GENERAL SHEET NOTES

1. UTILITIES NOT SHOWN FOR CLARITY. SEE FIGURES 5.0 - 5.6
2. SEE FIGURES 11.0 - 12.6 FOR PLANTING PLANS - NOT SHOWN FOR CLARITY
3. SEE FIGURE 7.0 FOR PEDESTRIAN AND AUTOMOBILE CIRCULATION PLAN, PARKING AND DIMENSIONS.
4. THERE ARE NO TYPE II LANDS ON THIS SITE.
5. FOR TREES TO BE REMOVED, SEE FIGURES 2.9 - 2.12.
6. GROSS SITE AREA IS 9.24 ACRES.
7. FOR FENCE TYPE AND DETAIL - SEE FIGURES 11.0-12.6.
8. GARBAGE AND RECYCLE TO BE SCREENED BY SECURITY FENCE. ACCESS BY COLLECTOR VIA SEPERATE GATE
9. TREE PROTECTION AREA SHOWN EQUALS 18.7% OF THE TOTAL SITE AREA
10. THE FAR = 0.155
11. THE PROPOSED LOT COVERAGE = 85,610

LEGEND

- SITE BOUNDARY / PROPERTY LINE
- C — KEY PLAN BOUNDARY
- CONSTRUCTED PERVIOUS SURFACE
- CONSTRUCTED GRAVEL SURFACE
- IMPERVIOUS SURFACE
- GREEN ROOF
- OPEN PROCESS TANKS
- OPEN SPACE / LANDSCAPE AREA
- TREE PROTECTION AREA
- CONIFEROUS TREE TO REMAIN
- DECIDUOUS TREE TO REMAIN
- TREE OF SIGNIFICANCE
- 142 — CONTOUR LINE
- SITE SET-BACKS
- SURVEY BENCHMARK

0 25 50 scale in feet

KENTHORPE WAY
SIDEWALK
MAILBOX
SURVEY BENCHMARK
SITE ENTRANCE / EXIT
VISITOR BICYCLE PARKING
VISITOR PARKING
GARBAGE & RECYCLE (PREFERRED LOCATION)
GARBAGE & RECYCLE (ALTERNATIVE LOCATION)
ADMIN BLDG
REMODELED EXISTING OPS BLDG
STAFF PARKING
STAFF BICYCLE PARKING
OVERFLOW PARKING GRAVEL SURFACE
WASHWATER EQ
FILTERS
OZONE CONTACTOR
SOLIDS LOADING AREA
OZONE GENERATOR AND CHEMICAL BLDG
MECHANICAL DEWATERING
SOLIDS LAGOONS
FUTURE SOLIDS THICKENING
SOLIDS THICKENING
BALLASTED FLOCCULATION
FUTURE WASHWATER CLARIFIER
CHEMICAL DELIVERY AREA
EQUIPMENT STORAGE PENTHOUSE
FUEL STORAGE TANK
LOX STORAGE TANK
CO2 STORAGE TANK
ELECTRICAL BLDG
FINISHED WATER PUMP STATION
SURGE TANK
SITE ACCESS 12' WIDE
EQUIPMENT HATCH SKYLIGHT (TYP)
ELECTRICAL TRANSFORMERS
CLEARWELL (UNDERGROUND)
SITE BOUNDARY / PROPERTY LINE
RESIDENCE
SIDEWALK
MAPLETON DR.
EMERGENCY ACCESS 12' WIDE
499'-2"
61'-2"
64'-0"
~ 7'-9"
24'-0"
114'-9"
~ 23'-10"
42'-2"
~ 56'-11"
214'-9"
34'-8"
129'-11"
391'-11"
198'-5"
~ 65'-5"
26'-5"
153'-0"
38'-5"
20'-3"
85'-8"
139'-0"
35'-9"
12'-0"
241'-1"
~ 30'-6"
~ 56'-3"
80'-11"
289'-6"
~ 121'-2"
~ 26'-0"
282'-4"
157'-0"
186'-8"
57'-8"
~ 117'-11"
504'-8"

PLOT DATE: September 10, 2008 - 1:55PM USER: dbrast
FILE: C:\pwworkdir\dms\52971\38594 - TITLE BLOCK FOR PERMITTING.dwg

MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)
DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	(XREFS)?? DESCRIPTION	BY		APP.

OWNER:
CITY OF LAKE OSWEGO
380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

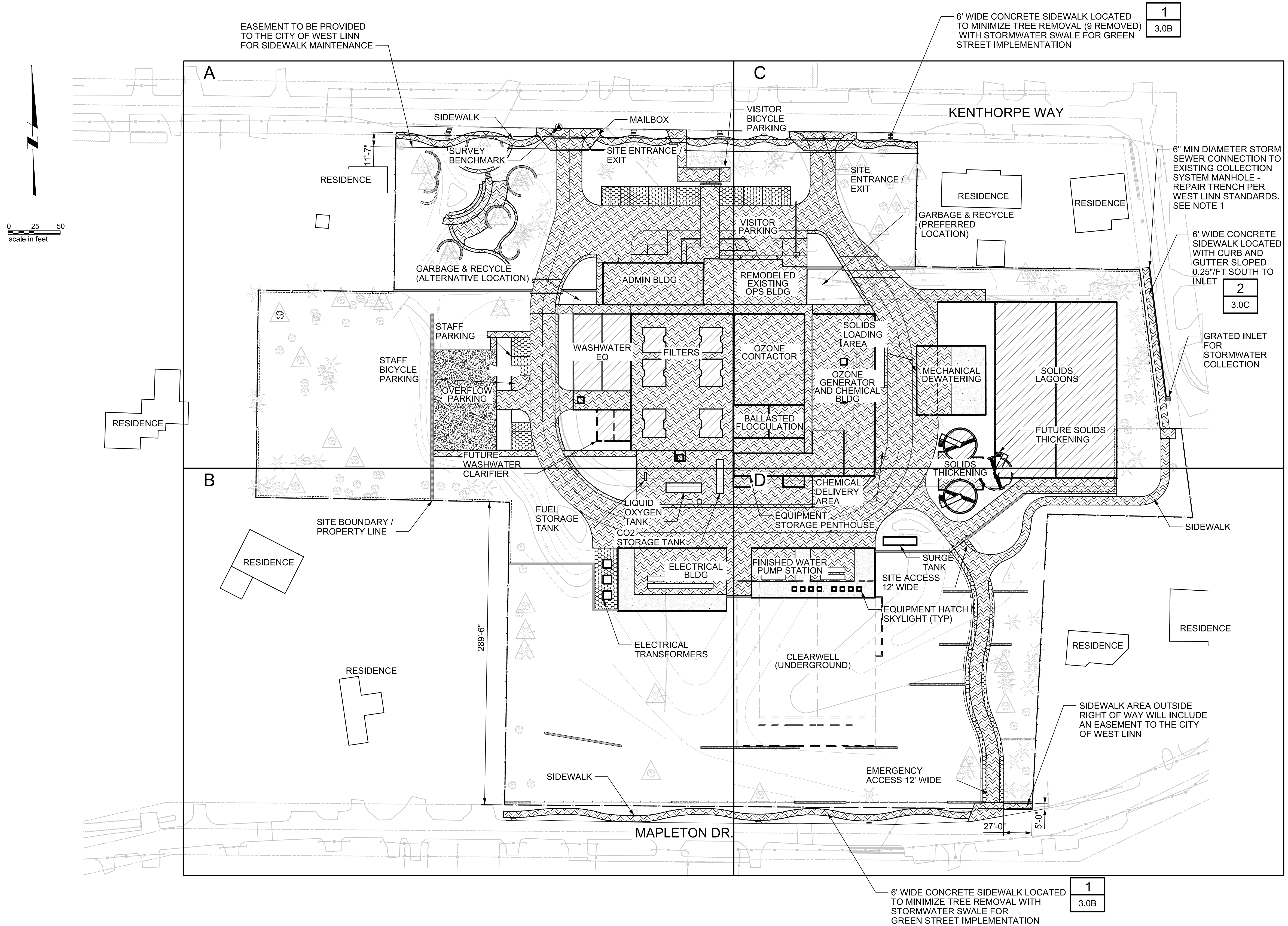
Lake Oswego · Tigard Water Partnership
sharing water · connecting communities

LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT
DESIGN REVIEW AND CONDITIONAL USE
PROPOSED SITE PLAN OVERVIEW

FILENAME
PROJECT NUMBER
SCALE 1" = 50'
DRAWING/FIGURE NUMBER 3.0
OF

GENERAL SHEET NOTES

1. STORMWATER COLLECTION ALTERNATIVE. FINAL COORDINATION WILL BE WITH THE CITY OF WEST LINN TO DETERMINE THE ALTERNATIVE WITH THE LEAST IMPACT TO THE NEIGHBORHOOD THAT PROPERLY CONVEYS STORMWATER TO THE PUBLIC COLLECTION SYSTEM.



LEGEND

- SITE BOUNDARY / PROPERTY LINE
- KEY PLAN BOUNDARY
- CONSTRUCTED PERVIOUS SURFACE
- CONSTRUCTED GRAVEL SURFACE
- IMPERVIOUS SURFACE
- GREEN ROOF
- OPEN PROCESS TANKS
- OPEN SPACE / LANDSCAPE AREA
- TREE PROTECTION AREA
- CONIFEROUS TREE TO REMAIN
- DECIDUOUS TREE TO REMAIN
- TREE OF SIGNIFICANCE
- 142 CONTOUR LINE
- SURVEY BENCHMARK

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
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MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS			
REV.	DESCRIPTION	BY	APP.

OWNER:
CITY OF LAKE OSWEGO
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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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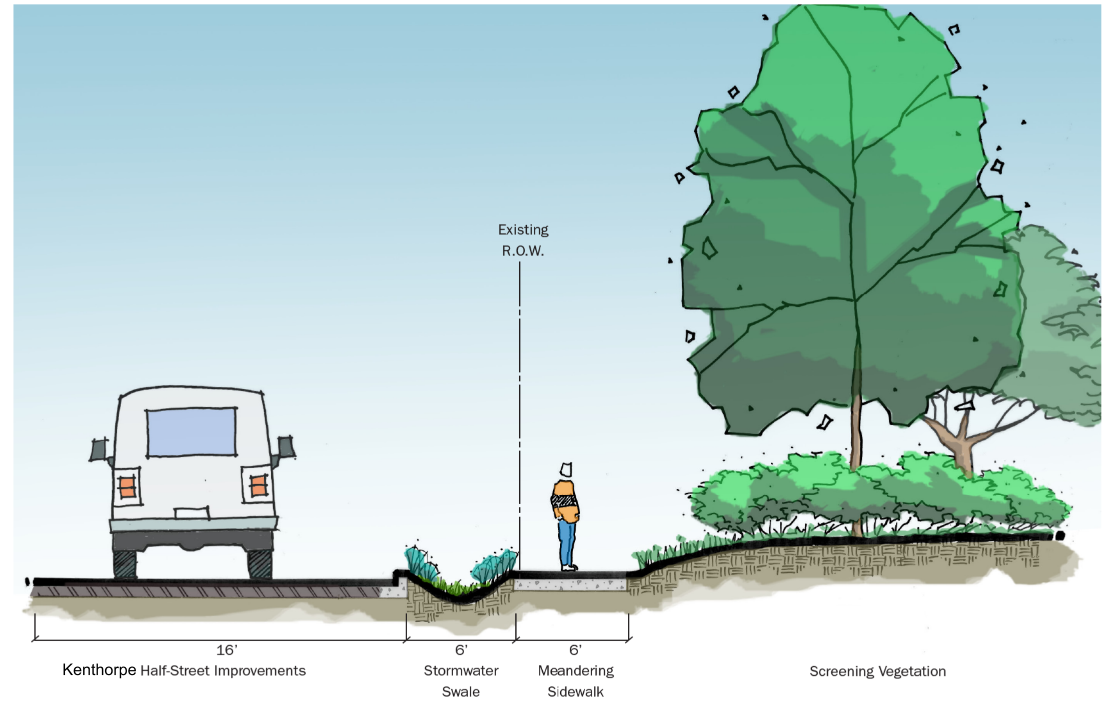
LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT
DESIGN REVIEW AND CONDITIONAL USE

