Water Treatment Plant
Conditional Use and Class II Design Review
Land Use Application:
AMENDED AUGUST 20, 2012

Prepared for
Lake Oswego-Tigard Water Partnership
August 20, 2012

Prepared by
Eric Day, Senior Planner, City of Lake Oswego
Eric Eisemann, Principal, E^2 Land Use Planning

Contact List

APPLICANT

City of Lake Oswego
Lake Oswego/Tigard Water Partnership
4101 Kruse Way
West End Building
Lake Oswego, OR 97034
503.534.4238

Contact – Eric Day

OWNERS

City of Lake Oswego
4101 Kruse Way
Lake Oswego, OR 97034
503.534.4238

Contact – Joel Komarek, PE

City of Tigard
8777 SW Burnham Street
Tigard, Oregon 97223
503-718-2596

Contact – Dennis Koellermeier

SUBCONTRACTORS

Brown and Caldwell
6500 SW Macadam Blvd., Suite 200
Portland, OR 97239
503.244.7000

Contact – Jon Holland, PE

MWH
806 SW Broadway, Suite 200
Portland, OR 97204
503.226.7377

Contact – Peter Kreft, PE

MWA Architects
70 NW Couch Street, Suite 401
Portland, OR 97209
503.973.5151

Contact – Jeff McGraw, AIA

GreenWorks, PC
22 NW 2nd Avenue, Suite 100
Portland, OR 97209
503.222.5612

Contact – Mike Faha, LSA

E² Land Use Planning Services, LLC
215 W 4th Street, Suite 201
Vancouver, WA 98660
360.750.0038

Contact – Eric Eisemann, JD

David Evans and Associates, Inc.
2100 SW River Parkway
Portland, OR 97217
503.499.0572

Contact – Ethan Rosenthal

Barney & Worth, Inc.
247 Commercial Street, NE, Suite 204
Salem, Oregon 97301
503.585.4043

Contact – Clark Worth, Libby Barg

Table of Contents

I. Introduction

All substantive changes to the application narrative, Section 4, are lightly screened. For ease of reading, changes in grammar, capitalization, punctuation or similar writing mechanics that do not affect the substance of the report, are not highlighted. Where no amendments or additions are proposed, the original application narrative is not highlighted.

On May 16, 2012, the Lake Oswego-Tigard Water Partnership (Partnership) asked the West Linn Planning Commission (WLPC) to suspend the Water Treatment Plant (WTP) land use proceedings so that the Partnership could respond to three issues of concern raised during the WTP hearing process. Those issues identified in the May 16th request are:

1. Expediting submittal of the pipelines application to allow a consolidated hearing process in which the cumulative effects and benefits of both projects are considered;
2. Initiating negotiations with the City of West Linn on an amended intergovernmental agreement (IGA) for emergency water supply that clarifies commitments by and benefits to the parties; and
3. Conducting further discussions with the affected neighborhood association and individual neighbors in an effort to resolve their concerns over mitigation.

Since May 16, 2012, the Partnership:

- Submitted a separate land use application on June 25, 2012 for the raw water pipeline/finished water pipeline (RWP/FWP), to be considered in a consolidated hearing with the WTP application this fall
- Developed with the City of West Linn an update to the current (2003) emergency water supply IGA agreement which will come before the City Councils of both Tigard and Lake Oswego for approval in September
- Participated in meetings with representatives of the neighborhood and the City of West Linn, and funded the services of a professional facilitator selected by the City of West Linn, in an effort to resolve the outstanding items on the neighbors' requested mitigation list.

AMENDMENTS – AUGUST 20, 2012

The Partnership takes its commitment to minimize temporary and permanent impacts on the neighborhood and the citizens of West Linn seriously. During the public hearing process, citizens raised several concerns regarding WTP construction and operations. Consequently, the Partnership instructed its design team and consultants to find additional ways to further minimize possible WTP impacts.

The Partnership has amended the land use application narrative, figures, and supporting documents to reflect these changes. The revised application cover sheet identifies sections of the land use application that have been modified. Table 1.1 of the application narrative summarizes the specific changes to the WTP site design. In general, the effects of many of these changes result in less truck traffic during construction, less noise during construction, reduced visual impacts, and an overall site disturbance (paving and buildings) reduction of more than 12,000 S.F. from the original land use application.

Item	Change	Change to Section 21 Figures
Architecture	Significant changes in architectural design – some building heights increased but footprints have been reduced	Figure 3.0 and Figure Series 9 and 10 for specific buildings
	Building heights proposed: mechanical dewatering – 35 feet, finished water pump station – 27 feet, electrical building – 31.5 feet inches, and ballasted floc penthouse – 30.5 feet	Building heights shown in series 10
	Administration building width reduced, increased neighborhood set-backs, reduced footprint and associated pile foundation system	Figure 3.0
Primary process facilities	Primary process facilities refined allowing for reduced building footprint and associated pile foundation systems, including:	Series 9 and 10
	20 percent reduction in ballasted flocculation basin size	Figure 9.1
	20 percent+ reduction in ozone contact basin size	Figure 9.1
	20 percent reduction in filter/filter gallery size	Figure 9.1
	30 percent reduction in clearwell volume/size resulting in fewer excavation, truck haul trips	Figure 3.0
	20 percent reduction in finished water pump station size	Figure 9.5
Secondary process facilities	Secondary process facilities were refined, including:	
	Washwater handling facility geometries were optimized	Figure 3.0
	Addition of washwater clarification if ever needed, is deferred until the future	Figure 3.0
	Three gravity thickeners reduced to a single gravity thickener, avoiding need for future construction; reduced footprint and associated pile foundation system	Figure 9.4
	30 percent reduction in mechanical dewatering building size; reduced footprint and pile foundation system	Figure 9.4
Support facilities	Support facilities refined, including:	
	Revised electrical building footprint; location of switchgear out-of-doors to minimize building size; reduced footprint and pile foundation system	Figure 3.0, 5.0, and 9.6

Item	Change	Change to Section 21 Figures
	Secondary power feed from PGE has eliminated the need for a large diesel generator for emergency power; a smaller generator an optimized design will create less noise, minimize fuel storage and create less traffic for O&M	Figure 5.0
	10 percent reduction in chemical building size; inclusion of a partially enclosed chemical unloading area for optimum safety; reduced footprint and pile foundation system	Figure 3.0 and 9.7
	Location of liquid oxygen (LOX) tank and vaporizers optimized	Figure 3.0
Site/civil	Site/civil refined, including:	
	More space between facilities to minimize need for shoring, which will reduce truck trips and noise during construction	Figure 3.0
	Roadways refined further reducing building sizes and increasing setbacks to the west	Figure 3.0
	Small emergency generator relocated in a sound-attenuated enclosure, reducing noise impacts and providing additional resiliency of operations for emergency response reliability.	Figure 3.0 and 3.4
	Significant reduction in onsite fuel storage tank size	Figure 3.4
	Generator in an enclosure, reducing electrical building footprint and pile foundation system	Figure 3.4
	CO_2 tank and compressor eliminated	Figure 3.0
	Stormwater ponds and infiltration basins moved per new site plan layout	Figure 4.0
	Fire hydrant count reduced from 4 to 2 per fire code (still in excess of code requirement)	Figure 7.1
	Bicycle rack locations and number of stalls revised per discussions with city staff	Figure 7.0
	Added Figure 2.13 Tree Areas	Figure 2.13

Table 1.1 – Significant changes in the design, operation, and construction of the WTP

BENEFITS

The proposed WTP improvements will provide multiple benefits to all of West Linn and the Robinwood Neighborhood:

- **WTP proposal furthers West Linn's adopted plans and regional plans.** The West Linn Comprehensive Plan and West Linn WSMP recognize the intrinsic benefits of enhancing the reliability and capacity of the emergency intertie between the Partnership and the West Linn water system. As noted above, the WSMP specifically relies on "development of reliable emergency supply capacity with the cities of Lake Oswego, Tigard, and others . . ." as part of its preferred solution to address storage and emergency supply deficiencies.

  The WTP proposal is endorsed by the Regional Water Providers Consortium Board as being a "model of integrated water supply planning, as anticipated by the Regional Water Supply Plan of 2004." The ability of Lake Oswego to provide West Linn citizens with an emergency source of water as recently as December 2011 and January 2012, when the South Fork Water Board intake structure was damaged, underscores the importance of upgrading the WTP. The Clackamas River Water Providers, a coalition of special water service districts and cities, of which West Linn is a member, also supports the project for the opportunities it will create to connect all four major drinking water sources in the region and, in doing so, facilitate the ability to move water around the region for environmental, emergency response, and economic benefits.

  This application provides detailed plans and reports in response to the requirements of the conditional use and Class II design review requirements and supplemental standards and regulations. The Applicant has consistently met its burden in addressing each applicable criterion and demonstrates that the proposed WTP project either satisfies or, by means of conditions of approval, can satisfy all relevant applicable approval criteria.

- **Essential community need met at substantial savings to West Linn ratepayers.** The WTP is part of a system of water facilities that fulfill an essential community need for Lake Oswego, Tigard, and West Linn. The WTP is an integral part of a water system that will span four jurisdictions. The construction and operation of Lake Oswego's water treatment facility and RWP/FWP in 1967 created an opportunity for West Linn to secure a redundant source of water for emergency and nonemergency use at a very low cost relative to other options that would provide an equivalent benefit. In 1984, West Linn took advantage of that opportunity and worked with Lake Oswego to create and adopt an IGA that allows Lake Oswego, West Linn, and the South Fork Water Board to share water in times of emergency or to facilitate maintenance of their respective water systems.

  The 1984 agreement was updated in 2003, when West Linn and Lake Oswego partnered in the design, construction, and operation of an improved intertie and pump. This mutually beneficial arrangement exists today, and West Linn and the Partnership are now in the process of updating this important agreement to reflect Tigard as a new partner to the IGA, and, more importantly, to reflect the significantly improved water system, that if constructed, will dramatically enhance the reliability and capacity of the existing intertie at significant cost savings to West Linn.

  Specifically, expansion and construction of the new WTP, in conjunction with the upsized RWP/FWP, would save West Linn ratepayers **$11.6 million** in avoided costs for high-priority emergency supply capacity and reliability projects identified in West Linn's adopted *2008 Water System Master Plan* (WSMP). And the RWP/FWP projects will save West Linn an additional **$0.3 million** in avoided costs for high-priority capital maintenance projects in the WSMP.

Avoiding these significant short-term infrastructure costs directly benefits West Linn ratepayers today and can help West Linn fund its remaining substantial long-term water infrastructure needs in a more manageable way for the benefit of future ratepayers.

In addition, feasibility of the Bolton Reservoir replacement, one of West Linn's highest priority capital projects, is dependent on an extended summer shutdown of the existing reservoir. This is only possible with an emergency supply source of adequate capacity during this peak demand season. The Partnership will be able to meet this need after the proposed WTP and RWP/FWP projects have been completed. Anticipated schedules for these projects are compatible.

- **Revised WTP site design enhances the character of the neighborhood.** The cumulative effect of the revised operations and site designs is to further reduce the visual and auditory impacts of WTP operations in the neighborhood.
    - The revised WTP site plan reduces the building footprints and associated pile foundations of the primary processing facilities by 20 percent or more.
    - The width of the administration building was reduced while the associated setback was increased.
    - In the category of secondary processing facilities, construction of the washwater handling facility is deferred, the three gravity thickeners were reduced to one structure, and the footprint of mechanical dewatering building was reduced by 30 percent.
    - The secondary power feed significantly reduced the size of the primary diesel power emergency generator which has been moved into an enclosed structure with sound attenuation built in.
    - The chemical unloading area is now partially enclosed.
    - The CO_2 tank was eliminated.
    - The design team carefully considered lighting impacts, and the revised landscape plan requires installation of mature 14-foot trees in three light-sensitive areas, further reducing the visual impact of the processing facility.

