling Trees, Above OHW, In Random Spacing:  
*Pinus ponderosa* - 65  
*Pseudotsuga menziesii* - 75  
 Conifer Trees, Seedling - 140

- ⑪ Seed All Upland And Riparian Community Areas With Seed Mix No. 1 (Approx. 515.5 Ac.)  
 Permanent Seeding, Mix No. 1 - 515.5 Ac.



- ⑧ Plant Tubeling Herbaceous Plants Below OHW, Or In Wetland, In Random Spacing, At 18" o.c. (Approx. 562 S.Y.):  
*Carex stipata* - 580  
*Juncus effusus* - 580  
*Juncus tenuis* - 580  
*Scirpus microcarpus* - 580  
 Tubeling Plants, 0.14 Gal. - 2320

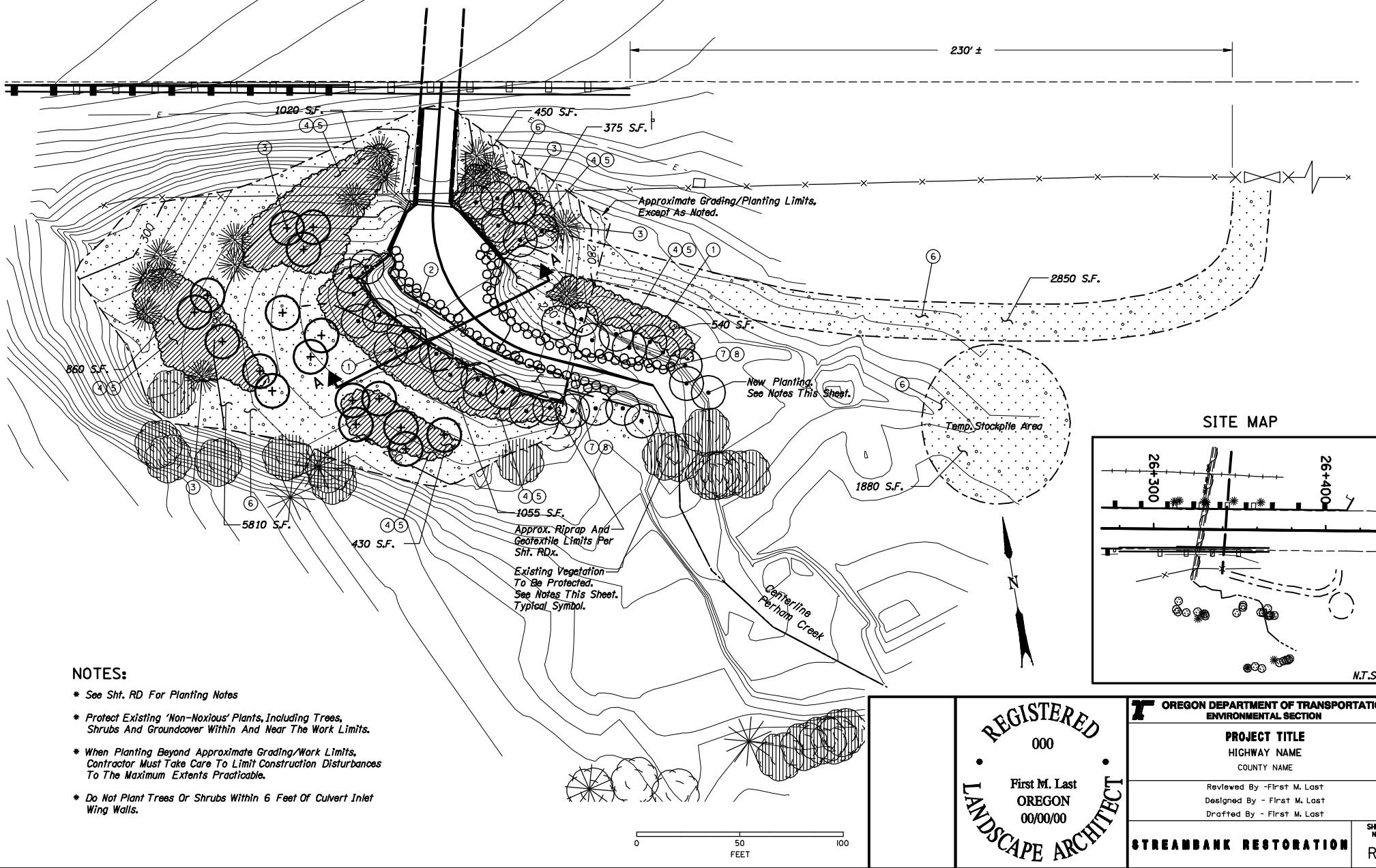
- ⑫ Plant The Following Seedling Trees, Below OHW, In Random Spacing:  
*Alnus rubra* - 15  
*Fraxinus latifolia* - 20  
 Seedling Trees, Deciduous - 35

- ⑨ Provide And Place The Following At The Specified Depths As Noted On Plans:  
 Topsoil (6" Depth) - 287 C.Y.  
 Soil Conditioner (2" Depth) - 95 C.Y.  
 Bark Mulch (2" Depth) - 2.5 C.Y.