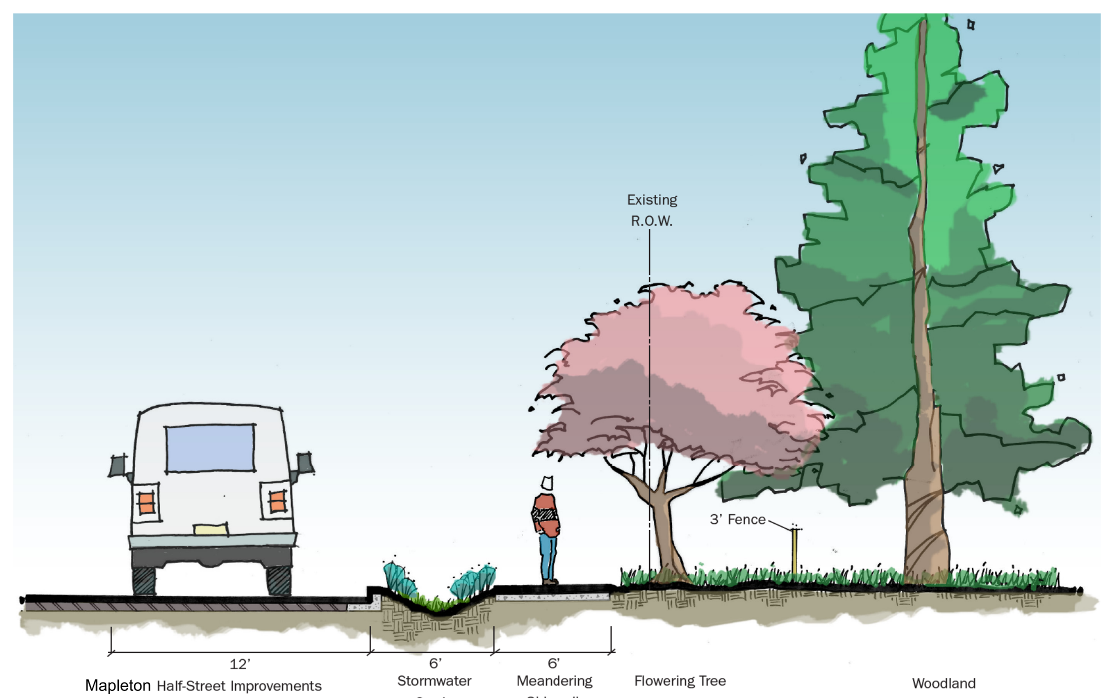
PROPOSED SIDEWALK AND STORMWATER COLLECTION ALTERNATIVE

FILENAME
PROJECT NUMBER
SCALE 1" = 50'
DRAWING/FIGURE NUMBER 3.0A
OF

GENERAL SHEET NOTES

1. STORMWATER SWALES TO BE DESIGNED AND OPERATED TO PORTLAND BES STANDARDS.
2. STREETS TO BE DESIGNED AND CONSTRUCTED TO CITY OF WEST LINN STANDARDS.
3. SIDEWALKS ON STREET FRONTAGES SHALL BE DESIGNED AND CONSTRUCTED TO CITY OF WEST LINN STANDARDS.





Sidewalks | 1 | 3.0A

MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

$(XREFS)??

REV.	DESCRIPTION	BY		APP.

OWNER:
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380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PROPOSED SIDEWALK AND STORMWATER SECTIONS - I

FILENAME

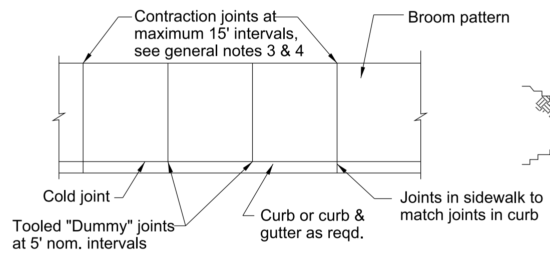
PROJECT NUMBER

SCALE
NO SCALE

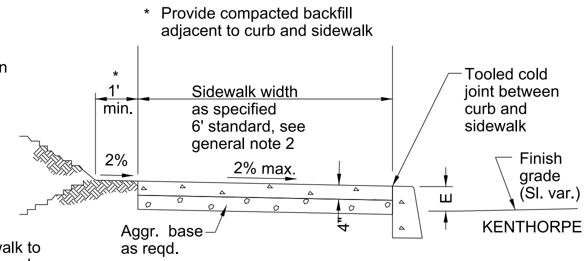
DRAWING/FIGURE NUMBER
3.0B

OF

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
FILE: C:\pwworkdir\dms55297\138564- TITLE BLOCK FOR PERMITTING.dwg



Typical Plan View - Curb Line Sidewalk



Typical Curb Sidewalk Cross Section
E = curb exposure

General notes for all details:

1. Include additional paved or unpaved 2' clearance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
2. Curb type and sidewalk width as shown on plans or as directed. On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
3. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveway. For monolithic curb & sidewalk, const. expansion joints at 45' maximum spacing.
4. Const. contraction joints at 15' maximum spacing, and at ends of each driveway and ramp.
5. Sidewalk details are based on United States Access Board Standards.

Sidewalks 2 / 3.0A

MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY		APP.

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PHONE: 503-635-0270

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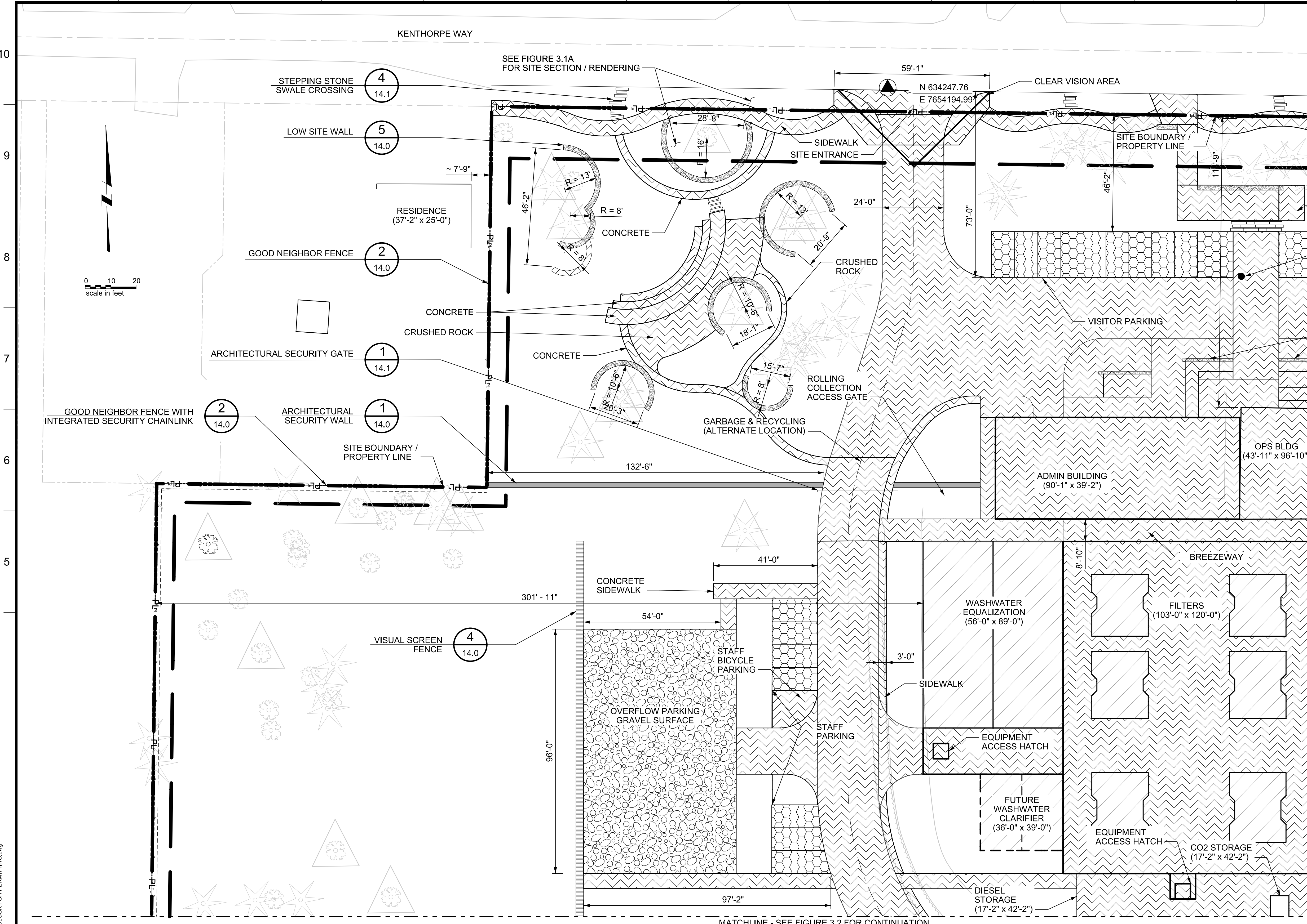
LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PROPOSED SIDEWALK AND STORMWATER SECTIONS - II

FILENAME
PROJECT NUMBER
SCALE: NO SCALE
DRAWING/FIGURE NUMBER: 3.0C
OF

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
FILE: C:\pwworkdir\dms55297\138564- TITLE BLOCK FOR PERMITTING.dwg



GENERAL SHEET NOTES

1. SEE FIGURE 3.0 FOR LEGEND.

MWH
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PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS			
REV.	DESCRIPTION	BY	APP.

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PROPOSED SITE PLAN
AREA A

FILENAME
PROJECT NUMBER
SCALE 1" = 20'
DRAWING/FIGURE NUMBER 3.1
OF

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
FILE: C:\pwworkdir\dms55297\138564- TITLE BLOCK FOR PERMITTING.dwg

GREENWORKS

GreenWorks, P.C.
Landscape Architecture
Environmental Design
24 NW 2nd Avenue, Suite 100
Portland, Oregon 97209
Ph:503.222.5612/F:503.222.2283
Email: info@greenworkspc.com

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806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: JB
DRAWN: DS
CHECKED: JB
CHECKED: RT
APPROVED: MF

REVISIONS

REV	DESCRIPTION	BY		APP.
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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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DESIGN REVIEW AND CONDITIONAL USE

VIGNETTE
KENTHORPE STORMWATER AREA

FILENAME
PROJECT NUMBER
SCALE
DRAWING/FIGURE NUMBER
3.1A
52 OF

PLOT DATE: March 29, 2012 - 1:30PM USER: jeffb
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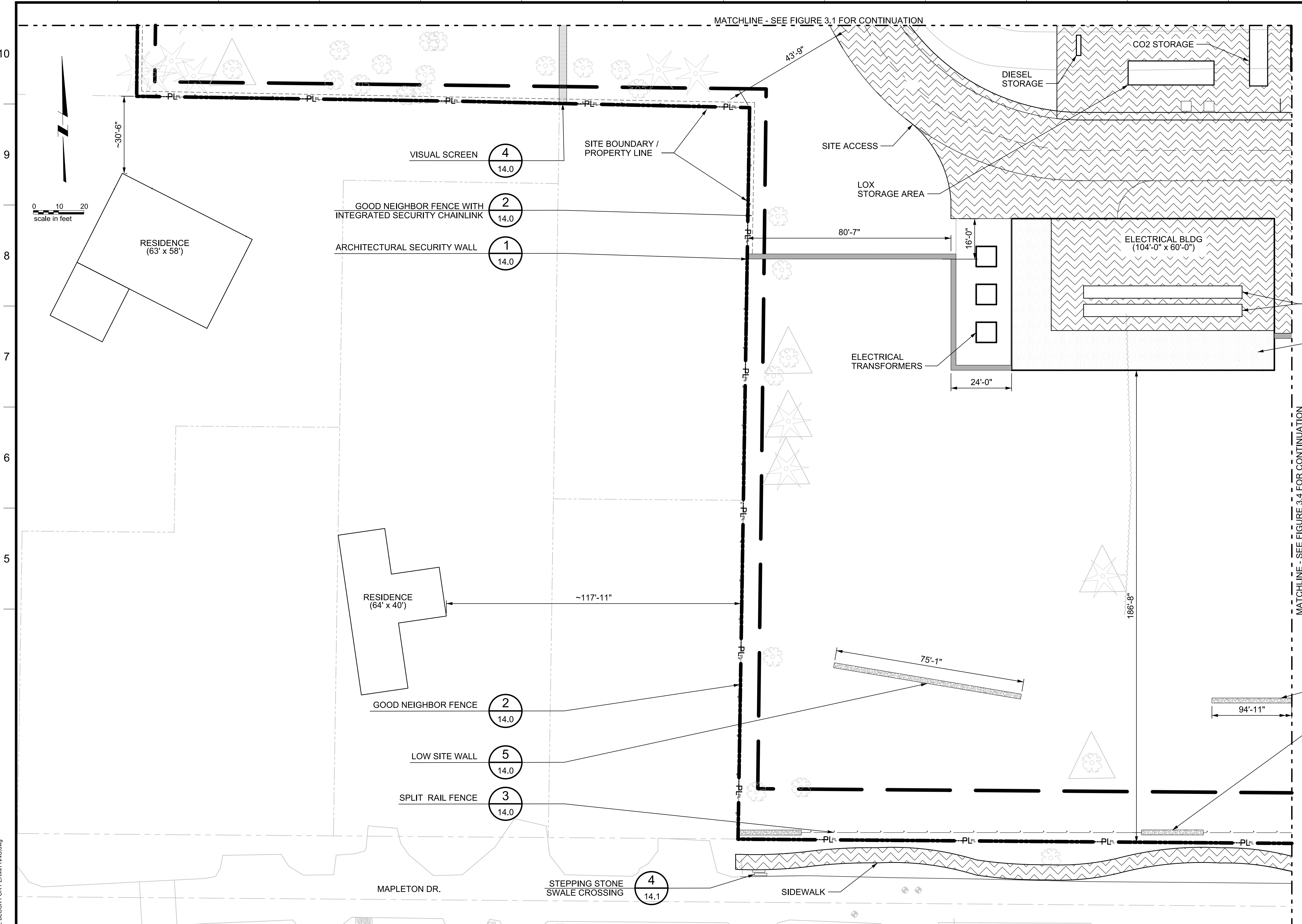

GENERAL SHEET NOTES

1. SEE FIGURE 3.0 FOR LEGEND.

MWH

806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY		APP.