In addition to these direct benefits, the new WTP design continues to avoid environmental impacts and is supported by West Linn's adopted plans as well as regional planning groups, as described below.

- **The WTP proposal enhances the environment -- Innovative 'Green" designs reduce stormwater impacts.** The Partnership is committed to finding solutions to minimize impacts on the local environment. Green roof strategies will be used to cover approximately 8,254 square feet of the new roof surfaces throughout the project. The application of green roofs will provide multiple benefits to the project beyond stormwater management; they will provide additional insulation for reduction of both noise and energy usage, they will help reduce the heat island effect, and will provide potential habitat for song birds and other urban wildlife. In addition to the green roofs, approximately 17,845 square feet of pervious pavers are proposed for the visitor and employee parking areas and the Mapleton Drive emergency access road and path. These impervious area reduction techniques reduce the need to manage approximately 0.6 acres of new surface area and significantly reduce the volume of water discharge into the surrounding drainage area.

- **The WTP proposal provides significant Underground Utility Improvements – Old River Drive and Kenthorpe Way**. Portland General Electric (PGE) proposes to install an underground secondary power feed to the WTP along Old River Drive and Kenthorpe Way. The City of West Linn proposes to replace the aging 8-inch AC water line along this same alignment and improve surface

pavements. The Partnership team met with PGE and West Linn Public Works representatives to discuss these future activities. The PGE and West Linn projects will operate independently from the WTP land use review process.

The potential consequence of three separate projects occurring in Kenthorpe Way could be duplicative street restoration or patching efforts. Instead, the Partnership will design the water line replacement for West Linn and include the work in the WTP construction contract, thereby saving West Linn design time and costs. The Partnership will also work with West Linn and PGE to coordinate the final paving of WTP frontage improvements and final resurfacing of Old River Drive and Kenthorpe Way.

The benefits of these efforts include:

- The Partnership will coordinate the phasing of these improvements under and with the WTP construction contract work to avoid inadvertent traffic disruptions that can occur when multiple parties are performing construction work in the same neighborhood.
- The result will be a new smooth and durable asphalt surface on Old River Drive and Kenthorpe Way, unencumbered by utility trench patching, that will last well into the future.
- The value of the new paving work is over $100,000.

- **New WTP addresses safety concerns.**

Seismic. The new WTP will provide significantly greater reliability than the existing WTP, including design to the highest seismic standard for an extraordinary earthquake, a magnitude 9.0 event. Equally important, the Partnership understands that the WTP project has raised serious concerns within the neighborhood about seismic stability, construction impacts, noise, safety, and other issues. The Partnership contracted with recognized experts to evaluate these concerns in detail and has provided supplemental application materials, including seismic evaluation-geologic hazards analysis and mitigation proposals, construction management plan (CMP), traffic control management strategy memorandum (TCSM), Safe Operations Plan (SOP), and more. In many ways, these reports and plans exceed the formal requirements of the land use permitting process, but the changes in design and practices will ultimately make this a better project and provide more robust protections for the citizens of West Linn.

Adopting the high seismic design standards will provide greater reassurance that the WTP will survive a major seismic event and will be able to provide a more reliable source of emergency and nonemergency water for the region. The WTP site is located in a high earthquake hazard area. Because some elements of the WTP function to provide fire flows to Lake Oswego, Tigard, and West Linn, those elements are considered essential facilities. Consequently, the Partnership completed a Site-Specific Seismic Hazards Evaluation in accordance with requirements of the Oregon Structure Specialty Code, 2010 Edition (OSSC 2010). Based on this hazards evaluation, the Partnership confirmed that the major geologic hazard at the WTP site is soil liquefaction. The proposed design incorporates multiple mitigation strategies for every type of structure to be built or retrofitted. Combined, these mitigation techniques can successfully accommodate the seismic total and differential settlements. Detailed procedures and results of the Site-Specific Seismic Hazards Evaluation are presented in Section 17.

Operational safety. The operators of the existing WTP have managed the WTP in an exemplary manner; there have been no safety or health violations over the 40-year history of the WTP. The Safe Operations Plan (SOP) contained in Section 18 details how the operation of the new WTP will continue this unbroken tradition of safe operations and excellence.

Construction traffic safety. Construction of the WTP will bring additional vehicles to the neighborhood streets and OR 43. The revised CMP and TCSM contained in Sections 14A and 14B identify and consider the additional traffic the project will present along with measures to mitigate traffic impacts, including provisions to ensure that that emergency vehicle access is always available 24/7. The information presented in these Sections will be reviewed with West Linn Public Works Department, Oregon Department of Transportation (ODOT) and Tualatin Valley Fire and Rescue (TVF&R) officials and provisions will be included in the WTP construction contract requiring development of traffic control and safety plans to be followed through construction. The Partnership will include these officials in review and approval of the plans to ensure that all regulatory traffic and safety provisions are followed.

LOCATION

The project site is located at 4260 Kenthorpe Way (Section 24, Township 2S, Range 1E) within the Robinwood neighborhoods on Kenthorpe Way. The total site area is 9.24 acres. The City of West Linn approved a lot line adjustment in September 2011. See Section 9. For purposes of this application, the tax lot number for the consolidated lot is 21E24BD00300.

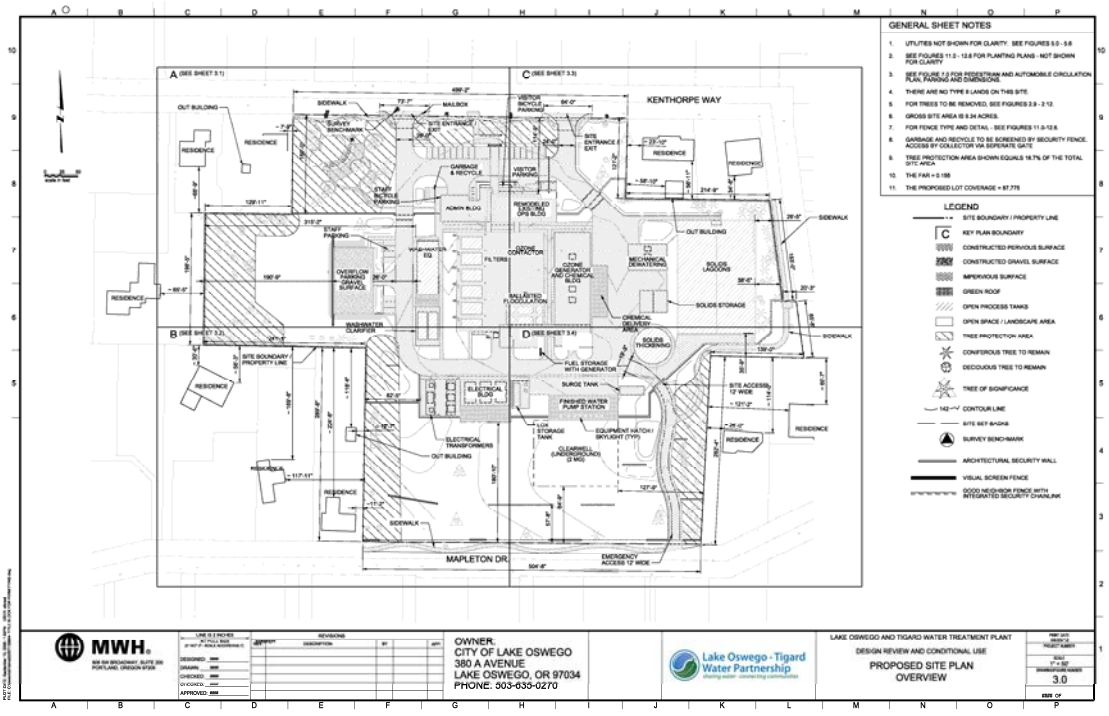


Figure 1.0: Proposed Site Plan

THE LAKE OSWEGO TIGARD WATER SUPPLY PARTNERSHIP

The applicant is the Lake Oswego-Tigard Water Supply Partnership (Partnership). The cities of Lake Oswego and Tigard formed the Partnership in 2008 to develop and deliver a reliable potable water supply for the two cities. The expansion of the WTP is a critical component of the Partnership's water treatment and delivery system, providing potable water to Lake Oswego and Tigard on a daily basis and a supplemental supply of water for West Linn in times of emergency.

Lake Oswego holds significant water rights on the Clackamas River and has relied on that source as its primary water supply for the past 40 years. Tigard receives surplus Clackamas River water from Lake Oswego and water from Portland and Beaverton. The capacity of the Partnership supply system will be 38 million gallons per day (mgd) following completion of this project. This capacity will be available to both Lake Oswego and Tigard in 2015. The main elements of the Partnership's proposed water supply system include:

- Intake/Raw Water Pump Station (RIPS) on the Clackamas River;
- Raw Water Pipeline (RWP) from the RIPS to the Lake Oswego WTP;
- Expansion of the existing WTP;
- Finished Water Pipeline (FWP) from the WTP to Waluga Reservoir No. 2;
- Waluga Reservoir No. 2 (WR2); and
- Bonita Pump Station (BPS) to deliver water into Tigard's distribution system.

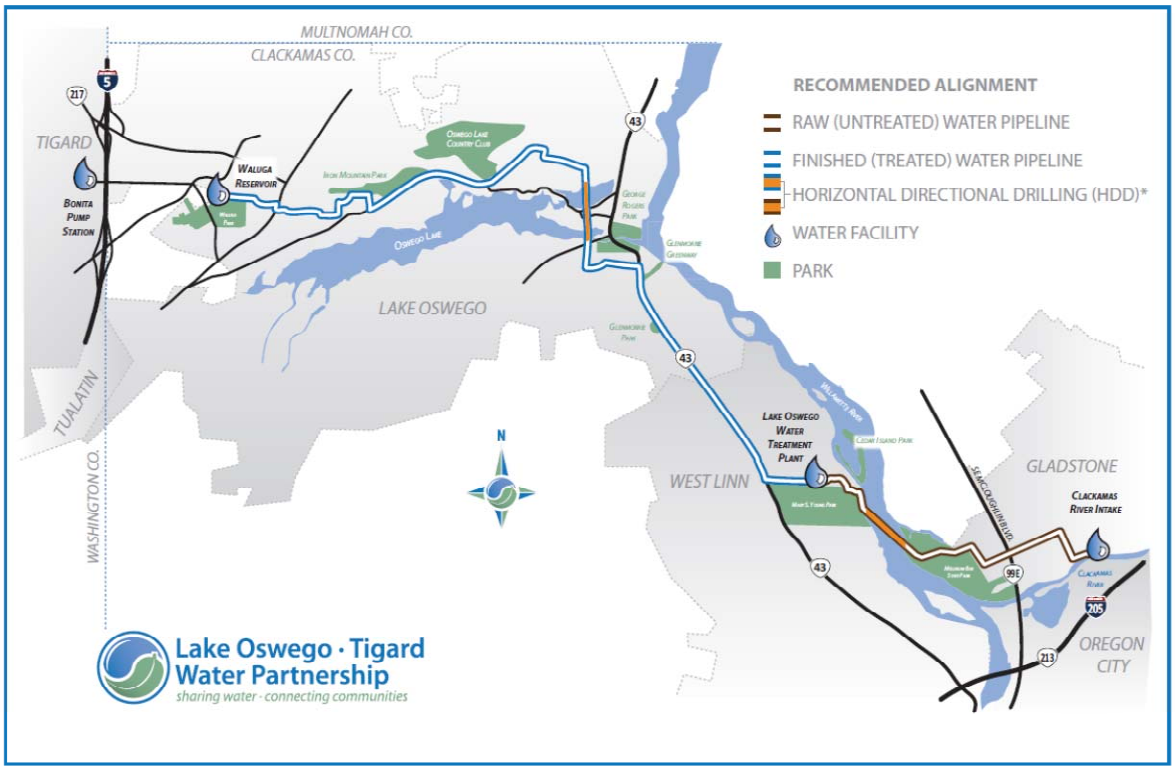


Figure 1.1: Lake Oswego-Tigard Water Supply Partnership Overview

PROPOSAL: LAKE OSWEGO WATER TREATMENT PLANT (WTP)

The purpose of this application is to secure Conditional Use and Class II Design Review approval to expand the WTP to provide the desired treatment and finished water pumping capacity. The expanded WTP will receive untreated water drawn from the Clackamas River at the new RIPS, approved by the City of Gladstone in 2011, via a new raw water pipeline, subject to future land use approval in Gladstone and West Linn. The WTP will send finished water into a new clearwell on-site and from there the Partnership will pump finished water through West Linn and Lake Oswego to the new Waluga Reservoir located in Lake Oswego. The new Bonita Pump Station located in Tigard will pump water from the Waluga Reservoir to the Tigard distribution system.