**LEGEND**

- 318.5 - Existing Contour
- - - Proposed Wetland Boundary
- Protect Existing Tree
- Existing Tree To Be Removed
- - - Ordinary High Water (OHW) Elevation 315.94'
- - - Existing Wetland - No Work

	<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION	
	<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME	
	Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last	
<b>WETLAND / STREAMBANK PLAN</b>		SHEET NO. RD



230' ±

Approximate Grading/Planting Limits, Except As Noted.

New Planting, See Notes This Sheet.

2850 S.F.

540 S.F.

1880 S.F.

1055 S.F.

5810 S.F.

430 S.F.

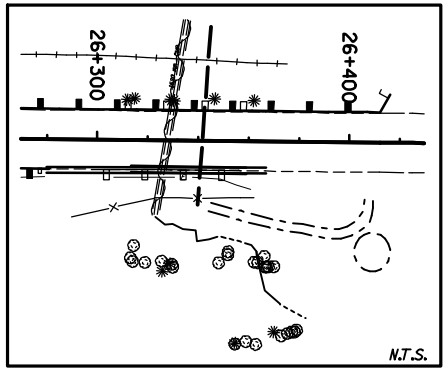
860 S.F.

Approx. Riprap And Geotextile Limits Per Sht. RDx.

Existing Vegetation To Be Protected. See Notes This Sheet. Typical Symbol.

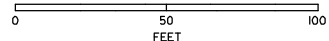
Centerline Perkom Creek

SITE MAP



NOTES:

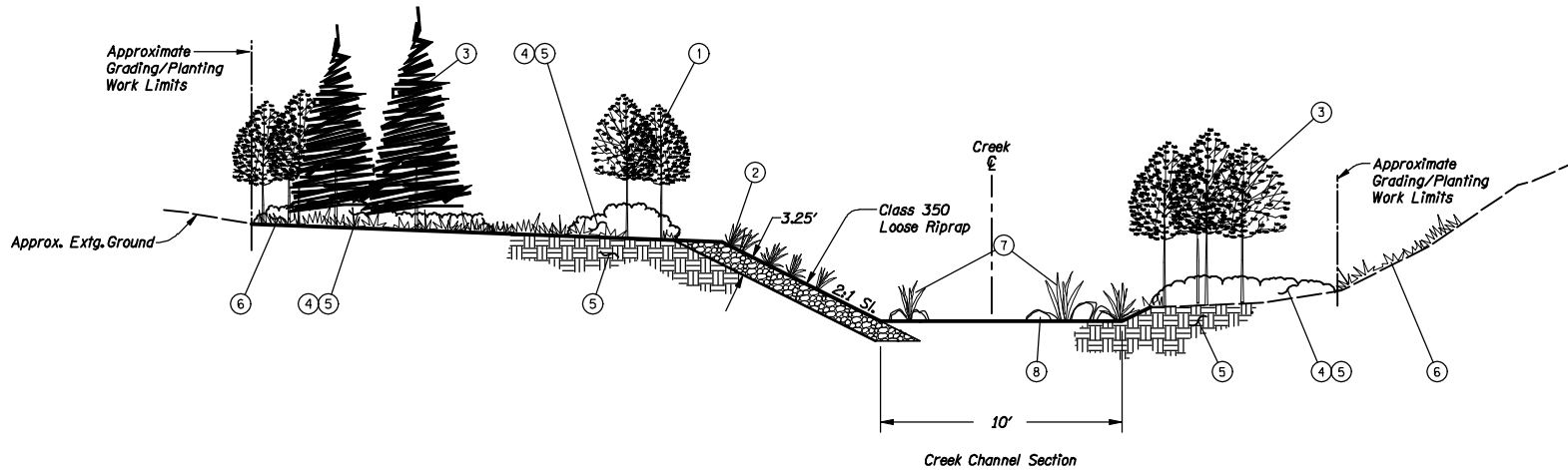
- \* See Sht. RD For Planting Notes
- \* Protect Existing 'Non-Noxious' Plants, Including Trees, Shrubs And Groundcover Within And Near The Work Limits.
- \* When Planting Beyond Approximate Grading/Work Limits, Contractor Must Take Care To Limit Construction Disturbances To The Maximum Extents Practicable.
- \* Do Not Plant Trees Or Shrubs Within 6 Feet Of Culvert Inlet Wing Walls.