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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

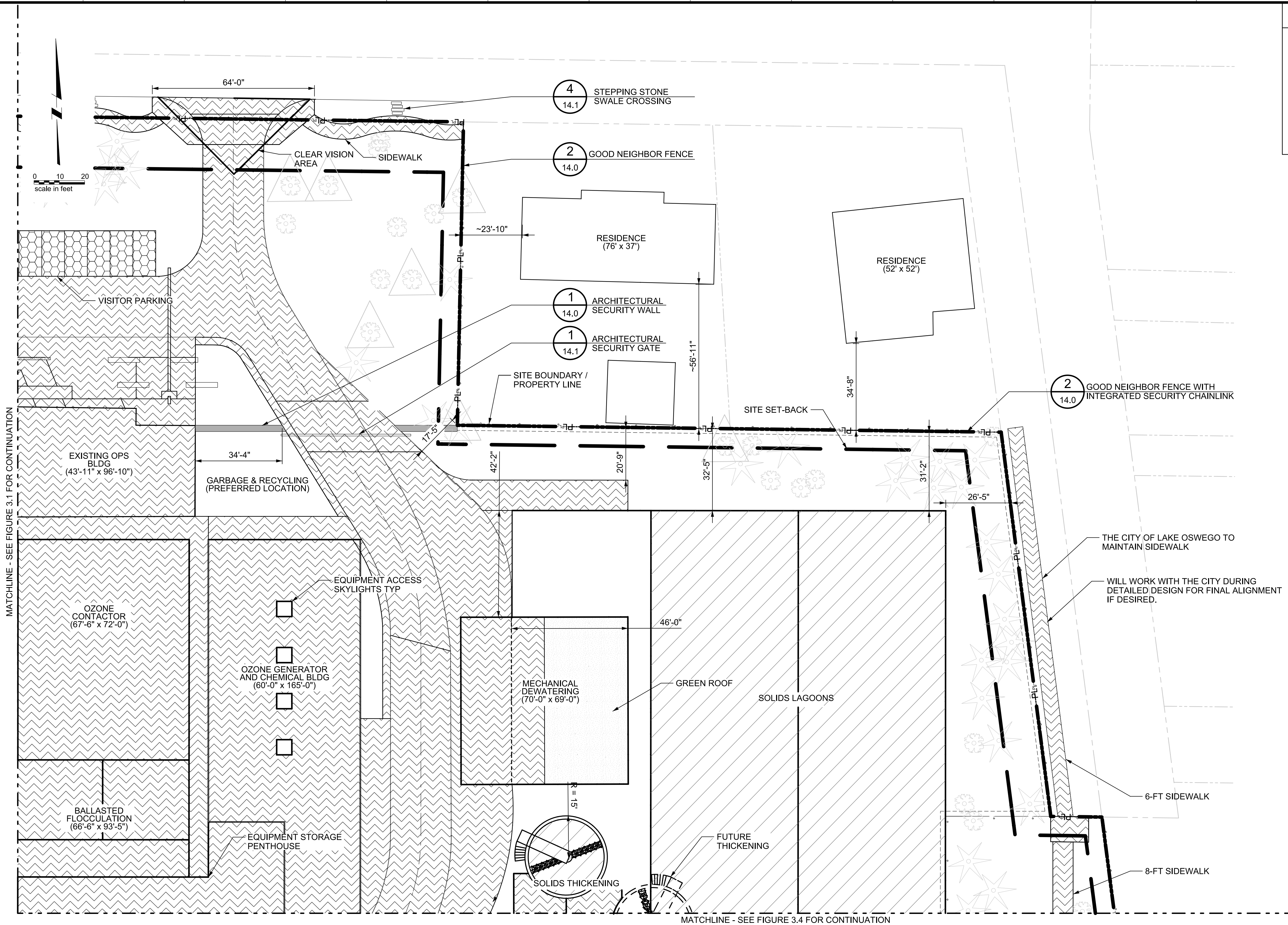
DESIGN REVIEW AND CONDITIONAL USE

PROPOSED SITE PLAN
AREA B

FILENAME
PROJECT NUMBER
SCALE
1" = 20'
DRAWING/FIGURE NUMBER
3.2
OF

GENERAL SHEET NOTES

1. SEE FIGURE 3.0 FOR LEGEND.



MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

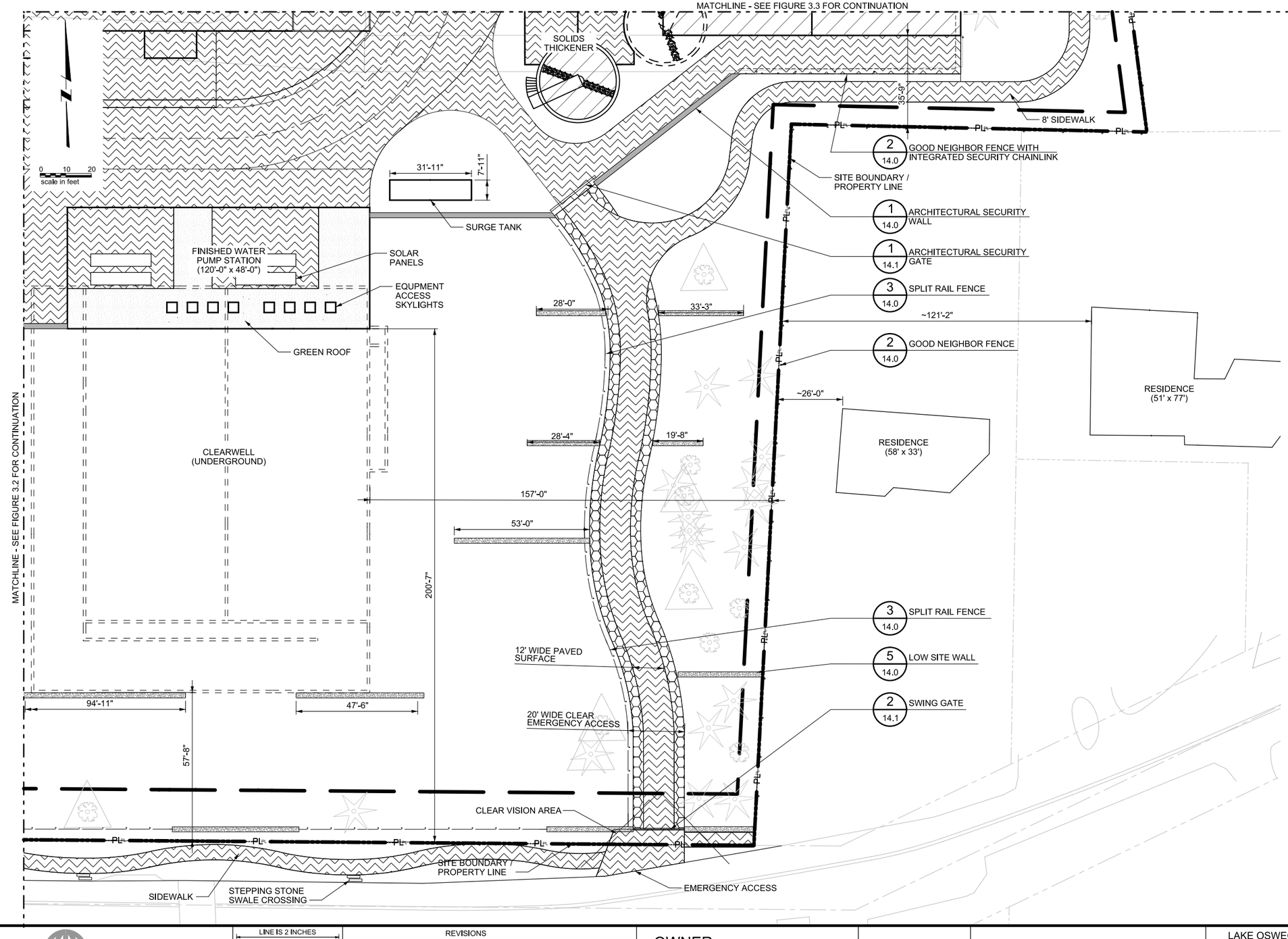
DESIGN REVIEW AND CONDITIONAL USE

PROPOSED SITE PLAN
AREA C

FILENAME
PROJECT NUMBER
SCALE
1" = 20'
DRAWING/FIGURE NUMBER
3.3
OF

GENERAL SHEET NOTES

1. SEE FIGURE 3.0 FOR LEGEND.



MWH
806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY		APP.

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380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

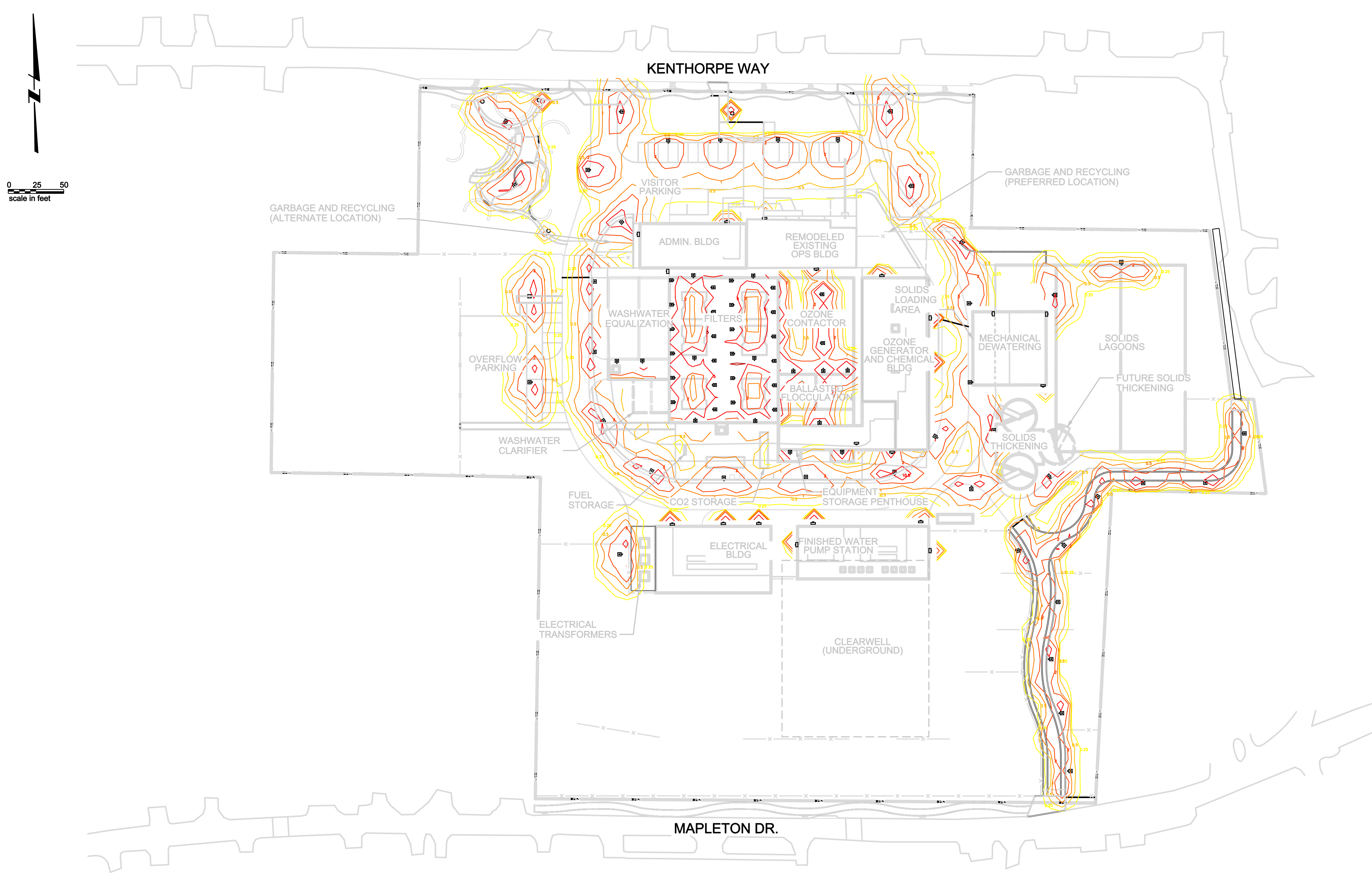
PROPOSED SITE PLAN AREA D

FILENAME
PROJECT NUMBER
SCALE 1" = 20'
DRAWING/FIGURE NUMBER 3.4
OF

PLOT DATE: September 10, 2008 - 1:55PM USER: dbrait
FILE: C:\pwworkdir\dms352\7138594- TITLE BLOCK FOR PERMITTING.dwg