The Partnership determined that the existing WTP plant site on Kenthorpe Way is too small to accommodate the expanded plant. West Linn approved Lake Oswego's request to consolidate the City's property on Mapleton Drive with the Kenthorpe property because the proposal satisfied the lot consolidation approval criteria.

The Partnership has completed the preliminary 60 percent design phase, which allows for a more detailed and refined site design. The design team will complete the final design of the WTP in late 2012 or early 2013. The Partnership anticipates that construction will begin in May or June 2013 with project completion by early 2016.

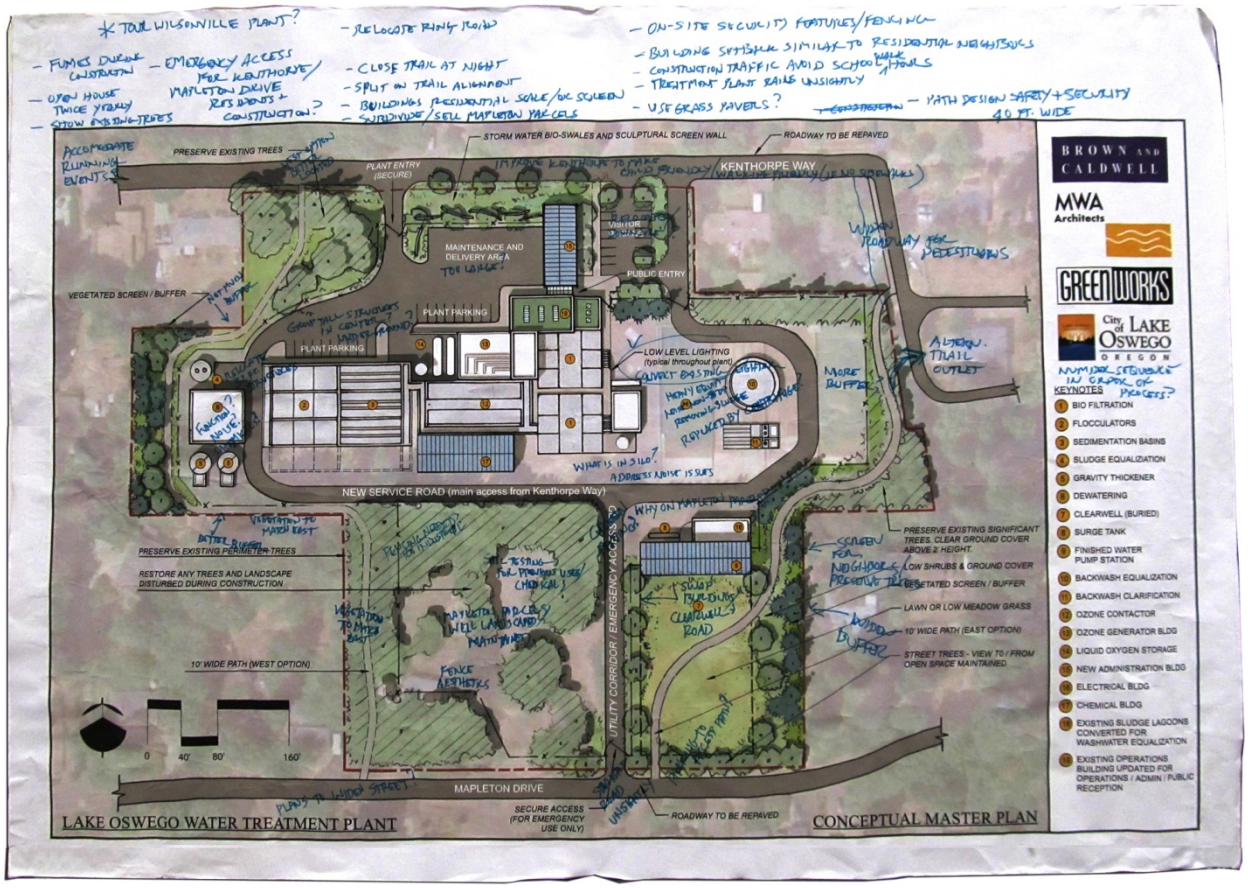
The key features of the proposed WTP expansion include:

1. New administration building and modifications to the existing operations building;
2. New raw water settling facilities. New high efficiency settlement technology is proposed to reduce the footprint of new raw water settling facilities;
3. Addition of six new filters to replace the existing six filters;
4. Addition of new ozone contact facilities to enhance water quality and improve taste and odor aspects of the water produced;
5. New 2.0 million gallon (MG) treated water storage reservoir (clearwell) buried underground with a new finished water pump station (FWPS) located above ground inside of a new building;
6. New solids handling systems including one solids thickener and mechanical dewatering units;
7. New chemical storage and feed systems;
8. New washwater (WW) handling systems to equalize, clarify and recycle waste filter backwash water;
9. The existing WTP power supply will be maintained and second PGE power supply will be installed to avoid the need to install a large backup power generator on-site;

The proposed conditional use permit will include the construction of a new finished water pipeline (FWP) and raw water pipeline (RWP) on the WTP site. However, this proposal does not include work done in furtherance of the RWP and FWP off of the WTP site.

Site Design Processes

Early in the design process, the applicant reached out to neighborhood residents for help in better integrating the WTP into the neighborhood. As a result of a lengthy neighborhood coordination process, the design team made substantial changes to the site layout in an effort to reduce potential impacts on neighbors and within the neighborhood. Figure 1.2 illustrates the neighborhood design consultation in process.



Neighbors added their suggestions to enhance the WTP site design.

Figure 1.2: Preliminary Site Layout – Neighborhood design consultation

During the public hearing process in April and May 2012, the local residents urged the Partnership to consider additional strategies to further reduce impacts on the neighborhood. As a direct consequence of neighborhood input, the Partnership design team has further compressed the WTP processing activity into the center of the site. The WTP design team worked over the summer of 2012 to adjust the plant operations and site design to further minimize impacts to the neighborhood. The evolving design reduced the size of the administrative building and set it back further from Kenthorpe Way. The CO_2 tank was eliminated. The clearwell size was reduced by one-third (from 3 MG capacity to 2 MG capacity), thereby reducing construction-related traffic impacts. A lighting study concentrating on perspectives from abutting residential properties resulted in the placement of mature 14 foot coniferous trees at key viewing angles. The net effect is a more compact WTP facility with even

greater separation from existing residences and much more robust screening, landscaping, and buffering. As a direct consequence of its efforts to address neighbor concerns, the Partnership will incur several million dollars of additional expense.

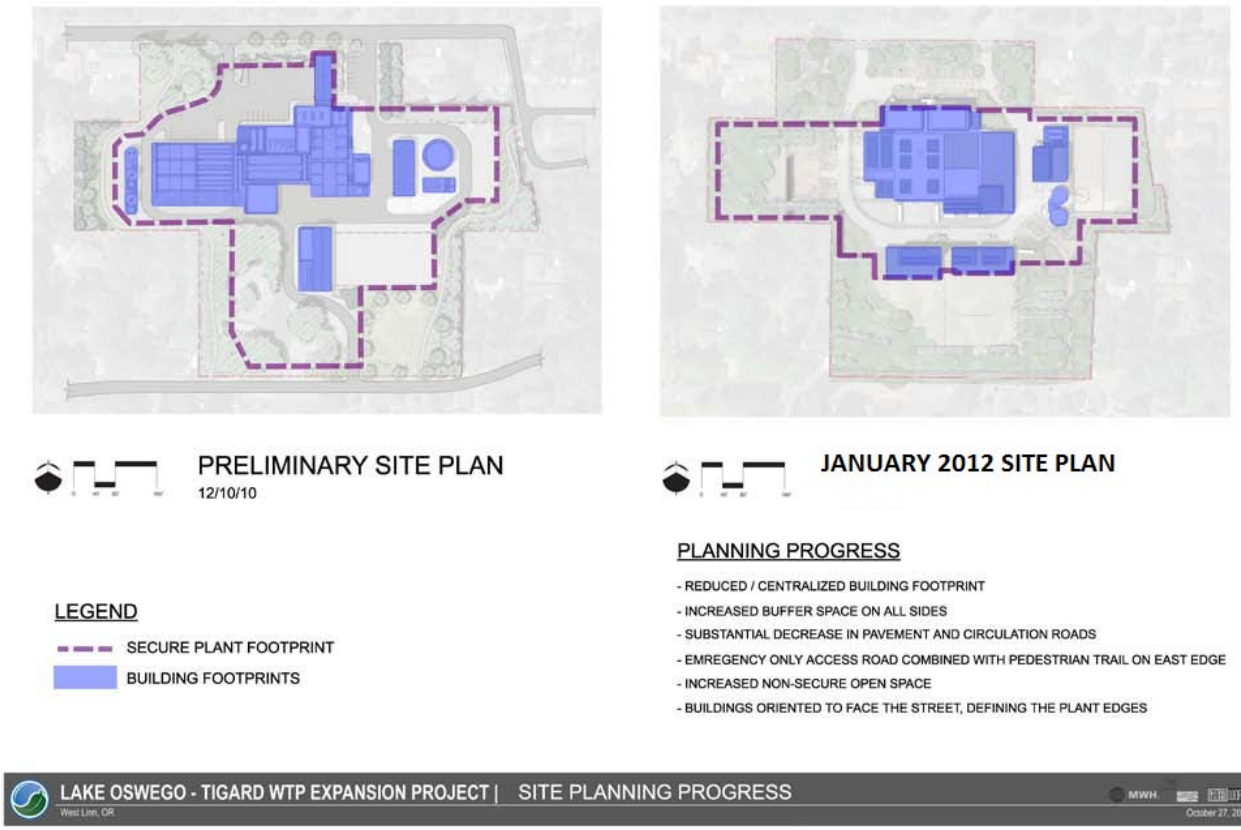


Figure 1.3: Site Plan Evolves

WTP CONSTRUCTION AND LAND USE HISTORY

The following describes the history of the Lake Oswego WTP and its relationship to comprehensive land use planning in West Linn:

1967 The City of Lake Oswego constructed the existing WTP in unincorporated Clackamas County. The WTP included two sedimentation basins and four filters.

1980 West Linn granted Conditional Use and Design Review approval for an expansion of the WTP. The expansion included the construction of an additional sediment basin, two mixed media filters, and a new high service pump. Plant treatment capacity grew from 10 mgd to 16.0 mgd.