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000  
First M. Last  
OREGON  
00/00/00  
LANDSCAPE ARCHITECT

<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION	
<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME	
Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last	
<b>STREAMBANK RESTORATION</b>	SHEET NO. RD

12-10



SECTION A-A  
STA. "P" 0+014 TO STA. "P" 0+028

- ① Plant The Following Trees At The Top Edge Of The Riprap Embankment As Shown:  
*Acer macrophyllum* - 14 (No. 2 Cont.)  
*Alnus rubra* - 20 (No. 2 Cont.)  
 Deciduous Trees - No. 2 Cont. - 34

- ② Pocket Plant The Following (Size As Noted) Within The Riprap Embankment At 3' o.c. (For Detail, See Sht. RDS): (Approx. 550 S.F.)  
*Cornus sericea* - 20 (Plant Cutting)  
*Holodiscus discolor* - 5 (Tubeling)  
*Salix sitchensis* - 20 (Plant Cutting)  
*Sambucus racemosa* - 5 (Tubeling)  
 Plant Cuttings, Large - 40  
 Tubeling Plants, 0.14 Gal. Cont. - 10

- ③ Plant The Following Trees (Size As Noted) Where Shown:  
*Alnus rubra* - 10 (No. 2 Cont.)  
*Fraxinus latifolia* - 8 (No. 1 Cont.)  
*Pseudotsuga menziesii* - 8 (Seedling)  
*Tsuga heterophylla* - 7 (Seedling)  
 Deciduous Trees, No. 1 Cont. - 8  
 Deciduous Trees, No. 2 Cont. - 10  
 Conifer Trees, Seedlings - 15

- ④ Plant The Following 0.14 Gal. Tubeling Shrubs At 3' o.c. Where Noted: (Approx. 476 S.Y.)  
*Holodiscus discolor* - 80  
*Mahonia aquifolium* - 80  
*Polystichum munitum* - 80  
*Ribes saguineum* - 80  
*Sambucus racemosa* - 80  
 Tubeling Plants, 0.14 Gal. Cont. - 400

- ⑤ Place And Spread Topsoil (6 Inch Depth) Within Disturbed Limits, Including Overtop The Riprap Embankment  
 Topsoil - 80 CUYD

- ⑥ Seed And Mulch All Disturbed Areas Where Noted On Plans: (Approx. 1220 S.Y.)  
 Permanent Seeding, Mix No. 1 - 1220 S.Y.

- ⑦ Plant The Following Shrubs Amongst The Creek Boulders. See Detail, Sht. RDS:  
*Cornus sericea* - 50 (Plant Cuttings)  
*Salix sitchensis* - 50 (Plant Cuttings)  
 Plant Cuttings, Large - 100



- ⑧ Provide And Place Boulders (Average 3' Diameter) Along Toe Of Slope, Near Banks Of Creek, Random Groupings. Bury 2/3 Boulder Below Grade.  
 Boulders - 66 Each

NOTES:

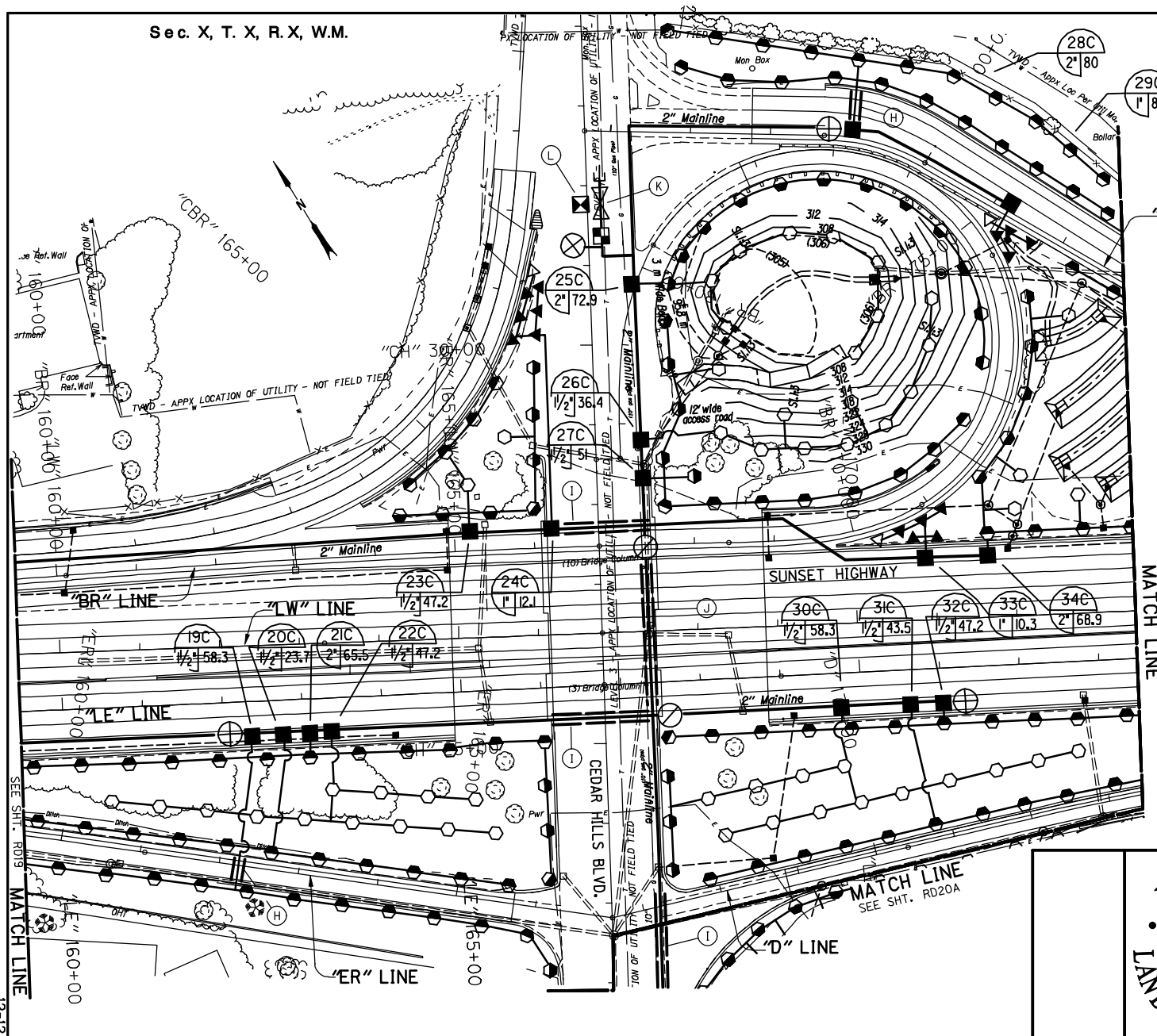
- \* See Sht. RDX For Grading Information.
- \* See Sht. RDX For Riprap Construction Notes And Limits.
- \* Remove Existing *Rubus procerns* (Himalayan Blackberry) From Within The Work Limits

	<b>OREGON DEPARTMENT OF TRANSPORTATION</b> <b>ENVIRONMENTAL SECTION</b>
	<b>PROJECT TITLE</b> HIGHWAY NAME COUNTY NAME
	Reviewed By - First M. Last Designed By - First M. Last Drafted By - First M. Last
<b>STREAMBANK RESTORATION</b> <b>SECTION/NOTES</b>	SHEET NO. RD

NOT TO SCALE

Sec. X, T. X, R. X, W.M.