GENERAL SHEET NOTES

1. LIGHTING VALUES SHOWN ARE MODELED 2.5-FT ABOVE GRADE IN FOOT CANDLES.



LEGEND

POLE OR BUILDING MOUNTED LIGHT

5	LIGHTING CONTOUR
2	LIGHTING CONTOUR
1	LIGHTING CONTOUR
0.5	LIGHTING CONTOUR
0.25	LIGHTING CONTOUR

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
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806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
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APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY		APP.
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OWNER:
CITY OF LAKE OSWEGO
380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

FULL-ON LIGHTING PLAN OVERVIEW

FILENAME

PROJECT NUMBER

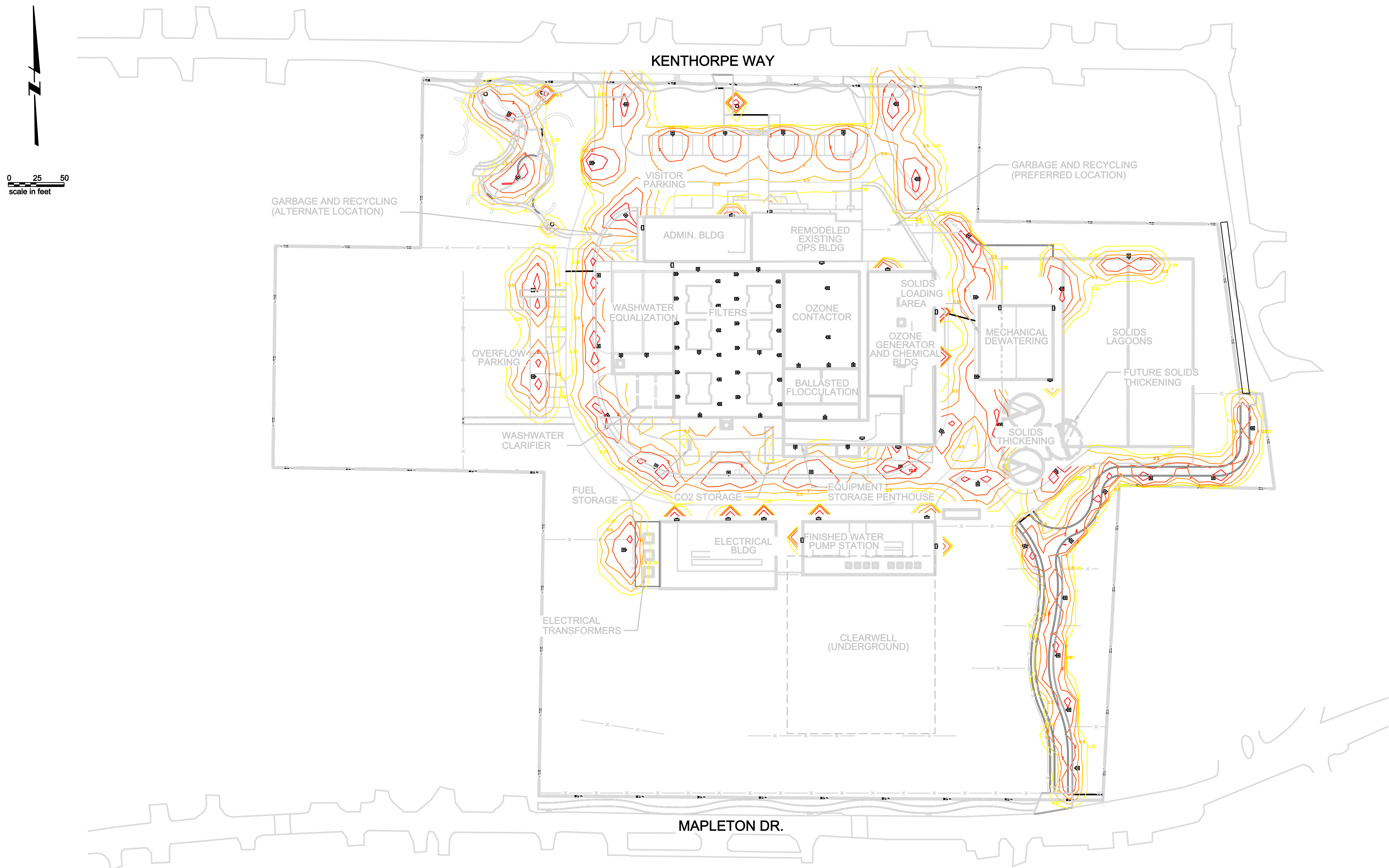
SCALE 1" = 50'

DRAWING/FIGURE NUMBER 5.5

OF

GENERAL SHEET NOTES

1. LIGHTING VALUES SHOWN ARE MODELED 2.5-FT ABOVE GRADE IN FOOT CANDLES.



LEGEND

POLE OR BUILDING MOUNTED LIGHT

5	LIGHTING CONTOUR
2	LIGHTING CONTOUR
1	LIGHTING CONTOUR
0.5	LIGHTING CONTOUR
0.25	LIGHTING CONTOUR

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806 SW BROADWAY, SUITE 200
PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" - SCALE ACCORDINGLY)

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DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.		DESCRIPTION	BY		APP.

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380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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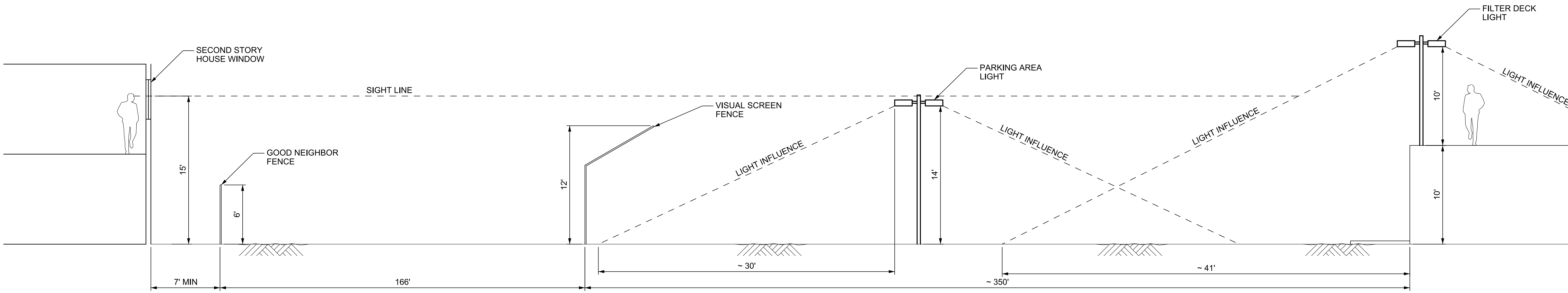
LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT
DESIGN REVIEW AND CONDITIONAL USE

NIGHT TIME LIGHTING PLAN OVERVIEW

FILENAME
PROJECT NUMBER
SCALE
1" = 50'
DRAWING/FIGURE NUMBER
5.5A
OF

GENERAL SHEET NOTES

1. ANGLE OF LIGHT INFLUENCE IS DETERMINED BY THE CUT OFF FEATURES OF THE SELECTED POLE LIGHTS.



LIGHT INFLUENCE WEST FROM FILTER DECK

MWH® 806 SW BROADWAY, SUITE 200 PORTLAND, OREGON 97205	LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)	REVISIONS
	DESIGNED: ####	REV. | DESCRIPTION | BY | APP.
	DRAWN: ####	
	CHECKED: ####	
	CHECKED: ####	
	APPROVED: ####	

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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

LIGHTING SECTION

FILENAME	
PROJECT NUMBER	
SCALE	NO SCALE
DRAWING/FIGURE NUMBER	5.5B
	#### OF

Safety & Outages

Light Fixtures & Poles

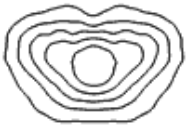
KIM Archetype Streetlight

Safety
- Outdoor Area Lighting
  - Parking Lot & Yard Lighting
  - Street Lighting
  - Light Fixtures & Poles
  - Order Online
- Outdoor Safety
- Electric & Magnetic Fields
- Electricity 101
- Home Safety
- Business Safety
- Classroom Support
- Kids Safety Videos

Outages
Tree Maintenance
Surge Protection
Power Troubleshooting

Decorative architectural design in bronze adds a modern touch to major streets, parking lots and other other outdoor lighting. Low-glare design preserves night sky beauty.

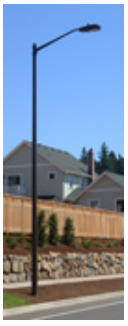
Illumination pattern



Lamp Wattage	Inital Light Output	End of Life Light Output	Recommended Mounting Height
250 watt HPS	27,500 Lumens	19,250 Lumens	30 feet
400 watt HPS	50,000 Lumens	35,000 Lumens	40 feet

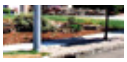
Traditional poles installed with this light

Bronze fiberglass bracket arm



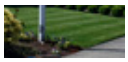
Bronze fiberglass mast arm

Additional pole choices for this light



Gray fiberglass direct bury

Gray fiberglass anchor base

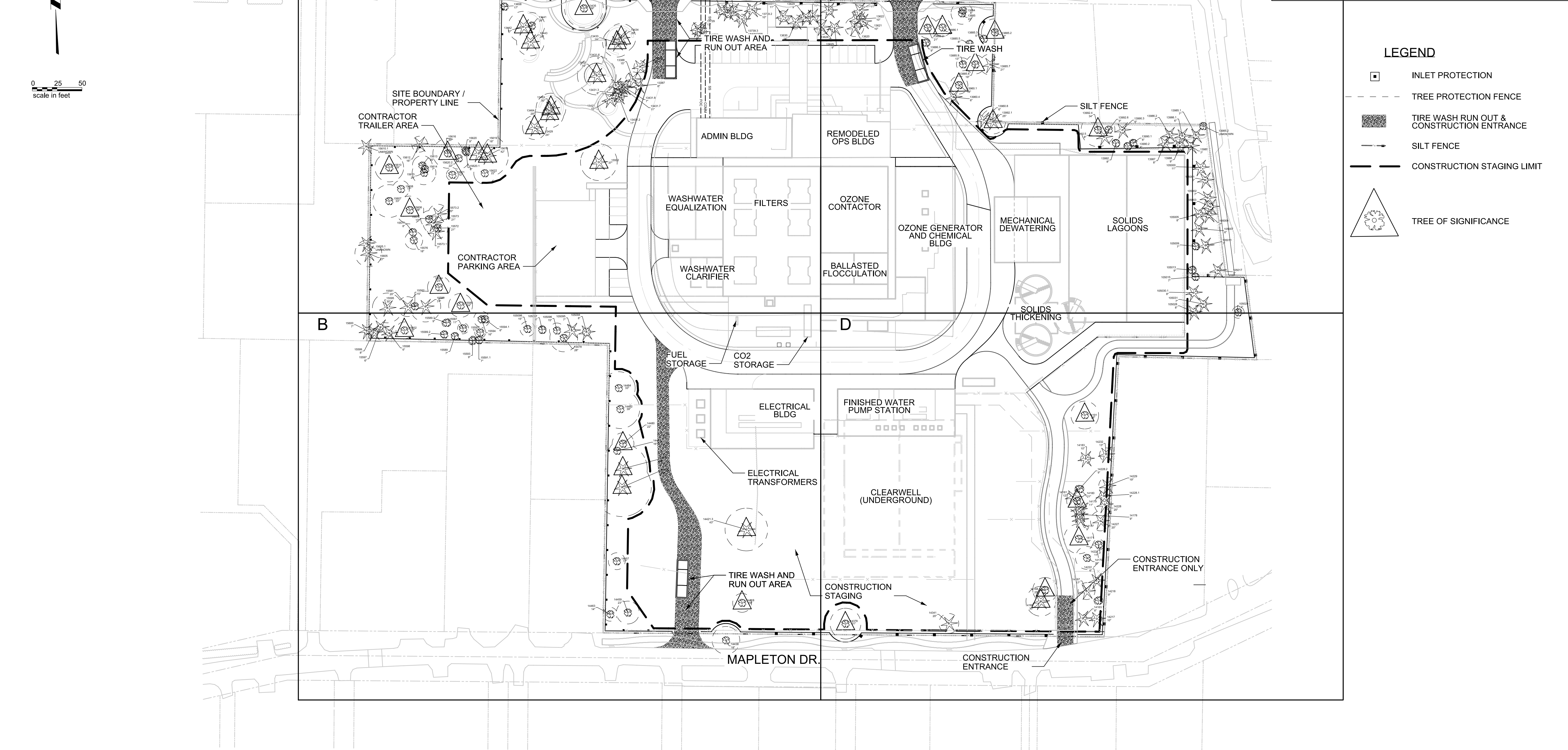


Aluminum with regular mast arm

Wood utility with steel upsweep

GENERAL SHEET NOTES

1. UTILITIES NOT SHOWN FOR CLARITY. SEE FIGURES 5.0 - 5.4
2. SEE FIGURES 11.0 - 12.6 FOR PLANTING PLAN.
3. LABORER PARKING WILL BE OFF-SITE. CONTRACTOR PARKING SHOWN IS FOR VISITORS, MANAGEMENT STAFF, AND SUPERVISORY PERSONAL ONLY.
4. CONSTRUCTION STAGING AREAS SHOWN MAY BE USED FOR RWP AND FWP CONSTRUCTION.