1988 The West Linn Planning Commission approved a consolidated Conditional Use and Design Review application (CU-88-02 and DR-88-14) to allow construction of on-site drying beds. The Commission found that: *The size, shape, topography and natural features [of the site] are well suited to this use … Potable water is essential for any community and any process which improves the provision of that service requires support…"*

1996 The West Linn Planning Commission approved a consolidated Conditional Use and Design Review application (CUP-96-04 and DR-96-07) for "Remodeling and Updating the Lake Oswego Water Treatment Plant at 4260 Kenthorpe Way." The West Linn City Council upheld that decision upon appeal. See Section 19 for the Conditions of Approval. The essential elements of the proposal, as described by City staff, were to:

(1) Install a sodium hypochlorite facility inside the existing operations buildings.

(2) Improve chemical feed systems (lime, carbon dioxide, and alum) to reduce corrosion in pipelines and household plumbing.

(3) Improve residuals (sludge management) with more on-site recycling of processed water and less moving of residual materials by replacing existing settling ponds and drying beds with engineered, ground level drying beds or lagoon; and

(4) Reinforce and remodel the existing building to ensure compliance with seismic (earthquake) and Americans with Disabilities Act (ADA) requirements.

1997 The West Linn Planning Director approved an "Extension of CUP Approval" (Misc-97-28) for the Lake Oswego WTP extending the approval period of the 1996 CUP for six months.

2011 The Planning Director approved a Lot Line Adjustment (LLA-11-01), consolidating 21E24BD300, 401, 1200, 1300, 1400 and 1500: 4260 Kenthorpe Way, no street address, 4245 Mapleton Drive, 4305 Mapleton Drive, 4315 Mapleton Drive and no street address respectively. The consolidated single lot area consists of 9.24 acres. See Section 9.

WTP & FWP INTEGRATION IN WEST LINN WATER SYSTEM PLAN

Beginning in 1982 and continuing through today, the City of West Linn has integrated the finished water generated by the Lake Oswego WTP into the West Linn water system planning efforts. Milestones along the path of coordination between the two cities include:

1982 West Linn adopted a comprehensive water system plan, which directly addressed the Lake Oswego WTP and need for an intertie.

1984 West Linn entered into an intergovernmental agreement with the City of Lake Oswego and the South Fork Water Board (SFWB) to construct, operate, and maintain an intertie between the Lake Oswego water supply system and the West Linn and SFWB system. West Linn constructed an 18-inch diameter intertie to Lake Oswego's 24-inch diameter transmission line in the City. Activation of the intertie may be accomplished only by the mutual consent of Lake Oswego and SFWB.

1987 West Linn updated its comprehensive water system plan, describing the "implementation of the intertie with the City of Lake Oswego water system" as a "major accomplishment" that was fully integrated with other system accomplishments.

2001 West Linn improved the intertie with the construction of an intertie pump station with a current firm capacity of approximately 4 mgd. Lake Oswego contributed $65,000 dollars to the cost of the new pump station. Approval of the 2003 emergency intertie agreement facilitated West Linn's approval of the land use review process. The below-grade pump station is located near the intersection of Old River Road and Willamette Drive. The pump station can be used to pump emergency supply from the Lake Oswego distribution system

into the Bolton and Robinwood pressure zones through altitude and pressure reducing valves located at the station. The pump station provided water to West Linn from November 2001 to April 2002 during the upgrade of the City's I-205 transmission main from the SFWB and has subsequently provided supply for short durations. (*West Linn Water System Master Plan* (pages 2-4).

2008 The City of West Linn continues to maintain an emergency water intertie with the Lake Oswego FWP coming from the WTP. The current WSMP anticipates strengthening the reliance on the intertie in the future, referring to the intertie with the Lake Oswego FWP as the "City of Lake Oswego Emergency Supply Connection." Key elements of the plan relating to the Lake Oswego intertie include:

- "The City's emergency intertie with the City of Lake Oswego provides a reliable backup supply, albeit with limited capacity, to the City in the event of a supply disruption" (pages 5-7).
- "The City is currently engaged in discussions with the cities of Tigard and Lake Oswego concerning Partnership opportunities to increase the reliability of the existing emergency supply intertie between the City and Lake Oswego" (pages 5-7).
- Solution Approach C: Improve the Emergency Supply Capacity and Reliability of the Lake Oswego Emergency Supply Connection. "This solution approach includes developing a coordinated emergency supply plan that allows the City to fully meet its emergency supply capacity needs through the existing emergency supply connection from the City of Lake Oswego's water system in the Robinwood neighborhood near Lake Oswego's WTP. The City's existing emergency supply connection to Lake Oswego is interruptible and its delivery capacity is dependent on Lake Oswego's supply and demand conditions at the time of the City's need. Under peak use and high demand conditions, the actual capacity of this connection may approach zero as Lake Oswego's current maximum water demands are approaching the existing supply system's capacity.

  The City of Lake Oswego is currently in discussions with the City of Tigard concerning long-term-water supplies. With the Tigard/Lake Oswego emergency supply connection operational, Lake Oswego could supply an equal amount of water to the City through the West Linn/Lake Oswego supply connection. A preliminary review indicates that this connection may have a hydraulic capacity in excess of 6 mgd, potentially making an equal amount available to the City in an emergency event. Pursuing this option involves negotiating intergovernmental agreements (IGAs) and probable participation in funding a portion of the transmission system intertie improvement. A preliminary review of potential project costs associated with this approach indicates that it has a lower cost than Approaches A and B" (pages 6-9).
- "Based on input from and discussions with City staff and policy makers it is recommended that Solution Approach C be pursued" (pages 6-10).
- "It was further directed to pursue development of reliable emergency supply capacity with the cities of Lake Oswego, Tigard and others in accordance with Solution Approach C" (pages 6-15).

2011 On December 30, 2011 the SFWB intake facility on the Clackamas River was temporarily shut down due to storm damage. During the emergency, the City of West Linn received finished water from the City of Lake Oswego and the North Clackamas County Water Commission through separate emergency interties. As the City of West Linn stated in a December 30, 2011 press release, "All agencies involved are confident this emergency supply system can provide for all of the water needs in the SFWB service area until this situation is corrected."

2012 In August 2012, the City Managers from West Linn, Lake Oswego, and Tigard negotiated an amended IGA for emergency water supply via the intertie, consistent with the West Linn WSMP. This amended IGA is scheduled to be approved by the Lake Oswego and Tigard City Councils in September 2012. The West Linn City Council is expected to consider the amended IGA later this year.

NEIGHBORHOOD COORDINATION

In developing plans for the expanded, upgraded WTP, the Partnership has placed a high priority on neighborhood coordination. The Partnership has carefully carried out its responsibilities under CDC 99.038, Neighborhood Contact Required for Certain Applications, and it has undertaken a significant neighborhood coordination program of its own in an honest effort to be a good neighbor. See Section 8. As shown in Figure 1.4, Lake Oswego's approach to public outreach reflects many of the West Linn Planning Commission / Commission for Citizen Involvement's recommendations for public outreach and communications during the land use planning process.*

Public Outreach and Communication Highlights

- ✓ Early consultation with the neighborhood
- ✓ Public involvement plan prepared with neighborhood association advice
- ✓ Open public process inviting participation by neighbors and other interested parties
- ✓ Well publicized public meetings
- ✓ Public comments invited, recorded and acknowledged
- ✓ Project design reflects public input West Linn policy makers informed

Figure 1.4: West Linn Planning Commission / Commission for Citizen Involvement recommendations

* West Linn Planning Commission's December 8, 2011 Memo to City Council.

The WTP is located within a residential neighborhood and must remain compatible with this setting. The Partnership has informed and involved the Robinwood Neighborhood Association (RNA) and treatment plant neighbors from the outset of project planning, and has pledged to continue this high level of communication through the construction period and into ongoing operation of the new facility.

The project team has worked with plant neighbors, RNA, and the City of West Linn to develop the Good Neighbor Plan (GNP). The GNP was developed over a twenty-month period (April 2010 to December 2011). The process included:

- Presentations and discussion at regular monthly meetings of the RNA:
  - Monthly between April 2010 – January 2012
  - April 16, 2011 Lake Oswego and Tigard Mayors meeting with Robinwood neighbors
- Open houses and tours:
  - June 24, 2010 Water Treatment Process Recommendation Open House
  - July 24, 2010 Water Treatment Plant Open House
- Three planning workshops:
  - August 24, 2010 Maple Grove Plat property owners
  - October 27, 2010 First Good Neighbor Plan meeting
  - December 1, 2010 Second Good Neighbor Plan meeting
- Two surveys of neighbors and property owners:
  - August 4 – October 8, 2010
  - December 1, 2010 – January 12, 2011
- RNA tour of Wilsonville's water treatment plant:
  - December 11, 2010
- Consultations with the City of West Linn:
  - April 5, 2010 West Linn City Council presentation
  - May 4, 2010 West Linn, Gladstone, Tigard, Lake Oswego City Managers' meeting presentation
  - September 15, 2010 West Linn Utility Advisory Board
  - August 25, 2011 West Linn Parks and Recreation Advisory Committee
  - December 12, 2011 West Linn Utility Advisory Board
- Design team "backyard visits" with 14 individual treatment plant neighbors:
  - July 13, 2011 – August 21, 2011
- Design open house:
  - October 27, 2011
- Neighborhood meeting required by West Linn development code:
  - November 10, 2011
- Coordination since May 2012
  - June 27, 2012 meeting with facilitator and Robinwood neighborhood members.
  - June 18 and June 27, Robinwood members work sessions with West Linn City Council.
  - August 11, 2012 Neighborhood BBQ and Open House at the Lake Oswego WTP. All Robinwood neighbors invited plus other interested parties (1275 total invited).

- Started signup campaign for reverse 911 to provide all neighbors with the opportunity to add their cell phones and VOIP addresses to Clackamas County's database.
- August 16, meeting with facilitator, City of West Linn, the Partnership and Robinwood neighbors.

Depending upon the outcome of the facilitated meetings between the Partnership, the City of West Linn, and the neighborhood, the plan may change to achieve the parties' shared goals. The Partnership is committed to keeping water treatment plant neighbors informed and involved throughout the WTP improvements project and into ongoing operation of the new facility.

CENTRAL ISSUES

1. Transportation

There are two types of traffic related issues that are of interest: (1) traffic associated with the long-term operation of the WTP and (2) traffic associated with the near-term construction activity. Both types of traffic are discussed below.

Long-term operations related traffic.

Trips associated with the operation of the Lake Oswego WTP are generated by a combination of employee commutes, operations and maintenance trips, and deliveries. Although WTP-related trips include a small amount of truck traffic that differs in character from the trips generated by the surrounding single-family residential development, total trips generated by the Lake Oswego WTP at current and proposed capacity do not constitute a significant impact on the neighborhood.

At the beginning of 2011, the Lake Oswego WTP employed 8.0 full-time equivalent (FTE) employees (a Plant Manager, an Assistant Plant Manager, six plant operators, and 1.0 temporary intern). For fiscal year 2013 the total FTE will be 9.0.

The WTP is staffed between 18 to 24 hours per day depending on water demands. Employees work four 10-hour shifts per week. Shift changes occur during off-peak travel hours (5:00 AM, 3:00 PM and Midnight). On average, there are three FTE employees at the WTP during normal operation hours. In addition to plant duties, operations staff is also responsible for various off-site duties including operation and maintenance of the Clackamas River intake and raw water pump station, pipeline inspection and maintenance, and customer water quality inquiries (approximately 30 a year).