XXV-XX



- ① Construct Irrigation System As Shown - Lump Sum
- GENERAL IRRIGATION NOTES**
- (A) Provide And Install Irrigation System Per Manufacturer's Recommendation, Or As Detailed.
  - (B) Provide Utility Locat(s) Before Performing Work.
  - (C) Install All Pipes, Valves, And Other Irrigation Equipment In Planting Areas.
  - (D) Avoid Conflicts With Other Utilities Whenever Possible.
  - (E) See Sht. R4 For Irrigation Legend.
  - (F) No Irrigation Required This Area.
  - (G) See Spec's For Trenching Within DripLines Of Protected Existing Trees.
  - (H) Provide And Install A 6" Dia. PVC Conduit Beneath The "ER" And "SC" Lines. Locate Approximately Where Shown. Coordinate With Engineer, Prior To Roadway Construction.
  - (I) Bore 6" Dia. PVC Conduit Beneath Cedar Hills Blvd. Locate Approximately Where Shown. Coordinate With Engineer, Prior To Roadway Construction.
  - (J) Bore Or Trench For Mainline Across US26. See Sheet R4 And Spec. Section 01120. Coordinate This Work With Engineer, Prior To Construction.
  - (K) Point Of Connection - Provide And Install One 2" Water Meter, One 2" Isolation Ball Valve, One 2" Double Check Valve, One 1 1/2" Quick Coupling Valve, And One Manual Drain Valve In Locking Valve Boxes) As Required. Coordinate Water Meter And Double Check Valve Installation With Tualatin Valley Water District. Attn. Some Body, 503-\*\*\*-\*\*\*\*. All Point Of Connection Work To Be Performed By A Licensed Plumber. Verify Water Service Location And Available Hydrostatic Pressure, Prior To Construction.
  - (L) Controller "C" Location: Provide And Install One 40 Station Pedestal Mounted Controller And 110 Power On A Separate Circuit. Coordinate Power Requirements With Appropriate Agency.