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PORTLAND, OREGON 97205

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY	APP.

OWNER:
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PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT
DESIGN REVIEW AND CONDITIONAL USE
CONSTRUCTION MANAGEMENT OVERVIEW

FILENAME
PROJECT NUMBER
SCALE 1" = 50'
DRAWING/FIGURE NUMBER 6.0
OF

PLOT DATE: September 10, 2008 - 1:55PM USER: slbraat
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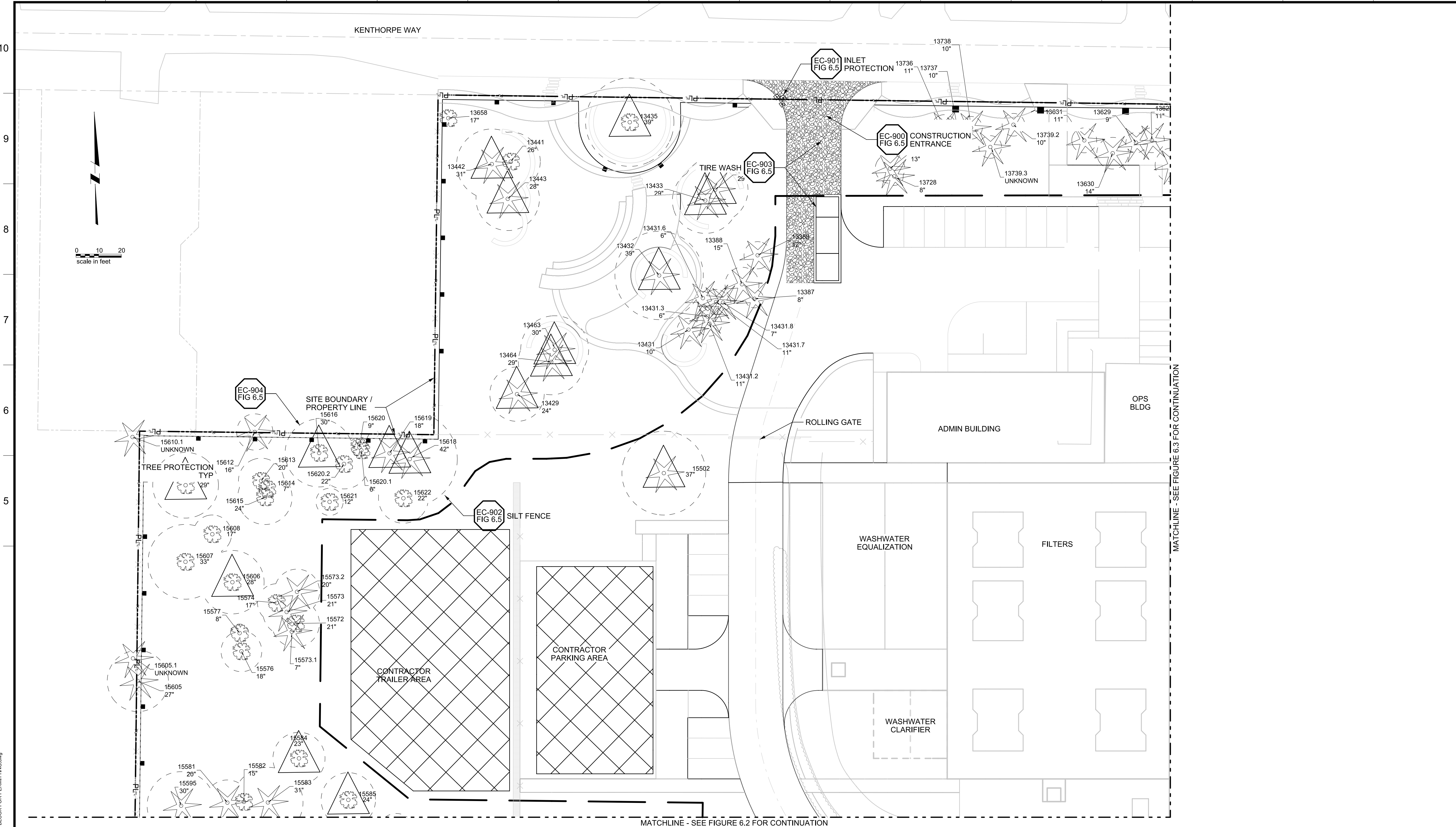

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PORTLAND, OREGON 97205

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DESIGNED: ####
DRAWN: ####
CHECKED: ####
CHECKED: ####
APPROVED: ####

REVISIONS

REV.	DESCRIPTION	BY		APP.

OWNER:
CITY OF LAKE OSWEGO
380 A AVENUE
LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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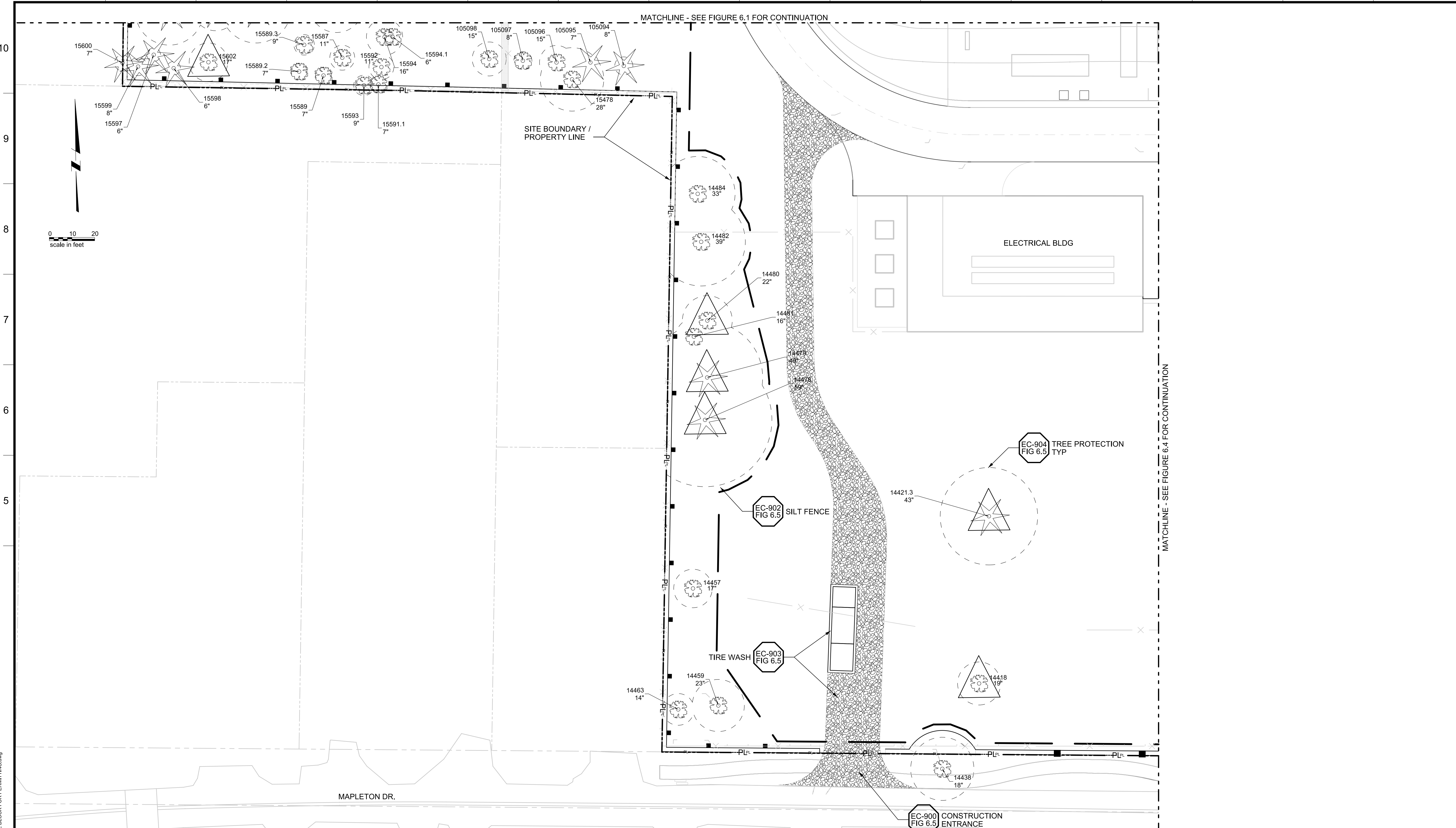
sharing water · connecting communities

LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

CONSTRUCTION MANAGEMENT
AREA A

FILENAME
PROJECT NUMBER
SCALE 1" = 20'
DRAWING/FIGURE NUMBER 6.1
OF



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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

CONSTRUCTION MANAGEMENT
AREA B

FILENAME
PROJECT NUMBER
SCALE 1" = 20'
DRAWING/FIGURE NUMBER 6.2
OF

PLOT DATE: September 10, 2008 - 1:55PM USER: slbrazt
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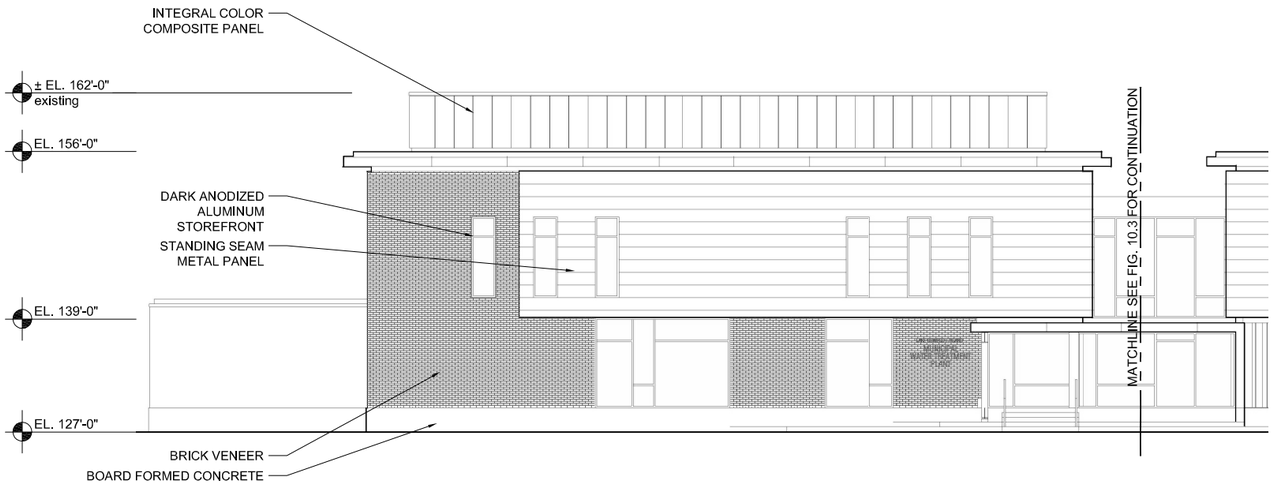
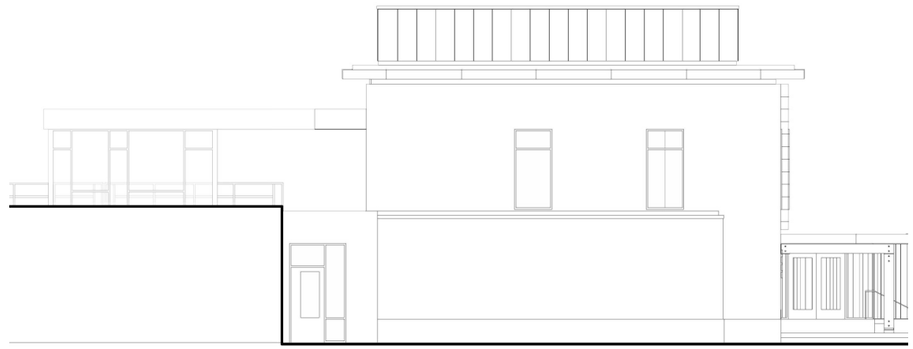