In 1996, WTP operations generated between 12 to 13 Average Daily trips (ADT). See Section 19, CUP-96-04 and DR-96-07. Today, additional vehicle trips to and from the WTP include delivery of chemicals and other materials, on-site maintenance of electronics, elevator maintenance, HVAC maintenance, school visits, and miscellaneous trips. The WTP manager calculates that this additional activity generates approximately 2 additional ADTs. Today, WTP activity generates approximately 14 to 15 ADTs. See Section 10, Vehicle Trip Generation. Chemical delivery and sludge de-watering and removal accounts for approximately 0.38 ADT, or less than 3 percent of all ADTs. Chemical deliveries occur during normal business hours (8:00 AM – 5:00 PM) and do not occur on weekends, except in an emergency. On average, one chemical delivery truck drives to and from the WTP each week.

The upgraded Lake Oswego WTP will generate 16 to 17 employee-commute ADTs. This is an increase of approximately 4 employee-commute ADTs since 1996. Chemical delivery and sludge removal at the upgraded WTP will generate approximately 0.7 ADT, a 0.32 ADT increase over present operations, or less than 2 percent of the projected WTP generated traffic. The total projected daily traffic is approximately 19 ADTs. This is an increase of approximately 2 to 3 ADTs over present

observed values. (Because the two houses along Mapleton Drive, part of the WTP site, will be demolished, the neighborhood will experience a net reduction of approximately 10 ADTs per unit.)

The total anticipated ADTs for the plant are significantly less than the ADTs that would be generated by single-family development on the same parcel. During the public outreach initiative for this project, neighborhood residents suggested that Lake Oswego should move the entire WTP operations to Lake Oswego and re-develop the site for single-family detached residential use. Consequently, by way of comparison, the Partnership considered what the vehicle trip generation might reasonably be if the site were developed for residential purposes.

The entire 9.24 acre site is zoned R-10 and could be subdivided and re-developed for residential use in accordance with the West Linn Development Code. Residential development options within the zone include single-family detached dwellings and residential homes (five or fewer residents who may or may not be related – this housing type is often described as an adult foster home). See CDC 11.030. The minimum lot size in the R-10 zone is 10,000 S.F. See CDC 11.070(1). Every single-family detached residential unit generates approximately 10 ADTs. See International Transportation Engineers (ITE) Traffic Manual, 7th edition.

Assuming, generously, that 28 percent of the gross site area would be dedicated to street, utilities, setbacks and amenities, the 9.24 acre WTP site could yield 6.65 acres of net buildable land. If every newly platted lot was 10,000 square feet, the new subdivision could reasonably accommodate 28 new single-family homes. Assuming each home would generate 10 ADTs, the new subdivision would generate 280 ADTs, or more than 14 times as many trips as the new Lake Oswego WTP at full build-out.

The forecasted WTP traffic creates significantly fewer potential automobile trips than single-family residential development. The WTP-related truck trips that occur each week may be comparable to the number of truck trips, such as garbage collection, package delivery and service truck trips, which a 28-unit single-family subdivision might create or which occur in the RNA neighborhood today. Consequently, the proposed WTP expansion does not create a significant operational traffic impact on the surrounding neighborhood.

Near-term construction related traffic and transportation safety.

Construction of the WTP will create a temporary increase in traffic on the transportation network in the project vicinity. To fully consider transportation-related concerns associated with the construction of the WTP, the Partnership commissioned DKS, Inc. (DKS), a transportation engineering firm, to assess current traffic and transportation conditions in the project vicinity, identify potential areas of concern, and identify mitigation strategies to alleviate transportation problems. The updated construction management plan (CMP) included in Section 14A of this application provides construction traffic estimate information used by DKS. The resulting traffic control strategy memorandum (TCSM) prepared by DKS is included in Section 14B of this application update.

The updated CMP discusses the project schedule and identifies when peak construction traffic will occur. DKS considered this information and analyzed the transportation network to determine the effect of peak traffic volumes associated with project construction.

Key findings are (1) the existing transportation networks is adequate to address both existing and the incremental traffic volumes the project presents, and (2) that *additional* average delay encountered by a vehicle using either Cedar Oak Drive or Mapleton Drive at OR 43 would increase by less than 15 seconds per vehicle during a.m. and p.m. peak commute hours as a result of WTP construction. The findings are in consideration of the following mitigation strategies:

- use Mapleton Drive and Kenthorpe Way site access routes,
- place left turn restrictions on construction vehicles entering OR 43 from Mapleton Drive and entering Mapleton Drive from OR 43, and
- require off-site parking for construction craft-level workers and bus transport of workers to and from the site.

By employing these strategies, DKS concluded that the existing transportation network capacity is adequate to accommodate existing and additional project-related construction traffic. During the 32-month construction period, the Partnership can maintain emergency access to all residences and businesses within the project area and along the construction routes 24 hours a day, seven days a week. In addition, the identified strategies will allow pedestrian and bike access in the area at the current level of service and would not adversely affect transit and school bus routes. Commuters entering or leaving either Cedar Oak Drive or Mapleton Drive at OR 43 would experience an average increase of less than fifteen seconds delay during both a.m. and p.m. peak hours, assuming the craft-level construction workers are bussed to and from the site each day from an off-site location.

During the entire construction period, vehicle activity will increase, on average, by 25.4 average hourly vehicle trips during the morning and evening commuting hours (13 average round-trips during work hours). Of these 25.4 average hourly trips, only 3.5 trips will be truck trips. Construction traffic will spike up to an average of 35 peak-hour workforce trips during the busiest construction periods.

The CMP proposes several measures to mitigate construction impacts relating to access and safety. Some of these measures include:

- Emergency vehicles will have access to all properties along the construction travel routes through the duration of the project 24 hours per day, 7 days per week.
- The Contractor will provide worker-parking areas outside of the Robinwood neighborhood and will bus the craft-level workforce to and from the work site.
- Pedestrian and bicycle access will be available throughout the construction travel zones.

2. Construction Hours

Construction work days and work hours will be limited to those allowed by West Linn code. The Partnership and West Linn have agreed that construction activities will not occur on Sundays or legal holidays.

The WTP must maintain its water supply functions throughout the construction period. Therefore, some limited exceptions to normal work hour periods will be required. When necessary, permission for any work period exceptions will be made to the West Linn City Manager or designee and such requests will include provisions to mitigate after-hours construction noise and lighting impacts. In addition, the request will include communication protocols that provide notice to the neighborhood association and affected property owners at least one week in advance of approved work activities.

3. Noise Impacts

The City of West Linn, the neighborhood residents, and the Partnership share the objective that the upgraded Lake Oswego/Tigard WTP satisfies all applicable noise limitation standards. The current WTP meets all applicable local and state noise standards, and the proposed updated WTP will meet noise standards through a range of mitigation measures.

The Partnership asked ENVIRON International Corporation (ENVIRON) to assess current and potential future operational sound levels at residences near the WTP. ENVIRON identified the regulatory noise limits applicable to operation of the WTP, and analyzed the results of sound level measurements taken near both the existing WTP and the Willamette River Water Treatment Plant (WRWTP) in Wilsonville, Oregon, as well as the methods and conclusions of the noise assessment of the proposed updated WTP. See Section 11, Noise Analysis. During the pre-application conference, West Linn staff suggested that the Partnership evaluate noise levels at a water treatment plant that uses similar processes. The Partnership selected the WRWTP for comparison because the water processes employed at this facility were designed by the engineering team working on the WTP and the processes are very similar to those proposed for the expanded WTP.

Chapter 5.487 of the West Linn Municipal Code (WLMC 5.487) defines noises that are considered a nuisance, such as noise from dogs and amplified music. West Linn repealed its quantitative noise standards (CDC 55.100) by Ordinance No. 1604 on September 26, 2011. Therefore, both the subjective nuisance-based noise standards in WLMC 5.487 and the quantitative noise standards established by the Department of Environmental Quality (DEQ) in the Oregon Administrative Rules (OAR 340-035) apply to this project. (The repealed noise standards are identical to the DEQ noise standards except for the ambient degradation rule.)

Noise from traffic on public roads and construction activities is exempt from the noise regulations (per OAR 340-035-0035(5)). However, West Linn's nuisance code restricts construction to the hours between 7 AM to 7 PM Monday through Friday and 9 AM to 5 PM weekends and holidays (WLMC 5.487.B.4).

With regards to potential noise impacts from ongoing operations, Section 55.110.B.11 of West Linn's Community Development Code requires determination of existing ambient sound levels for proposed land uses that may generate noise. Therefore, ENVIRON measured existing sound levels at locations representing residences near the existing and proposed updated WTP.

To identify existing ambient sound levels, ENVIRON measured sounds from existing sources in hourly intervals over 24 hours at five locations around the existing WTP. For these measurements, ENVIRON used microphones placed approximately 5 feet above ground elevation. The measurements captured the L_{50}, L_{10}, and L_1 noise descriptors for each hour of measurement.

Over the 24-hour measurement period, activity levels at the WTP were varied to capture the range of potential noise impacts. The measured levels at each location included periods of typical treatment plant activity, periods of no plant activity, and periods of staged intermittent activity conducted in order to capture the sound levels of these infrequent events.

ENVIRON used the measurements of typical continuous operations and other intermittent noise-generating activities at the existing WTP to forecast potential future sound levels at the WTP. ENVIRON also measured sound levels near the WRWTP to characterize typical continuous operational sound levels of a plant that uses equipment and processes similar to that proposed for the updated WTP.

Sound levels measured during typical continuous operations at the existing WTP complied with both the daytime and nighttime DEQ noise limits. With the proposed updated WTP, several of the intermittent noise generating activities will be eliminated including sludge lagoon cleaning, lime silo vibratory system operations, lime building blower exercises, and emergency backup generator tests. The new finished water pump station will replace the existing high service pumps/fans facilities.

ENVIRON found that measured sound levels near the WRWTP easily complied with the daytime noise limit of 55 dBA (L_{50}) at each of the measurement locations. Therefore, ENVIRON concluded that the upgraded WTP should comply with all DEQ daytime noise limits.

The sound level measurements of typical daytime operations at the existing WTP identified L_{50} levels ranging from the mid to high 40s dBA at most locations around the plant. These levels are well below the applicable 55 dBA daytime noise limit and would also comply with the nighttime noise limit of 50 dBA, if the plant operated between 10 PM and 7 AM. Similarly, sound level measurements taken near the WRWTP identified L_{50} levels ranging from the mid-40s to low 50s dBA. The measured sound levels (including both plant noise and water feature/gravel pit noise) easily complied with the daytime noise limit of 55 dBA at each of the measurement locations.

Because the sound levels of typical operations at the existing Lake Oswego WTP and WRWTP easily complied with the daytime noise limits at nearby locations, the sound levels of typical operations at the upgraded WTP should also meet the daytime noise limit of 55 dBA (L_{50}).

The existing WTP is operated up to 24 hours per day when water demands are high and for fewer hours per day when demands are lower. The professional WTP managers must be able to continue producing water to satisfy all ranges of demand. Therefore, the WTP managers will operate the upgraded WTP up to 24 hours per day when they deem it to be most operationally efficient to do so.

ENVIRON compared the sound levels measured during daytime operations at both the existing WTP and the WRWTP to the nighttime noise limits to assess future compliance needs. The measured sound levels of typical operations at the existing WTP would comply with the nighttime noise limit of 50 dBA. However, ENVIRON was not able to reach a definitive conclusion regarding nighttime compliance at the WRWTP based on the available measurement data, due to non-plant related noise generated by the architectural water feature along the west side of the WRWTP and a gravel producing operation to the east.