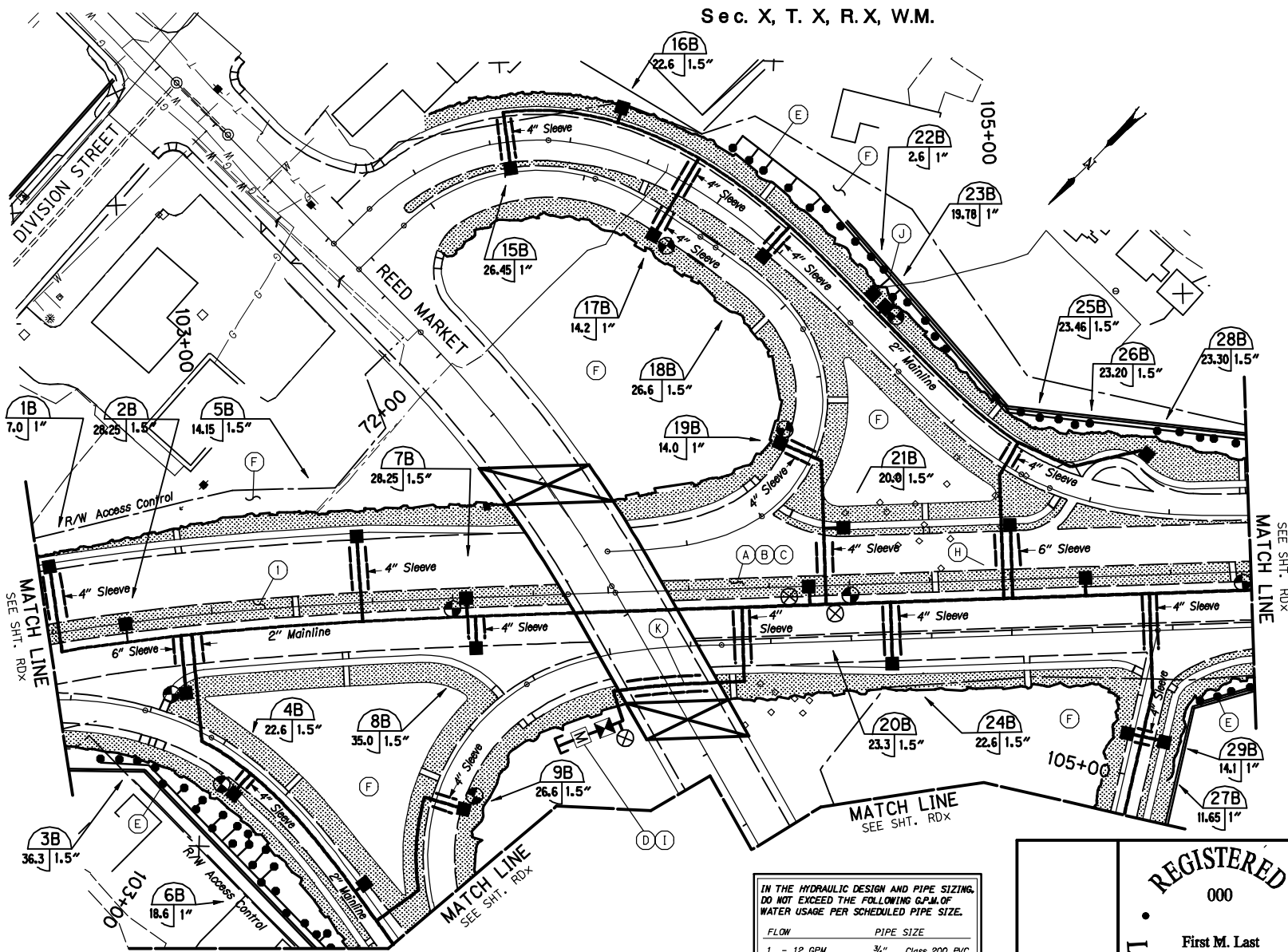
SEE SHT. RD21  
MATCH LINE

MATCH LINE  
SEE SHT. RD20A

<p><b>REGISTERED</b></p> <p>000</p> <p>First M. Last</p> <p><b>OREGON</b></p> <p>00/00/00</p> <p><b>LANDSCAPE ARCHITECT</b></p>	<p><b>OREGON DEPARTMENT OF TRANSPORTATION</b></p> <p><b>ENVIRONMENTAL SECTION</b></p>	
	<p><b>PROJECT NAME</b></p> <p>PROJECT HIGHWAY</p> <p>PROJECT COUNTY</p>	
	<p>Reviewed By -</p> <p>Designed By -</p> <p>Drafted By -</p>	
	<p><b>IRRIGATION PLAN</b></p>	
	<p>SHEET NO.</p> <p><b>RD</b></p>	

Sec. X, T. X, R. X, W.M.

XXV-XX



① Construct Irrigation System As Shown - Lump Sum

**GENERAL IRRIGATION NOTES**

A Provide And Install Irrigation System Per Manufacturer's Recommendation, Or As Detailed, In Planting Areas. Avoid Conflicts With Other Utilities.

B Provide Utility Locates Before Working.

C Field Adjust All Irrigation Equipment As Necessary To Avoid Bedrock, Boulders Or Other Existing Features Discovered During Construction.

D Point Of Connection: Provide And Install One 2" Water Meter, A 1½" Isolation Ball Valve, A 1½" Double Check Valve, A Quick Coupler Valve, And A Manual Drain Valve Within A Locking Valve Boxes). Coordinate Water Meter And Double Check Valve Installation With City Of Bend Water Division. All Point Of Connection Work To Be Performed By A Licensed Plumber And City Approved Contractor.

Full Payment Of The Irrigation Meter And Double Check Valve Hookup Fees, Inspection Fees And Systems Development Charges, As Determined By Appropriate Agency, Are The Responsibility Of The Installing Contractor. Coordinate Fee Assessment And Payment With The Appropriate Agency Representative.

E Low Flow Emitters And Lateral Pipe Locations Are Diagrammatic. Field Adjust As Required To Ensure Water Coverage To Each 1¼", 1½" Caliper And 4' Ht. Tree.

F No Irrigation Required This Area.

G See Sheet RD5 For Irrigation Legend.

H Approx. Low Point Of Mainline System. Verify And Locate Manual Drain Valve Near Sta. 105+00 NB.

I Water Service Tap: 18" Pipe Below Existing Reed Market Road, North Side (60 p.s.i. Available Hydrostatic Pressure)

J Extend Lateral PVC Up Rock Face, Encase In 4" Galv. Steel Conduit Where Exposed Above Grade.

K Sleeve Mainline Beneath Sloped End Pavement With 6" Schedule 40 PVC

IN THE HYDRAULIC DESIGN AND PIPE SIZING, DO NOT EXCEED THE FOLLOWING G.P.M. OF WATER USAGE PER SCHEDULED PIPE SIZE.

FLOW	PIPE SIZE
1 - 12 GPM	¾" Class 200 PVC
12 - 20 GPM	1" Class 200 PVC
20 - 30 GPM	1¼" Class 200 PVC
30 - 45 GPM	1½" Class 200 PVC
45 - 60 GPM	2" Class 200 PVC
60 - 90 GPM	2½" Class 200 PVC

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First M. Last  
**OREGON**  
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**LANDSCAPE ARCHITECT**