NORTH ELEVATION
SCALE: 1/8"=1'-0"



WEST ELEVATION
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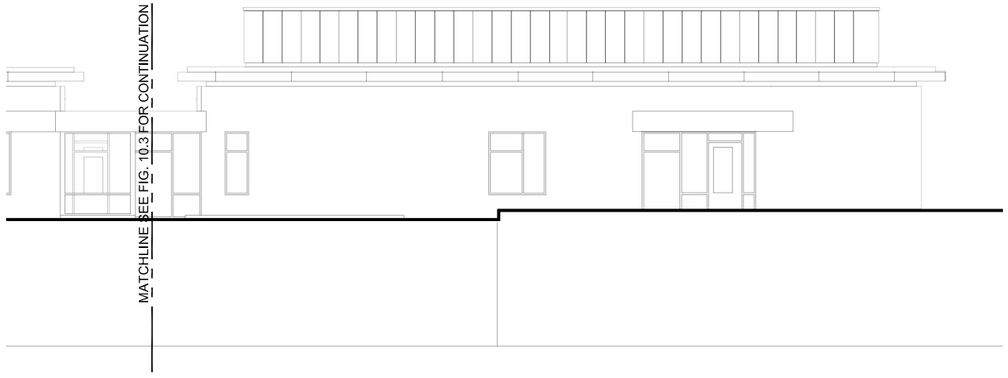

SOUTH ELEVATION
SCALE: 1/8"=1'-0"

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

OPERATIONS BUILDING ELEVATIONS

FILENAME	
PROJECT NUMBER	
SCALE	AS SHOWN
DRAWING/FIGURE NUMBER	10.2
	OF

PLOT DATE: March 30, 2012 - 1:25PM USER: mmclugh
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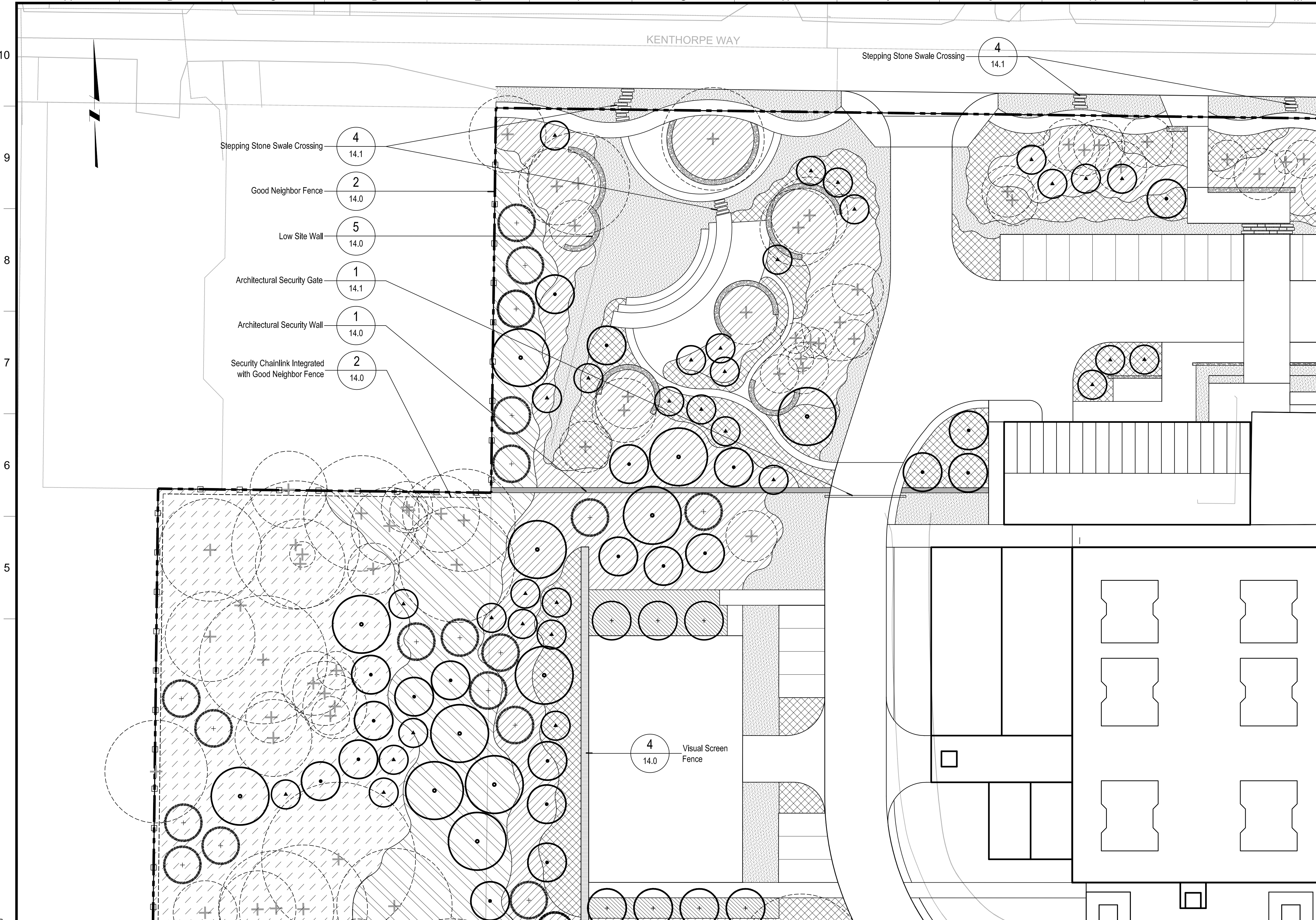

GENERAL SHEET NOTES

1. SEE FIGURE 11.0 FOR PLANTING LEGEND AND NOTES.

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Environmental Design
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Portland, Oregon 97209
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PLOT DATE: April 4, 2012 - 2:59PM USER: jeffb
FILE: C:\pwworkdir\dms81303\LOWTP-A-L-12.1.dwg

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DRAWN: DD
CHECKED: JB
CHECKED: RT
APPROVED: MF

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	LOWTP_L_TREE.dwg LOWTP_fence_model.dwg			
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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PLANTING PLAN
AREA A

FILENAME

PROJECT NUMBER

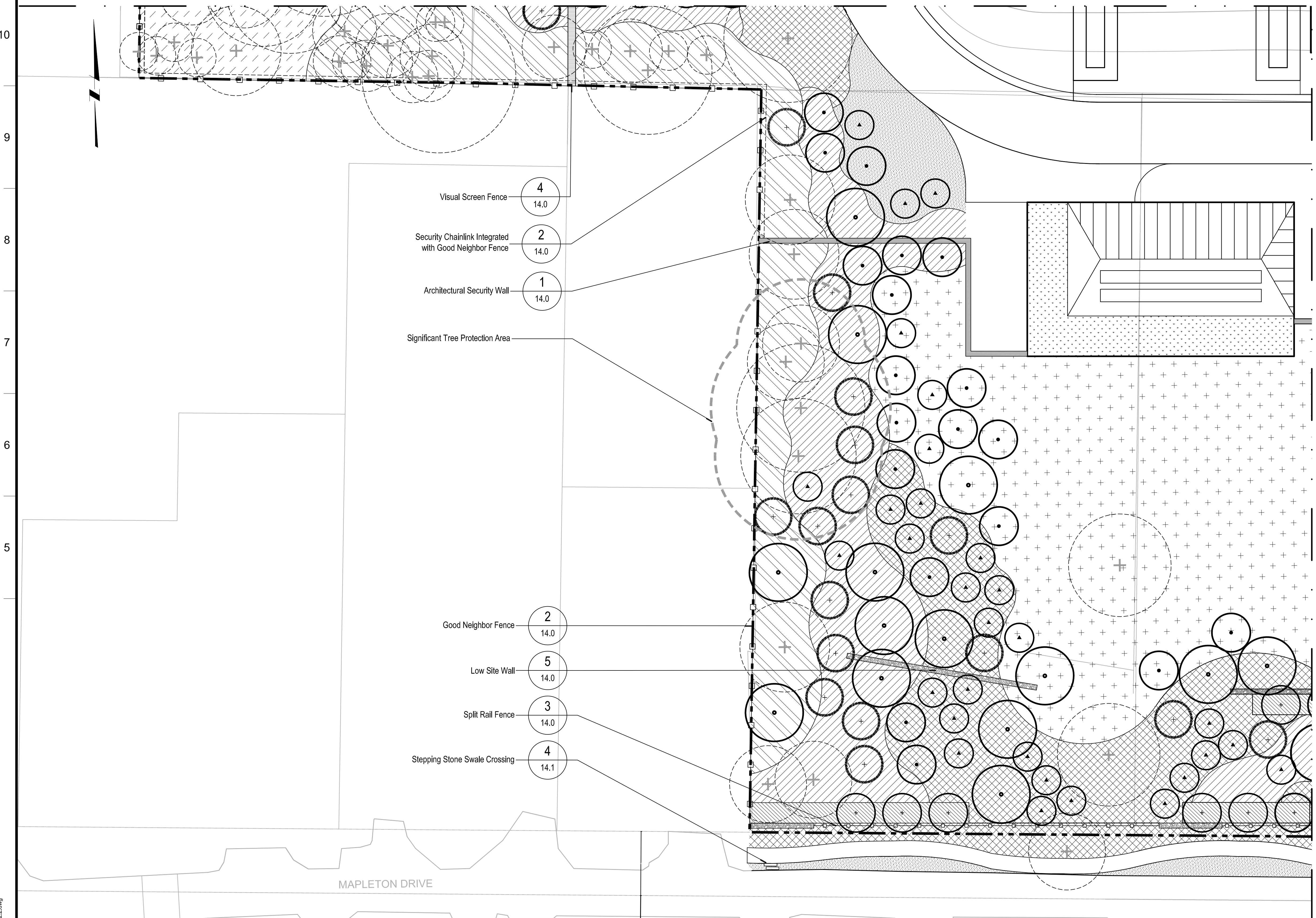
SCALE
1" = 20'

DRAWING/FIGURE NUMBER
12.1

48 OF

GENERAL SHEET NOTES

1. SEE FIGURE 11.0 FOR PLANTING LEGEND AND NOTES.



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REVISIONS

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	W01424-BORDER.dwg			

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PLANTING PLAN
AREA B

FILENAME

PROJECT NUMBER

SCALE
1" = 20'

DRAWING/FIGURE NUMBER
12.2

PLOT DATE: April 4, 2012 - 3:1PM USER: jeffb
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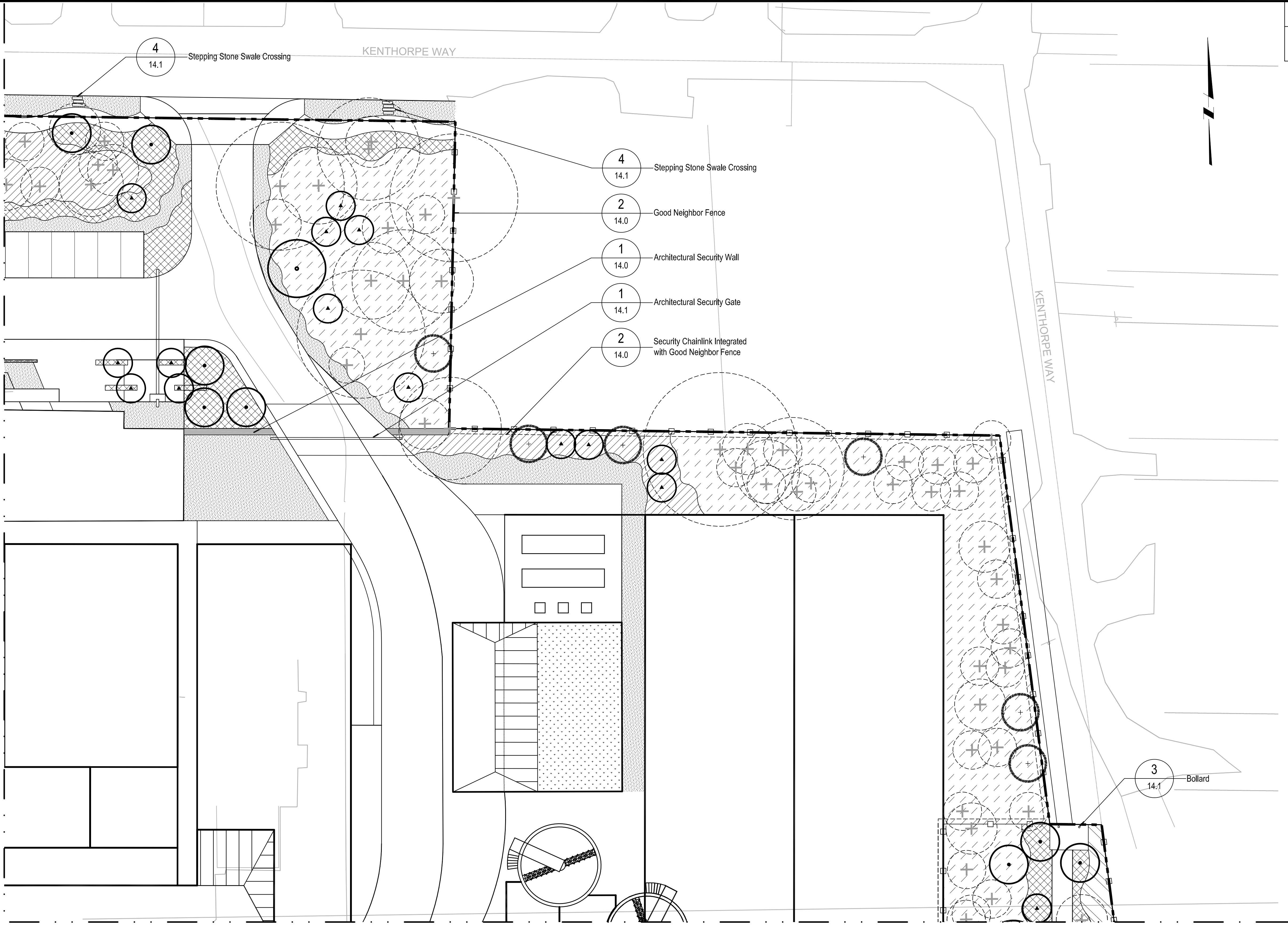
GENERAL SHEET NOTES