Consequently, ENVIRON recommends consideration of one or more of the following noise mitigation techniques and practices, during final WTP design:

- Installation of noise source equipment indoors, when feasible;
- Use of appropriate noise attenuation features on buildings, including acoustical louvers on air intakes/outlets and silencers on exhaust stacks;
- For equipment installed outside, use of appropriate noise attenuation features such as acoustical enclosures or barriers, pipe lagging around noisy pipes or ducts, etc.;
- Selection of quieted equipment, particularly for HVAC systems;

With careful design and implementation of noise mitigation measures, noise levels from typical, ongoing plant operations are expected to comply with the nighttime noise limits.

In addition to typical continuous operations, ENVIRON considered potential future sound levels associated with the intermittent on-site operations described previously. The sludge pond operations, lime silo vibratory system, and lime building blower are not required with the proposed upgraded Lake Oswego/Tigard WTP. Similarly, a smaller backup generator that will be installed in a structure will replace the existing emergency backup generator. The existing high service pump station and roof-mounted fans will be replaced and relocated with appropriate noise attenuation features incorporated into these plant modifications. Therefore, ENVIRON concluded that the only remaining intermittent operation of concern that will persist for the new WTP is truck mounted equipment associated with periodic chemical delivery unloading and weekly garbage pickup.

To meet the daytime noise limits at all property boundaries and thereby remedy this remaining concern, ENVIRON recommended the use of "plant air" (i.e., compressors installed inside a plant building) in lieu of truck-mounted compressors to eliminate the excessive noise associated with chemical unloading. Additionally, chemical unloading should be restricted to daytime hours only.

ENVIRON recommends that the design considerations for intermittent noisy activities should include the following:

- Installation of backup generator indoors
- Use of "plant" air for chemical unloading operations.

Most of the existing exterior noise-producing intermittent activities will be eliminated or are expected to be far enough from neighboring properties to comply with both the daytime and nighttime noise limits. As a condition of approval, the Partnership proposes to adopt the ENVIRON Noise Mitigation recommendations including a post-construction noise analysis to document that noise limits have been met.

Construction Noise BMPs. Section 5.487 of the West Linn Municipal Code does not expressly limit noise levels during construction. Because noise from construction activities may be audible and/or intrusive on occasion, ENVIRON recommended several best management practices (BMPs). As discussed in the CMP, Section 14A, The Partnership will require the Contractor implements and enforces these BMPs.

- Construction equipment and vehicles will be equipped with mufflers and particulate filters in good condition and repair.
- Heavy mobile equipment and trucks will be required to turn off engines when not in active use.
- Onsite truck and construction equipment activities will be planned to minimize reverse direction travel to minimize occurrence of noise generated from OSHA-required safety backup alarms.
- Dump truck tail gates will not be allowed to slam during delivery of materials.
- Fabric material will be installed at selected sections of temporary site security fencing to screen onsite activities and to provide a modicum of noise mitigation.

4. Visual Impacts

The landscaping, site design, and architecture of the proposed WTP are designed to minimize visual impacts while maintaining WTP functionality. To satisfy the requirements of the Class II Design Review process, the applicant must demonstrate that a proposed conditional use is functionally and physically integrated into the neighborhood in which it will be located. The WTP has been a significant feature within the neighborhood for more than 40 years. In a simple sense, the neighborhood and the WTP have changed and evolved together over that time-period. However, in this case, the intent behind Class II Design Review is to go beyond the obvious to analyze how the proposed changes will ensure that the expanded WTP remains an icon within the neighborhood rather than an alien.

Landscape and Site Design

A main consideration of the project is the WTP's visual and physical interface with the properties surrounding it. The question that designers and neighbors worked to address was, "How does one mitigate potential impacts in a way that is both functional and aesthetically pleasing?" For example, it may be functionally desirable to open up the site layout to allow for easier access between buildings

and operations, but the consequence of doing so may create adverse aesthetic impacts, which would negatively affect neighborhood livability. On the other hand, complete screening of the WTP to eliminate visual impacts is not possible considering the need for daily and emergency access. A balance is required.

The proposed approach to mitigate potential visual impacts is landscape layering. The idea of landscape layering is to establish a variety of attractive screens and filters that soften the presence of the WTP for the community, maintaining an overall transparency and cohesiveness while avoiding disconnectedness and alienation. One specific example of this concept is the proposed approach to fencing. Taller security fencing is subdued behind layers of vegetation within the core WTP area, distant from street view. The street edges along Kenthorpe Way and Mapleton Drive are delineated by split-rail fencing and good neighbor fencing which contribute to a residential neighborhood character yet clearly marks property boundaries. Access to the "unsecured" areas between the various layers of fencing is neither encouraged nor discouraged. In addition to fencing, other layers that subtly screen and secure the site are the preserved woodland edges, vegetated stormwater facilities, and the buildings themselves, which create a continuous façade shielding the most intensive plant operations from view.

The site can be divided into three zones: the "unsecured" zone on Kenthorpe, the private secure plant zone, and the "unsecured" zone on Mapleton. While preserving the screen of trees along Kenthorpe, a small water feature, meandering pathways, seating niches, and a secluded rain garden are integrated sensitively into this public zone. On the Mapleton side of the property, where much of the area will remain forested and/or planted, low site walls compliment the woodland/orchard character and pedestrian trail makes access to Kenthorpe and nearby schools and parks much more convenient.

The circulation hierarchy of the site starts with the main loop road serving operations vehicles and equipment coming in and out of the plant on a daily basis. Secondary vehicular and pedestrian routes are designed to avoid conflict with this loop and create a clear, safe, and human-friendly circulation model that allows for easy, logical pedestrian movement in and out of the plant buildings. Pedestrian routes in both the public and private areas are clearly delineated using indicative materials, surface treatments, and signage limited to certain key locations and building facades. In the plant's accessible areas, the design provides opportunities for walking as well as rest, in the form of trails and small-scale seating areas. Emergency access has been provided consistent with the recommendation from the TVF&R, with a new second emergency access route doubling as a pedestrian trail.

The landscape design's planting concept follows a sustainable approach which promotes the use of native species which are adapted to the Northwest climate and do not require significant irrigation, maintenance, or spraying. Six different planting types are proposed: **Woodland** with native trees and understory planting; **Meadow** with native grasses, perennials and wildflowers; **Orchard** with flowering non-fruiting accent trees and understory; **Rain Garden**, where stormwater runoff will be treated and detained in depressed wetland- like planted swales and basins; and **Green-roof**, where native meadow plantings will be re-applied to roof surfaces with other drought tolerant succulents.

The current site plan reflects a collaborative effort within the design team to balance the most viable engineering concepts with greatest realization possible of the neighborhood goals for visual presence. Summarized site strategies, developed with neighborhood involvement, are as follows.

- **Maintain the north edge of the property as the front door and public entry:** This works well for two reasons: 1) it is the existing entry point for the plant, and 2) this also allows the Partnership to keep the southern edge of the property along Mapleton Drive free from new WTP circulation patterns, thus maintaining the buffer created by the current distance from the plant's south edge.
- **Centralize the plant layout:** Several space-saving alternatives have resulted in a much smaller plant footprint. With this current configuration, the site layout provides for setbacks from the

south, east, and west that significantly exceed requirements. This aspect of the design allows landscaping and distance to be maintained as the primary buffers. The revised site design reflects the further compression of the central WTP facility.

  - The footprint of the administration building is reduced, and the other primary processing buildings have been reduced in size by 20 percent or more.
  - The more recent design also reduces the scale of the secondary processing facilities. Most notably, construction of the washwater clarifier building, if ever needed for regulatory purposes, is deferred, the three solids thickeners have been combined into one structure, and the mechanical dewatering building is reduced in size by 30 percent.
  - The emergency backup generator was reduced in size, allowing the footprint of the electrical building to shrink.

- **Screen the internal plant activity with building edges, walls, and artful screening elements which tie the architectural design and the landscape design together:** By placing occupied spaces along the plant perimeter, both public and plant safety is reinforced. Aesthetically, buildings placed on the WTP edge will be designed to integrate into the residential context using materials, color, orientation, form, and proportion. Site-specific constructed screens will also be employed to mitigate views. These will be comprised of vertically oriented reclaimed wood slats on timber or steel frames, tying into the semi-wooded nature of the site. Lastly, low walls in the landscape, inspired by dry-stacked rubble walls typical of a farm or orchard inferred by the fruit trees that are now growing on site, will reinforce the site's semi-rural character and draw the viewer's eye towards the foreground.
- **Provide additional mature plant screening to minimize glare:** The design team reevaluated the potential for light glare spilling out from the perimeter of the WTP central core and along the proposed pedestrian path. To further reduce glare, the revised landscaping plan proposes installation of a mature coniferous tree screen, between 12- to 14-feet tall, in three locations.

Together with the buffers of distance and landscape, these landscape and architectural elements will serve as visual mitigation.

Architecture

From the existing neighborhood, the design draws cues regarding material articulation, scale, and form. The neighborhood is primarily made up of single-story ranch-style homes, most of which were constructed in the 1960s. Predominant roof forms found throughout the neighborhood tend to be low slope shed roofs and gable roofs, as well as a few flat roofs, and the predominant cladding is lapped siding or vertical board & batten wood siding. Many of these ranch-style homes sit with their broad side facing the street, with their long, low pitched roof forms overhanging facades with lap siding, ultimately displaying a common pattern of horizontality. This language of horizontality will be carried throughout the design aesthetic of the plant.

Materials employed for the WTP buildings will be durable, low maintenance, environmentally conscious, and appropriately detailed for integration into the residential environment. The primary materials for building facades will be brick and horizontally articulated metal siding. Light colored composite panels and wood are secondary materials for elements like soffits, accents, and screens.

The process and non-process buildings will define part of the plant's secure boundaries. New process buildings on the edge of the plant include the electrical building, the finished water pump station (FWPS), and the mechanical dewatering building. Process buildings on the interior of the plant such as the chemical building will also employ this design language, though in modified form.

These buildings must serve not only as the screen but also as the gradient from the neighborhood to the WTP environment. Natural earth-toned brick atop a cast in place concrete stem wall rising from the landscape to a height of 12 to 16 feet is proportional to the residential scale. These walls will be long and low, with windows and louvers appropriately placed to break up the form and activate the edge. Above the brick will be a recessed frieze, clad in a light colored composite panel material. The predominant roof form will also read as a long plane that is topped with a garden roof system helping to integrate the buildings with the landscape below. These buildings will be articulated by shed roof forms; these volumes are essentially mechanical penthouses to keep all of the equipment indoors, out of view, acoustically isolated, and weather protected. These penthouses will be pushed to the far interior side of the process building and be constructed with shed roofs sloping to a high side towards the plant interior. The materiality of these will be dark in nature, allowing the form to recede from view.

The visitor face of the WTP will be the façade created by the administration and operations buildings. This complex will be both a professional work environment and a reception and education area. The renovation of the existing operations building and construction of the new adjoining administration Building creates the visual and functional effect of one building. Though still buffered adequately from Kenthorpe Way by landscape design and setback distance, the new façade will face the community. A new main entrance will be designed where the new addition is joined with the renovated existing building to welcome the community. Its materiality will draw from the same palette of materials as described for the process buildings, and it will take similar cues from the neighborhood context in terms of form and horizontality, but more so than the other buildings on the site, it will be designed to be outward-facing and inviting. The building, along with the publicly accessible landscaping within which it sits, will be designed to standards of full accessibility as well as sustainability.

Together with generous buffers, these site design, landscape, and architectural elements will serve as visual mitigation.

5. Significant Trees

The WTP property includes a variety of trees including significant trees. By developing within a small facility footprint and planting 308 trees, the Partnership proposes to preserve the majority of trees on-site and mitigate the anticipated loss of several significant trees.