**OREGON DEPARTMENT OF TRANSPORTATION ENVIRONMENTAL SECTION**

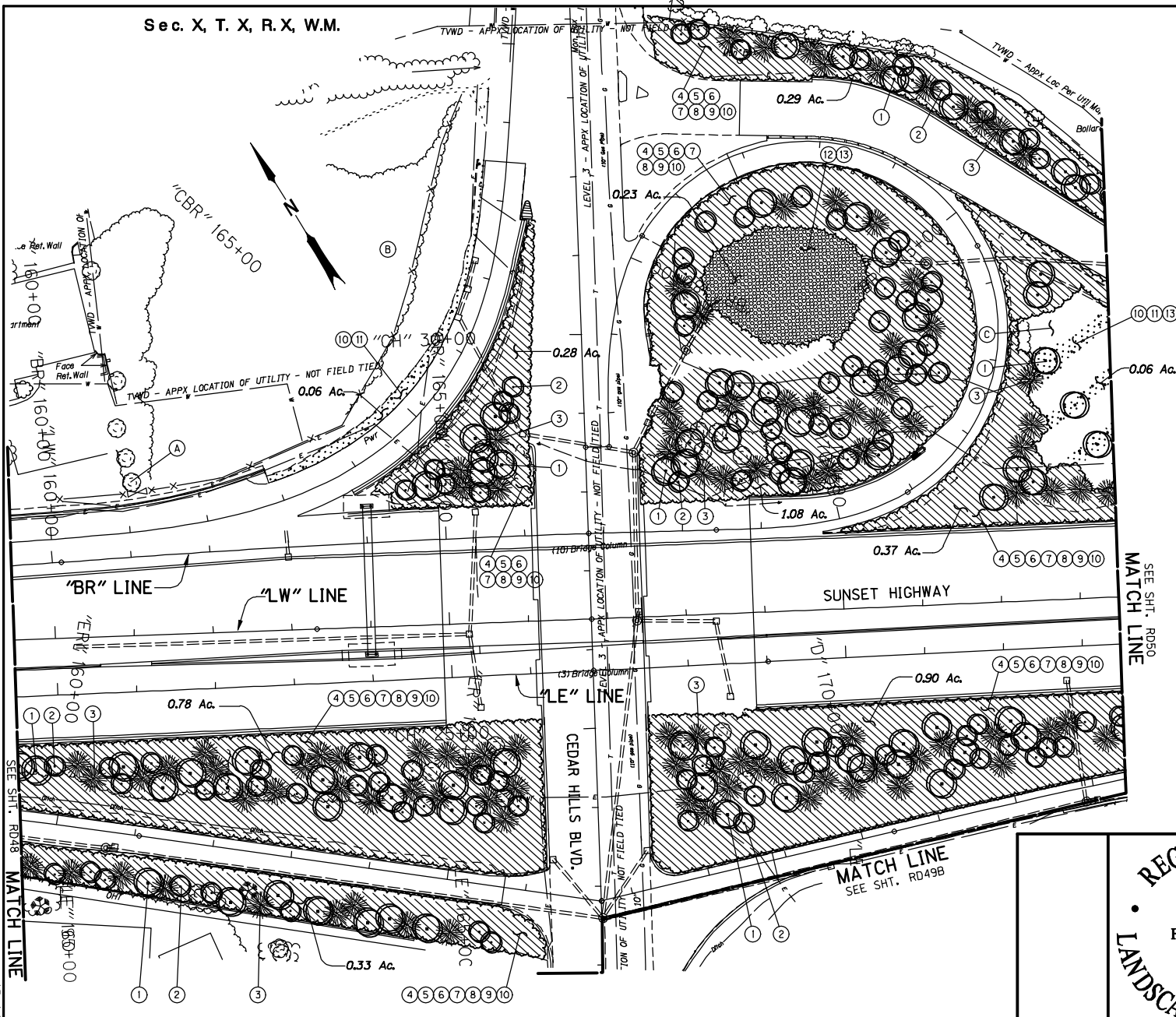
**PROJECT TITLE**  
HIGHWAY NAME  
COUNTY NAME

Reviewed By - First M. Last  
Designed By - First M. Last  
Drafted By - First M. Last

**IRRIGATION PLAN**

SHEET NO.  
RD

12-13




**NOTES:**


- (A) No Work This Area.
- (B) Protect Existing Vegetation To Maximum Extents Possible. See Special Provisions Section 00320 Clearing And Grubbing.
- (C) See Sht. 18B And Section 01092 For Water Quality Swale Facility Construction And Seeding.