1. SEE FIGURE 11.0 FOR PLANTING LEGEND AND NOTES.



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REVISIONS

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PLANTING PLAN
AREA C

FILENAME

PROJECT NUMBER

SCALE 1" = 20'

DRAWING/FIGURE NUMBER 12.3

50 OF

PLOT DATE: April 4, 2012 - 3:24PM USER: jeffb
FILE: C:\pwworkdir\dms81303\LOWTP-C-L-12.3.dwg

GENERAL SHEET NOTES

1. SEE FIGURE 11.0 FOR PLANTING LEGEND AND NOTES.

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DRAWN: DD
CHECKED: JB
CHECKED: RT
APPROVED: MF

REVISIONS			
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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

PLANTING PLAN
AREA D

FILENAME	
PROJECT NUMBER	
SCALE	1" = 20'
DRAWING/FIGURE NUMBER	12.4
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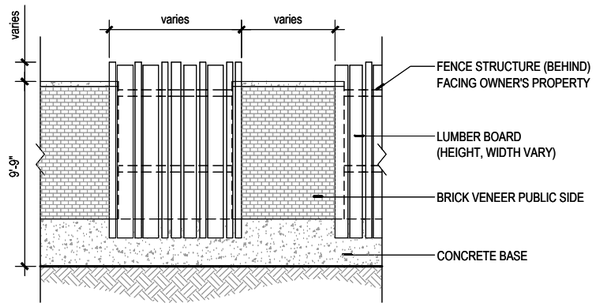
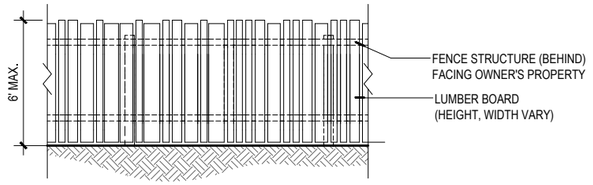


1 ARCHITECTURAL SECURITY WALL

SECTION/ELEVATION FROM ADJOINING PROPERTY

0' 1' 2' 4'

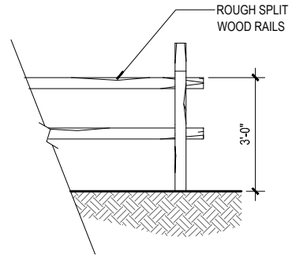


NOTES:
1. SECURITY CHAINLINK TO BE INTEGRATED INTO GOOD NEIGHBOR FENCE CONSTRUCTION AROUND CENTRAL PLANT PROPERTY AS SHOWN. SEE LANDSCAPE DRAWINGS 12.1-12.4.

2 GOOD NEIGHBOR FENCE

SECTION/ELEVATION FROM ADJOINING PROPERTY

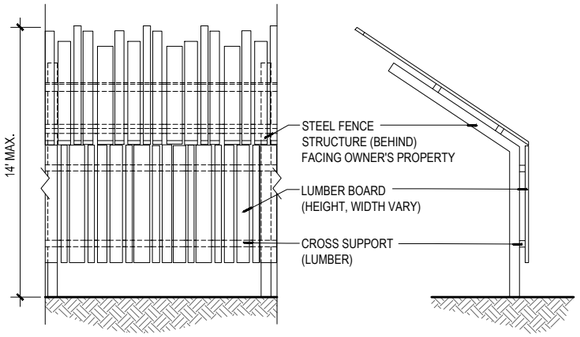
0' 1' 2' 4'



3 SPLIT RAIL FENCE

SECTION/ELEVATION

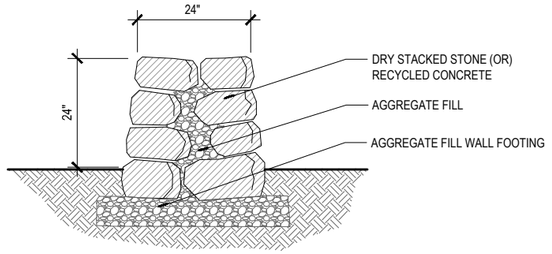
0' 6" 12" 24"



4 VISUAL SCREEN FENCE

SECTION/ELEVATION FROM ADJOINING PROPERTY

0' 1' 2' 4'



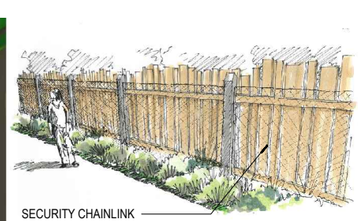
NOTES:
1. WALL FOOTING TO BE ADJUSTED TO PROTECT EXISTING TREE ROOTS WHERE NECESSARY

5 LOW SITE WALL

SECTION

0" 4" 8" 16"

VISUAL SCREEN FENCE - VIEW FROM ADJOINING PROPERTY (SEE DETAIL 4, THIS SHEET)



GOOD NEIGHBOR FENCE - VIEW FROM OWNER'S SIDE (SEE DETAIL 2, THIS SHEET)

6 FENCING ILLUSTRATIONS

PERSPECTIVE

NOT TO SCALE

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APPROVED: MF

REVISIONS

REV	DESCRIPTION	BY		APP.
	13854 - TITLE BLOCK FOR PERMITTING SET			

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DETL_FENCE_ARCSECURITYWALL.DWG
DETL_FENCE_GOODNEIGHBOOR.DWG
DETL_FENCE_SPLITRAIL.DWG
DETL_FENCE_VISUALSCREEN.DWG
04860_STONE_WALL_DRY.dwg
DETL_FENCE_RENDERINGS.dwg
W01424-BORDER.dwg

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LAKE OSWEGO, OR 97034
PHONE: 503-635-0270

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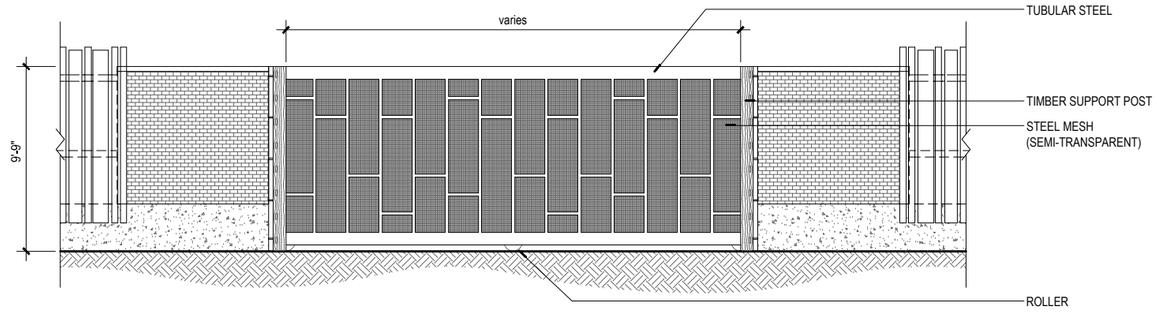
LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

HARDSCAPE & MATERIALS PLAN
DETAILS I
FENCES & WALLS

FILENAME
PROJECT NUMBER
SCALE: varies
DRAWING/FIGURE NUMBER: 14.0
52 OF

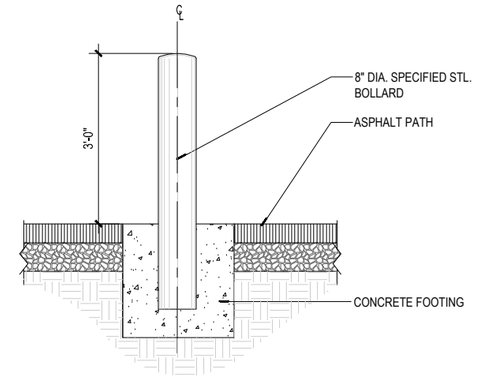
PLOT DATE: April 4, 2012 - 1:2PM USER: jeffb
FILE: C:\pwworkdir\dms\813938LOWTPL-140.dwg



1 ARCHITECTURAL SECURITY GATE

SECTION/ELEVATION

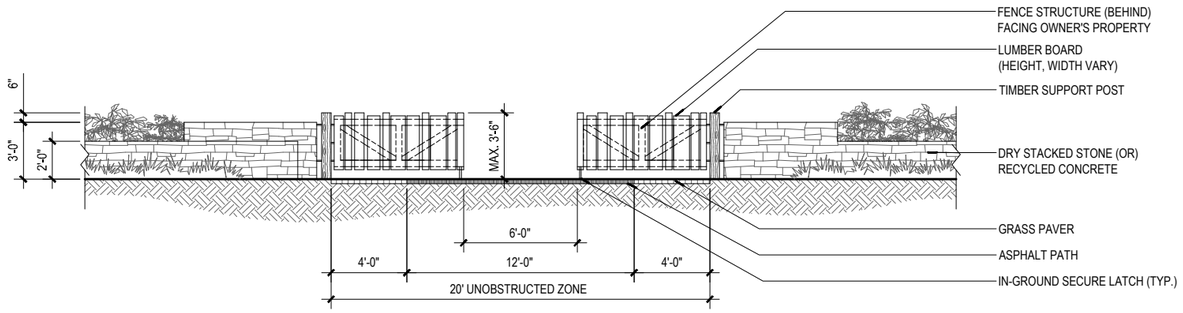
0' 1' 2' 4'



3 BOLLARD

SECTION

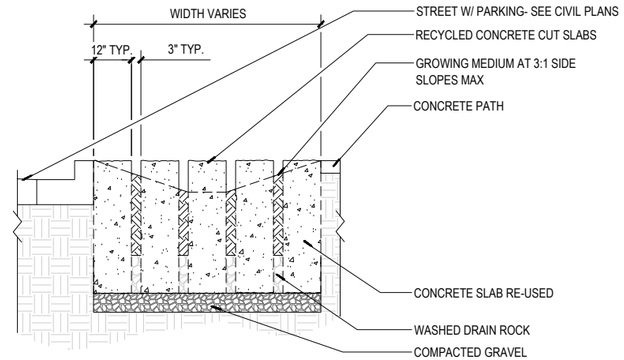
0" 4" 8" 16"



2 SWING GATE

SECTION/ELEVATION FROM MAPLETON DRIVE

0' 1' 2' 4'



4 STEPPING STONE SWALE CROSSING

SECTION

0" 6" 12" 24"

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	DETL_CONC_WALK_SWALE.dwg			
	DETL_BOLLARD.dwg			
	W01424-BORDER.dwg			

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LAKE OSWEGO, OR 97034
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LAKE OSWEGO AND TIGARD WATER TREATMENT PLANT

DESIGN REVIEW AND CONDITIONAL USE

HARDSCAPE & MATERIALS PLAN
DETAILS II

FILENAME
PROJECT NUMBER
SCALE: varies
DRAWING/FIGURE NUMBER: 14.1
52 OF

PLOT DATE: April 4, 2012 - 12:51PM USER: jeffb
FILE: C:\pwworkdir\dms913\03\LOWTP-L-14.1.dwg

City of Lake Oswego/Tigard Water Partnership
Water Treatment Plant Expansion Project
Land Use Permit – Construction Management Plan
Amended March 29, 2012
(Originally Submitted on January 12, 2012)

1.0 Purpose

This document describes the Construction Management Plan (CMP) specific to the Water Treatment Plant (WTP) Expansion as required by the City of West Linn Land Use Application; all figures cited in this plan are included in Section 21 of the Land Use Application Packet.