The WTP property hosts a variety of tree species, some of which are native and many of which were planted as a condition of the 1996 land use approval. Most noteworthy are the mature Oregon White Oaks, Western Red Cedars, and Giant Sequoias, as well as exotics including American Sweetgum, Deodar Cedar, Red Oak, and Spruce, which were introduced over time. Remnant orchards of apple and cherry are found on the southern side of the site.

Tree preservation has been a top priority for the design team, and they have created several site design iterations to maintain a compact facility footprint in order preserve trees and lessen visual impact to neighboring properties. The result is the preservation of a large number of existing trees. For areas impacted by construction, staging, and design, mitigation requirements replace significant trees that will be removed. Accepting this, the landscape design will use the inevitable tree loss as an opportunity to remove exotic species where appropriate and return the site, to the greatest extent possible, to a native Northwest environment.

The West Linn regulatory context for tree protection and removal is found in CDC 55.090(B)(1) & (2), CDC 54, WLMC 8.500 (West Linn Community Tree Ordinance. No. 1503), WLMC 8.610-8.620 (Tree Removal Permit), WLMC 8.710.798 (Heritage Trees) and the "West Linn Tree Technical Manual".

Both the Partnership and the West Linn City Arborist evaluated the remaining trees on site, consistent with West Linn protocols. The conclusion reached is that the WTP site does not contain any Heritage Trees. The West Linn Arborist concluded that there are 42 significant trees or significant tree clusters on-site subject to West Linn tree regulations. The proposed site development will remove six significant trees, the loss of which will be mitigated. Mapping of proposed tree removal has been provided as part of the land use application package. See Section 21, Figures 2.9 – 2.12. The combined Diameter-at-Breast-Height (DBH) for these trees is 182 inches.

Based on the 182 inches of significant tree DBH removal, mitigation will require 182 inches of DBH replacement. The project proposes conducting this replacement by planting 91 sapling trees at 2-inch caliper per tree for a total of 182 inches. In addition to the 91 trees needed for significant tree mitigation, an additional 217 trees will also be planted. This will result in a total of 308 trees being planted on-site. Although the final tree count is subject to minor changes, the 91 trees to be planted for significant tree mitigation will not change.

6. Safety

Key safety concerns have centered on construction safety, pedestrian and vehicle safety, hazardous materials, and emergency response. To date, Lake Owego has implemented a full suite of safety measures that have prevented safety problems. Lake Oswego proposes further measures to minimize any safety risks associated with the proposed WTP expansion during construction and future operations. During its 40-year history, the WTP has had no safety or health violations.

Background

In 1996, neighbors raised questions concerning vehicle traffic along Kenthorpe Way, as well as concerns about plant safety, in particular the use of chemicals to process and purify water. To address pedestrian and vehicle safety concerns along Kenthorpe Way, Lake Oswego implemented a construction management plan to guide the 1996 approved upgrade to the WTP. There were no reported significant conflicts between neighborhood pedestrians and drivers during the construction period. Similarly, since the 1996 construction phase ended, there have been no reported significant conflicts involving trucks delivering materials to the WTP and local vehicular or pedestrian traffic.

Regarding hazardous materials, Lake Oswego prepared a Hazard Materials Management Plan (HMMP), consistent with the Oregon Fire Code and with state law, as a condition of land use approval in 1996. Lake Oswego WTP operators have rigorously implemented the adopted HMMP and, consequently, there have been no significant safety violations involving hazardous materials.

There is no use or storage of chlorine gas on-site. The WTP's drinking water disinfection process was converted years ago to use a liquid sodium hypochlorite (bleach) solution rather than chlorine gas. Full information on drinking water treatment chemicals used on-site is maintained at the WTP.

Construction Management

Construction of the upgraded treatment plant will occur during the 2013 through early 2016 timeframe over an estimated 32-month period. Mitigating the impacts of construction on the neighborhood surrounding the treatment plant is a top concern of neighbors and a top priority for the Partnership.

Regarding these mutual concerns, the Partnership has provided a preliminary CMP, Section 14A, and a TCSM, Section 14B, for construction-related traffic. The Partnership will refine the CMP through

the final design phase and will require the contractor to meet all requirements of the CMP and all public safety requirements. The CMP includes the provisions described below:

- **Project Schedule:** CMP Figure 14A-1 identifies the three phases of construction: Preconstruction activity, primary construction, and post construction and demobilization. Work hours, consistent with West Linn regulations, are limited to 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. The contractor will be required to establish a normal work week schedule and will be precluded from working on Sundays and holidays. In the event the contractor requires an exception to the West Linn work-hour regulations, the Contractor shall make application for the exception through adopted West Linn administrative procedures.
- **Traffic Capacity Analysis and Safety:** The Partnership conducted a professional traffic capacity analysis that considered the capacity of the existing roadways to accommodate WTP construction traffic and proposed mitigation measures. See Section 14B. The highest traffic volume will occur during a.m. and p.m. commute periods as the work force moves in and out of the site. Mapleton Drive, Kenthorpe Way, and OR 43, the primary construction routes, have adequate capacity to accommodate construction traffic. Bicycle and pedestrian access will be maintained throughout the construction period. Emergency vehicles will have round-the-clock access to all residences along Kenthorpe Way and Mapleton Drive during the WTP construction period.

  The WTP construction contract will include provisions for the contractor to develop and submit for approval a traffic control and safety plan. The plan will be reviewed by the Partnership, and officials from West Linn Public Works Department, ODOT, TVF&R collaboratively to ensure all traffic and safety regulations are incorporated.
- **Neighborhood Safety:** Perimeter fences will secure the site during construction. On-site construction safety will conform to all Occupation Safety and Health Administration (OSHA) standards. The public will not have access to the construction site.
- **Public Street Access Maintenance:** Public traffic access along Kenthorpe Way and Mapleton Drive will be maintained at all times during construction, except for occasions when unusually large construction equipment or permanent plant components are delivered to the site requiring short-term traffic blockages. Temporary access closure, anticipated to not exceed one hour, shall occur only after the Partnership provides advance notice to the neighborhood. Signage and traffic control flaggers will be used to ensure that safety of the traveling public is the highest priority.
- Noise: Construction noise-generating activities will be limited to periods conforming to City of West Linn requirements. Perimeter fencing, including visual and noise-dampening materials, will be employed. Noisy portable construction equipment will be located as far as practicable from neighborhood residences.
  - Green Construction Practices: Use of ultra-low sulfur diesel fuel and limiting construction equipment idling during construction will be specified, as practicable.
  - A pre-construction survey of homes adjacent to the construction site will be performed.
  - The Partnership will continue to communicate and coordinate with its neighbors and the Robinwood Neighborhood Association regarding project construction activities.

Pedestrian and Vehicle Safety and Emergency Access

West Linn requires the construction of frontage improvements, including drive lane widths and sidewalks. To meet this West Linn standard, the improved WTP site will include sidewalks on both the Kenthorpe Way and Mapleton Drive frontages as well as a pedestrian connection between Kenthorpe Way and Mapleton Drive. In addition, the Partnership will provide a vehicular emergency access route through the WTP site, connecting Kenthorpe Way and Mapleton Drive. This new

accessway will be closed to daily traffic but it will serve as a vital accessway into the WTP facility in case Kenthorpe Way is closed, and vice versa. It will also create an evacuation route between Kenthorpe Way and Mapleton Drive thereby enhancing neighborhood safety.

Hazardous Materials Safety

Lake Oswego's WTP has an emergency response plan in place, and procedures are closely coordinated with the local emergency responders: TVF&R and West Linn Police Department. TVF&R inspects the plant facilities at least annually. In event of an emergency, the noted emergency responders would initiate communications with plant neighbors.

Regarding the WTP expansion, Lake Oswego prepared a Hazard Materials Inventory Statement (HMIS) that includes but is not limited to: product name, amount, type of location (above ground, below ground, in a building etc.), container sizes, and, amount in use (closed & open systems). See Section 18. Lake Oswego met with TVF&R personnel on December 28, 2011. Because of that meeting, the design team provided TVF&R with a plan and narrative responding to the issued discussed during the meeting. See Section 21, Figure 5.13.

TVF&R advised that it is more appropriate to discuss and consider hazardous materials during the design process rather than the preliminary phase of design and land use review. During the design process, prior to issuance of building permits, TVF&R requests that the applicant engage TVF&R in one or more Partnering Meetings to review the type, amount, location and transport of hazardous materials so that the site may be designed to be as safe as is reasonably practicable. TVF&R may request that the applicant prepare a HMMP, as a condition of land use approval.

In addition to meeting the requirements of the Oregon Fire Code and the West Linn Building Department, WTP staff will implement the following neighborhood communication strategies:

- Treatment plant staff will continue to provide information and answer neighbors' questions about chemicals used and stored on-site, and transported through the neighborhood.
- The HMIS and HMMP will be available at the WTP for review and inspection by the public during the normal business hours of 8 AM to 5 PM.
- An open house/tour at the treatment plant will be held once or twice per year.
- Neighbors will be informed about the pertinent plant activities through community meetings, website and email updates, mailings and presentations at Robinwood Neighborhood Association meetings.

Safe Operations Plan

The basic mission of the Partnership is to design, build, and maintain a safe, reliable, long-term water supply system that is resilient to multiple potential hazards, consistent with the critical importance of the system to public health and safety. The proposed WTP is a key piece of infrastructure for Lake Oswego and Tigard. Designed to meet both Lake Oswego's and Tigard's water needs, it represents a substantial investment to be made by Lake Oswego and Tigard water customers. Therefore, a strong commitment to maintenance through asset management is warranted.

Safety during ongoing operations focuses on ensuring the continuous mechanical, structural, and electrical integrity of all the equipment and structures within the WTP. As with any water facility, the key areas of concern are site security, structural integrity, process redundancy, operational control, hazardous materials management, and maintenance. To address these issues, the Partnership will implement several strategies, described in detail in Section 18B, Safe Operations Plan:

- **Compact and secure site** to enhance public safety, including: secure fencing and controlled gates, electronic and visual site monitoring, separation of public and work spaces, safety lighting, and a new emergency access route for fire and rescue vehicles.
- **Selection of durable building materials** and an advanced seismic support system designed to meet the industry's highest seismic standard during its 75- to 100-year design service life. The Partnership conducted extensive seismic analyses resulting in a design based on an auger-cast pile foundation. WTP engineering specifications also call for robust concrete design and extensive corrosion control.
- **Mechanical and electrical redundancy** including multiple backup power supplies to mitigate risk of a power failure while minimizing on-site fuel storage as well as a triple redundant overflow system that diverts unlikely treatment basin overflows to holding basins. In the event these basins are overwhelmed, overflows are diverted to the Willamette River, mitigating the risk of neighborhood flooding due to an overflow event.
- **State-of-the-art operational controls and instrumentation systems** running a robust treatment process, a redundant warning and alarm system, uninterruptable power supplies for essential operations, and extensive fire detection and suppression systems.
- **Fully contained chemical handling systems** that mitigate the risk of an uncontained spill and provide early detection in the event of a chemical leak. Chemical deliveries and storage areas are located within the secured perimeter, and redundant spill protocols are proposed. The LOX tank features insulated double-wall construction, which is located centrally in the site within the secured perimeter. The CO_2 tank has been removed from the plans.
- **Thorough construction inspection and testing program.** Careful construction inspection and a wide range of performance testing will validate that the facilities are constructed as intended by the design engineers.
- **Proactive asset management** and routine ongoing monitoring, assessment, and maintenance of every aspect of the facility, documented and checked by a comprehensive Asset Management Plan, will ensure this facility remains in good working order.