12-14


**REGISTERED**  
000  
First M. Last  
**OREGON**  
00/00/00  
**LANDSCAPE ARCHITECT**

<b>OREGON DEPARTMENT OF TRANSPORTATION ENVIRONMENTAL SECTION</b>	
PROJECT NAME PROJECT HIGHWAY PROJECT COUNTY	
Reviewed By - Designed By - Drafted By -	
<b>PLANTING PLAN</b>	SHEET NO. RD

- ① Plant The Following Deciduous Trees :   
*Alnus rubra* - 32  
*Quercus garryana* - 47  
 Deciduous Trees, 1 1/2" Cal. - 79

- ② Plant The Following Deciduous Trees :   
*Alnus rubra* - 32  
*Corylus cornuta v californica* - 17  
*Quercus garryana* - 47  
 Deciduous Trees, 1" Cal. - 96

- ③ Plant The Following Conifer Trees :   
*Abies grandis* - 10  
*Pinus ponderosa* - 35  
*Pseudotsuga menziesii* - 35  
*Tsuga heterophylla* - 20  
 Conifer Trees, 5 Ft. Height - 100

- ④ Plant Tubeling Shrubs In Random Spacing At 3.25 Ft. o.c. (Approx. 4.12 Ac.):   
*Acer circinatum* - 1010  
*Berberis nervosa* - 2500  
*Gaultheria shallon* - 3675  
*Holodiscus discolor* - 1835  
*Philadelphus lewisii* - 1835  
*Polystichum munitum* - 1835  
*Ribes sanguineum* - 2170  
*Vaccinium ovatum* - 1835  
 Tubeling Plants, 0.14 Gal. Container - 16,695

- ⑤ Plant The Following Deciduous Seedling Trees At 5' o.c. Intermix Seedlings From This Grouping With Those Noted In Note 6, This Sheet.  
*Alnus rubra* - 1390  
*Arbutus menziesii* - 465  
*Crataegus douglasii* - 465  
*Prunus emarginata* - 1390  
 Seedling Trees, Deciduous - 3710


- ⑥ Plant The Following Conifer Seedling Trees At 5' o.c. Intermix Seedlings From This Grouping With Those Noted In Note 5, This Sheet.  
*Pinus ponderosa* - 1115  
*Pseudotsuga menziesii* - 1115  
*Taxus brevifolia* - 555  
*Tsuga heterophylla* - 925  
 Conifer Trees, Seedling - 3710


- ⑦ Plant The Following Groundcover Plants At 30" o.c. (Approx. 4.12 Ac.):  
*Arctostaphylos uva-ursi* - 8670  
*Cotoneaster dammeri* - 8670  
*Ranunculus occidentalis* - 5780  
*Synthyris reniformis* - 5780  
 Groundcovers, 4" Pots - 28,900

- ⑧ Plant Bulbs In Clumps. Intermix Clumps In Randomly Spaced Groupings Throughout The Planter Beds. Min. 20 Bulbs Per Clump.  
*Erythronium oregonum* - 550  
*Iris tenax* - 550  
*Lilium columbianum* - 550  
*Oxalis oregana* - 550  
*Trillium ovatum* - 300  
 Bulbs - 2500


- ⑨ Spread Topsoil In Non-Median Planter Beds, Spread And Till In Soil Conditioner Before Planting, Then Spread Bark Mulch:  
 Topsoil (12" Depth) - 6553 C.Y.  
 Soil Conditioner (2" Depth) - 1092 C.Y.  
 Bark Mulch (2" Depth) - 1092 C.Y.  
 See Spec. 01040 For Topsoil Material Compaction Information.

- ⑩ Prior To The Start Of Landscape Work, Germinate Weeds And Erosion Control Grasses, Then Kill All Weeds And Grasses Where Designated. Cut Grass At 2" Height. Repeat Weed Germination And Kill, Then Clear All Dead Weeds And Grasses From The Site.  
 Site Prep/Weed Kill - 4.24 Ac.

- ⑪ Seed Mix No. 1 (Permanent Seed Mix) (Approx. 0.11 Ac.):   
 Permanent Seeding, Mix No. 1 - 0.11 Ac.

- ⑫ Plant The Following Mix Of Tubeling Plants (12" o.c.) Throughout The Bottom Of The Basin (Approx. 10,010 S.F.):   
*Eleocharis palustris* - 3400  
*Scirpus acutus* - 3400  
*Scirpus microcarpus* - 3400  
 Tubeling Plants, 0.14 Gal. Cont. - 10,200

- ⑬ Spread 3" Depth Topsoil In Basin Bottom And Between WQ Swales.  
 Topsoil (3" Depth) - 115 C.Y.

	<b>OREGON DEPARTMENT OF TRANSPORTATION</b> ENVIRONMENTAL SECTION	
	<b>PROJECT NAME</b> PROJECT, HIGHWAY PROJECT, COUNTY	
	Reviewed By - Designed By - Drafted By -	SHEET NO. <b>RDA</b>
<b>PLANTING NOTES</b>		

12-15