2.0 Project Overview

The existing WTP, originally constructed in 1967 to treat up to 10 million gallons per day (mgd) of water from the Clackamas River, was expanded in 1980 to its current treatment capacity of 16 mgd. In 1996, pursuant to conditional use and design review approvals, the WTP was upgraded to address neighborhood concerns regarding use of chlorine gas for water disinfection and to respond to more stringent water treatment regulations promulgated under the federal Safe Drinking Water Act (SDWA). Each prior expansion or upgrade of the WTP was determined by the City of West Linn to satisfy all conditional use and design review criteria and thus was allowed to proceed. For this current proposal, the WTP will be expanded to 38 mgd to replace obsolete, unreliable supply infrastructure and provide additional supply capacity for the next 50 plus years to satisfy current and long term water supply needs of Lake Oswego and the City of Tigard. Throughout the 32-month construction period, the existing WTP must continue producing safe drinking water in adequate quantity for City residents and wholesale customers. This objective will determine construction sequencing, duration, and work hours, and is the imperative upon which this construction management plan is developed.

3.0 Construction Schedule

The schedule for construction activities and associated durations is subject to local land use approvals. Assuming land use approval is received within 120 calendar days from notice of a technically complete application, activity start and anticipated durations are summarized below:

- Pre-Construction/Site Preparation Activities (3 months): March 2013 – May 2013
- Major Construction Activities (26 months): June 2013 – July 2015
- Post-Construction/Finish Work Activities (3 months): August 2015 – October 2015

Activities associated with this proposed CMP and as generally described above, are further detailed in the following subsections.

3.1 Pre-Construction/Site Preparation Activities

Prior to commencement of major construction activities, the following will be completed:

- Submittal for review and approval of a Traffic Control and Management Plan to the City of West Linn Engineering Department. This plan will include haul routes and details for establishment of temporary traffic control changes and signage in compliance with City requirements and the Manual of Uniform Traffic Control Devices;
- Installation of tree protection and site security fencing as shown in the approved application;
- Installation of erosion control best management practices as shown in the approved application; the applicant will submit a copy of an approved 1200-C permit to the City as evidence of compliance with Oregon Department of Environmental Quality regulations for construction site erosion/sediment control requirements;
- Establishment of Contractor and key Sub-contractor on-site construction offices, materials laydown and storage areas on property owned by Lake Oswego.
- Establishment of offsite parking areas. Applicant will furnish West Linn engineering staff with locations of offsite parking areas for construction parking.
- Existing trees authorized for removal by West Linn pursuant to the Final Conclusions and Order for the WTP application will be removed from the construction site.
- A digital video record to document existing conditions within the public right of way abutting the project site. This record will establish the preconstruction condition of visible surface improvements and conditions within the public rights of way that abut the property boundary's of the WTP site. A copy of this digital record will be provided to the City upon request.
- A communications plan will be developed that includes detailed information of communication means, methods, schedules, and key contacts for the project. A copy of this plan will be provided to the West Linn Public Works Department, Chairs of each Neighborhood Association within West Linn and posted to the project website.
- Project signage: Project signage will be placed strategically around the active work site and at offsite locations as may be approved by the City of West Linn Public Works Department as an element of the Traffic Control and Management Plan and Communications Plan. Emergency contact information will be provided on such signage.

3.2 Major Construction Activities

Construction activities will include:

- Establishing construction survey control monuments

- Conduct preliminary site investigations
- Site preparation
- Demolition of existing facilities
- Excavation
- Construction, including:
    - Civil Works – Earthwork, buried utilities and roadways
    - Structural/Architectural Works – Concrete and steel frame building construction
    - Mechanical Works – Including plumbing and HVAC
    - Electrical and Instrumentation – Including primary and secondary site power
    - Offsite frontage improvements to include half-street improvements comprising pavement restoration, surface water quality improvements, new pedestrian facilities and coordination of non-project related public improvements with the City of West Linn Public Works Department.
- Landscape, trail and final treatment plant road frontage work

Construction hours of work will be as allowed by the City of West Linn and will occur as follows:

Monday through Friday 7 a.m. to 7 p.m.

Saturday and Sunday 9 a.m. to 5 p.m.

Because the work will require connection to active water treatment facilities, temporary interruptions to normal water treatment plant operating schedules will be required. To minimize the frequency and duration of plant outages, work outside allowed work hours as noted above will be required. Not less than seven (7) days advance notice to the City Public Works Department, City Manager and Chair of the Robinwood Neighborhood Association will be provided prior to work outside allowed work hours. Said notice will include justification for work outside allowed work hours, beginning and end dates, and any information unique to the specific activities.

3.3 Post-Construction Activities

After major construction activities are complete, the following activities will be initiated and completed:

- Final site grading;
- Site mitigation plantings and landscaping;
- Removal of temporary site construction fencing and placement of final site fencing;

- Removal of erosion control devices;
- Removal of tree protection fencing;
- Demobilization of construction offices and contractor equipment;
- Restoration of offsite parking, staging and storage areas as necessary;
- Restoration of damaged streets to City of West Linn standards.

4.0 Site Management

4.1 Construction Staging and Stockpiling

Construction staging and stockpile areas will be located within designated disturbance areas as shown in Section 21, Figure 6.0 of the Land-Use Application. Several types of stockpiles are expected: general excavation material, aggregates, engineered backfill, and topsoil. Storage of stockpiled materials on site will reduce the need to haul materials off-site for storage and haul back on site later. Stockpiles will be managed to control dust and runoff.

As much as possible, the plan minimizes the space requirements for construction-related activities by compressing and consolidating lay-down and work areas, and avoiding impacts to significant trees.

4.2 Construction Waste Management

The Construction Contractor will dispose of all on-site waste. These materials may include concrete/rebar, dirt, rocks, asphalt and other materials from demolition of the existing facilities, as well as field office and on-site construction personnel related waste. Containers and layout will be included in the staging areas shown in Section 21, Figure 6.0 of the Land-Use drawing set.

4.3 Hazardous Material

Only materials, directly related to construction activities, will be permitted on site. These materials will include but not be limited to diesel fuel, hydraulic fluids, and paint, in consumer quantities allowed by regulations. Use, transport, and storage of any such materials will be minimized and quantities will not exceed consumer levels (intended for retail sale). On-site fuel transfer will be limited to designated construction staging areas and construction equipment will be stored in these staging areas overnight. Typically, the contractor will not store fuel, oil, or other hazardous materials on site, but rather will bring fuel to the site via maintenance vehicles on a daily basis.

4.4 Sanitation and Litter Facilities

The Contractor will be responsible for providing portable sanitation facilities for construction personnel for the duration of the construction project. The Contractor will also furnish and utilize suitable receptacles for waste and recyclables and ensure that all garbage is removed from the site on a weekly basis.

5.0 Construction Impacts

5.1 Noise

Construction-related noise will meet local noise ordinances for construction work.

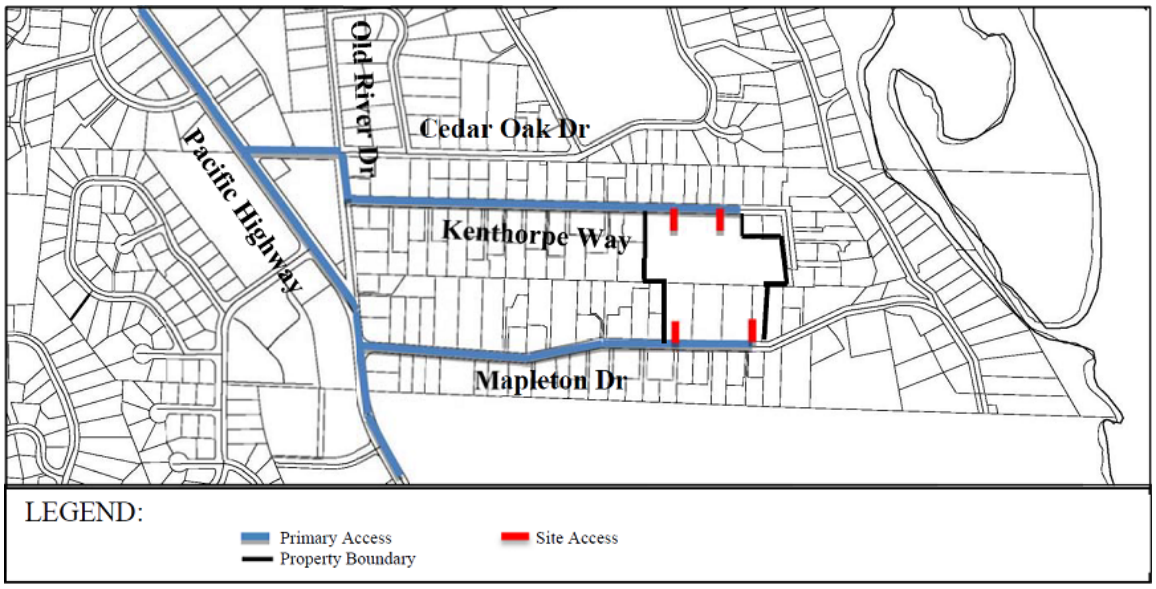
5.2 Traffic

Construction traffic to and from the project site will ebb and flow throughout construction and will not be equally apportioned to the Mapleton Drive and Kenthorpe Way corridors depending upon any particular sequence of work. Regardless, access to private properties throughout the construction period will be maintained with few exceptions. When the need for temporary interruptions to normal access to private properties are identified, advance notice will be provided to affected property owners in accordance with the approved traffic control and management plan and communications plan (see Section 3.1, above).

Figure 1 summarizes the primary construction access routes for the project. As shown in the Figure, there are two primary access routes to the project site:

1. Pacific Highway (Highway 43) to Cedar Oak Dr. to River Road Dr. to S. Kenthorpe Way
2. Pacific Highway (Highway 43) to Mapleton Dr.

Figure 1: Primary Construction Access Routes



Significant Trees to be removed (Amended April 5, 2012)

The West Linn Arborist determined that there are 41 significant trees on site. The proposal will remove up to six significant trees leaving 35 (85.4%) of the significant trees on site and protected. Efforts will be made to protect and, if possible, save trees these significant trees, as described below.

	Inventory Number	Common Name	Dbh *inches*	Reason for removal
1	13960	Norway Maple	21	The site design collapses the processing facilities into the center of the site and the required bi-directional truck route encircles the processing facilities. Consequently, there is insufficient turning radius for truck to enter or exit the processing plant unless one tree is removed at the bend of the driveway.
2	14245	Oregon White Oak	20	The site design incorporates a pedestrian walkway and screening fence at this site. In addition, plant front end loaders must move from the settling ponds to the west. To accommodate the pedestrian and on-site vehicle movement this tree must be removed.
3	14252	Oregon White Oak	30	The 30-foot deep clearwell will be located immediately to the west of this tree. Consequently, because of the need to move equipment around the excavation and the need to shore up the walls of the clearwell, the Lake Oswego Arborist determined that it is unlikely that this tree will survive the construction activity. During final design applicant will investigate measures to protect these trees using standard tree protection techniques (standard root and foliage protection methods), and minor shoring (up to three feet below existing ground surface adjacent to project excavations) to retain in-situ soils in tree root zones. Applicant will not be required to consider more protracted shoring measures. Investigated measures will be summarized in a memorandum submitted to the West Linn arborist.
4	14254	Giant Sequoia	39	The 30-foot deep clearwell will be located immediately to the west of this tree. Consequently, because of the need to move equipment around the excavation and the need to shore up the walls of the clearwell, the Lake Oswego Arborist determined that it is unlikely that this tree will survive the construction activity. During final design applicant will investigate measures to protect these trees using standard tree protection techniques (standard root and foliage protection methods), and minor shoring (up to three feet below existing ground surface adjacent to project excavations) to retain in-situ soils in tree root zones. Applicant will not be required to consider more protracted shoring measures. Investigated measures will be summarized in a memorandum submitted to the West Linn arborist.
5	14349	Oregon White Oak	30	The project designers had two choices for constructing the 3 million gallon clearwell. They could build an above ground water reservoir, potentially exceeding the zone height restrictions and permanently occupying what is now open space, or bury the reservoir. To minimize visual impacts on the neighborhood and to provide open space on site for local enjoyment, the Sponsors selected the clearwell option. The designers considered multiple options for the clearwell but all locations would impact a significant tree. Consequently, this tree will be removed because it would not survive the impacts from the selected layout.
6	14366	Western Red Cedar	42	Same as #5