With the proposed additional safety measures for construction, vehicle safety, emergency access, and hazardous materials, the applicant believes that it has proposed an appropriate response to reasonable West Linn and neighborhood concerns regarding public safety during construction and during future WTP operations.

II. Zoning

The proposed expansion to the WTP meets the relevant zoning regulations of the City of West Linn Community Development Code (CDC), as addressed below. Relevant excerpts from the CDC are italicized.

SINGLE FAMILY RESIDENTIAL DETACHED, R-10 (CDC 11)

PURPOSE (11.010)

The purpose of this zone is to provide for urban development at levels which relate to the site development limitations, proximity to commercial development and to public facilities and public transportation. This zone is intended to implement the Comprehensive Plan policies and locational criteria, and is applicable to areas designated as Low Density Residential on the Comprehensive Plan Map and Type I and Type II lands identified under the Buildable Lands Policy.

Applicant Response:

Proximity to public facilities is an attribute of the R-10 residential zoning district. The WTP is a Lake Oswego public facility as well as a use classified as "utilities, major," as conditional use in the West Linn CDC. The applicant identifies and responds to applicable Comprehensive Plan policies below.

PROCEDURES AND APPROVAL PROCESS (11.020)

C. A conditional use (CDC 11.060) is a use the approval of which is discretionary with the Planning Commission. The approval process and criteria for approval are set forth in Chapter 60 CDC, Conditional Uses. If a use is not listed as a conditional use, it may be held to be a similar unlisted use under the provisions of Chapter 80 CDC.

D. The following code provisions may be applicable in certain situations:
1. *Chapter 65 CDC, Non-conforming Uses Involving a Structure.*
2. *Chapter 66 CDC, Non-conforming Structures.*
3. *Chapter 67 CDC, Non-conforming Uses of Land.*
4. *Chapter 68 CDC, Non-conforming Lots, Lots of Record.*
5. *Chapter 75 CDC, Variance.*

Applicant Response:

The WTP is a conditional use; therefore, the provisions of CDC 60 apply but the non-conforming use provisions of CDC 65 - 67 do not apply. The applicant is not requesting any variances; therefore, CDC 75 does not apply.

ACCESSORY USES (11.040)

Accessory uses are allowed in this zone as provided by Chapter 34 CDC.

Applicant Response:

The applicant responds to Chapter 34, Accessory Uses, in Section IV of this document.

CONDITIONAL USES (11.060)

The following are conditional uses which may be allowed in this zoning district subject to the provisions of Chapter 60 CDC, Conditional Uses.

9. *Utilities, major.*

Applicant Response:

The Lake Oswego WTP is a major utility; therefore the requirements of CDC 60, Conditional Use, apply. The applicant fully discusses the provisions of CDC 60 in Section III of this document.

DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS (11.070)

Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:

1. *The minimum lot size shall be 10,000 square feet for a single-family detached unit.*
2. *The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.*
3. *The average minimum lot width shall be 50 feet.*
4. *The lot depth comprising non-Type I and II lands shall be less than two and one-half times the width, and more than an average depth of 90 feet. (See diagram below.)*
5. *The minimum yard dimensions or minimum building setback area from the lot line shall be:*
    a. *For the front yard, 20 feet; except for steeply sloped lots where the provisions of CDC 41.010 shall apply; and as specified in CDC 26.040(D) for the Willamette Historic District.*
    b. *For an interior side yard, seven and one-half feet; except as specified in CDC 26.040(D) for the Willamette Historic District.*
    c. *For a side yard abutting a street, 15 feet.*
    d. *For a rear yard, 20 feet.*
6. *The maximum building height shall be 35 feet, except for steeply sloped lots in which case the provisions of Chapter 41 CDC shall apply.*
7. *The maximum lot coverage shall be 35 percent.*
8. *The minimum width of an accessway to a lot which does not abut a street or a flag lot shall be 15 feet.*
9. *The floor area ratio shall be 0.45. Type I and II lands shall not be counted toward lot area when determining allowable floor area ratio, except that a minimum floor area ratio of 0.30 shall be allowed regardless of the classification of lands within the property. That 30 percent shall be based upon the entire property including Type I and II lands. Existing residences in excess of this standard may be replaced to their prior dimensions when damaged without the requirement that the homeowner obtain a non-conforming structures permit under Chapter 66 CDC.*
10. *The sidewall provisions of Chapter 43 CDC shall apply.*

Applicant Response:

1. The lot size is 9.24 acres, exceeding the required 10,000 S.F. minimum lot size. Therefore, the proposal complies with CDC 11.070(1).

2. The front lot line along Kenthorpe Way is approximately 499 feet, exceeding the required 35 foot minimum front lot width standard. Therefore, the proposal complies with CDC 11.070(2).

3. The mid-point of the lot is approximately 890 feet, exceeding the 50-foot average minimum lot width. No part of the lot is less than 50 feet wide. Therefore, the proposal complies with CDC 11.070(3).

4. West Linn does not classify the site as Type I or Type II land. The lot depth is approximately 710 feet at the centerline, approximately 1.4 times the width. Therefore, the proposal complies with CDC 11.070(4).

5. The setback standards in the R-10 zone and the proposed project setbacks are shown in Section 21, Figures 3.0 - 3.4. Table 2.1 demonstrates that the setbacks are consistent with the requirements of CDC 11.070(5).

Setback	Required (in feet)	Proposed setback to closest improvement (in feet)
Front (Kenthorpe)	20	114 to administration building & 46 to parking lot
Side - Interior	7.5	West side: 190 to the gravel overflow parking area; 216 to the washwater equalizer, 82 to the electrical transformers; East side: 26 to solids lagoon
Side – Street (Kenthorpe)	15	26 minimum
Rear (Mapleton)	20	190 to the electrical building and finished water pump station

Table 2.1: - R-10 Setbacks

6. Building elevations are shown In Section 21, Figures 10.6 – 10.11. Table 2.2 demonstrates that no building height will exceed the 35-foot maximum building height limitation in the R-10 zone. Therefore, the proposal complies with CDC 11.070(6).

7. The building lot coverage is 87,775 square feet, or 21.8 percent of total lot size and is less than the maximum 35 percent lot coverage limitation in the R-10 zone. Section 21, Figure 3.0. Therefore, the proposal complies with CDC 11.070(7).

8. There is no accessway onto the site from a lot that does not abut a street or a flag lot. Therefore, CDC 11.070(8) does not apply.

9. The site does not contain Type I or Type II lands. The minimum floor to area ratio (FAR) allowed in the zone is 0.45. The proposed FAR is 0.155 as is shown in Section 21, Figure 3.0. Therefore, the proposal complies with CDC 11.070(9).

10. CDC 43 applies to new home construction and home remodeling. The applicant does not propose to construct or remodel a home. Therefore, CDC 11.070(10) and CDC 43 do not apply.

11. Building or Structure Height. The maximum building height allowed in the R-10 zone is 35 feet. All buildings and structures are 35 feet tall or less.

Building	Approximate Maximum Height	Building	Approximate Maximum Height
Administration	29 feet	Mechanical Dewatering	35 feet
Operations	35 feet (existing)	Ballasted Floc and Chemical	30 feet 5 inches
Finish Water Pump Station	27 feet	Site Electrical/ Maintenance	31 feet 6 inches
Gravity Thickener	5 feet (without railing)	Thickened Solids Pump Station	16 feet

Table 2.2: Building and Structure Height

III. Application(s): Conditional Use and Design Review

The proposed expansion to the WTP meets the relevant requirements of the City of West Linn Community Development Code (CDC) for conditional use and design review, as addressed below. Relevant excerpts from the CDC are italicized.

CONDITIONAL USES (CDC 60)

PURPOSE (60.010)

The purpose of this chapter is to provide standards and procedures under which conditional uses may be permitted, enlarged, or altered if the site is appropriate and if other conditions can be met. (Ord. 1589 § 1 (Exh. A), 2010)

Applicant Response:

The City of West Linn approved conditional use permits for the WTP in 1980, 1988 and 1996. The applicant will demonstrate that the proposed expansion is consistent with the standards and procedures of CDC 60.

ADMINISTRATION AND APPROVAL PROCESS (60.030)

A. *Conditional use applications shall be decided by the Planning Commission in the manner set forth in CDC 99.060(B). A petition for review by the Council may be filed as provided by CDC 99.240(B).*

B. *All approved conditional use applications shall be subject to design review under the provisions of Chapter 55 CDC, and in the manner set forth in CDC 99.060(B).*

Applicant Response:

The application is provided for Planning Commission review. The City of West Linn approved design review requests for the WTP in 1980, 1988 and 1996. The applicant addresses the requirements of CDC 55 later in this section.

TIME LIMIT ON A CONDITIONAL USE APPROVAL (60.040)

Approval of a conditional use that required a design review shall be subject to the time limitations set forth in CDC 55.040. Approval of a conditional use that did not require design review shall be void unless either the use is commenced or an extension is granted per CDC 99.325 within three years of the approval.

Applicant Response:

CDC 55.040 requires that *"If substantial construction has not occurred within three years from the date of approval of the development plan, the approved proposal will be void, unless an extension is granted under CDC 99.325."*

The applicant will undertake substantial construction within three years of final land use approval. Substantial construction, by CDC definition, occurs when: utilities have been installed to serve the project; approved grading has been undertaken representing at least 25 percent of all the required preliminary grading; foundation excavation has occurred; foundation or building construction has occurred; street improvements are being installed; or a major physical improvement, required as part of the approved permit, has clearly begun.

BUILDING PERMITS FOR AN APPROVED CONDITIONAL USE (60.050)

A. Building permits for all or any portion of a conditional use shall be issued only on the basis of the conditional use plan and conditions as approved by the Planning Commission.

B. Any change in the conditional use plan or conditions of approval shall require a new application and hearing pursuant to the provisions set forth in this chapter and CDC 99.120(B).

Applicant Response:

Prior to construction or site development, the applicant shall submit building plans and permit requests consistent with the approved final land use decision.

APPLICATION (60.060)

A. A conditional use application shall be initiated by the property owner or the owner's authorized agent.

B. A prerequisite to the filing of an application is a pre-application conference at which time the Director shall explain the requirements and provide the appropriate forms as specified in CDC 99.030(B) and (C).

C. A prerequisite to the filing of an application is a meeting with the respective City-recognized neighborhood association, per CDC 99.038, at which time the applicant will present his/her proposal and receive comments.

D. An application for a conditional use shall include the completed application form and:

1. A narrative which addresses the approval criteria set forth in CDC 60.070 and which sustains the applicant's burden of proof; and

2. A site plan as provided by CDC 60.080.

One original application form must be submitted. Three copies at the original scale and three copies reduced to 11 inches by 17 inches or smaller of all drawings and plans must be submitted. Three copies of all other items must be submitted. When the application submittal is determined to be complete, additional copies may be required as determined by the Planning Department.

E. Names and addresses of all who are property owners of record within 300 feet of the site shall be determined by the Director.

F. The applicant shall pay the requisite fee. (Ord. 1401, 1997; Ord. 1442, 1999)

Applicant Response:

A. The City of Lake Oswego is the property owner and applicant, in satisfaction of CDC 60.060(A).

B. The applicant and West Linn representatives participated in a pre-application conference on September 1, 2011 in compliance with CDC 60.060(B). See Section 7.

C. The applicant conducted a neighborhood meeting, in compliance with CDC 99.038 on November 10, 2011 at the Cedaroak Park Primary School as required under CDC 60.060(C). See Section 8 for a complete discussion on the neighborhood coordination process.

D. This application contains a narrative and a site plan in compliance with CDC 60.060(D). See Section 21, Figures 3.0 - 3.4. In addition, the applicant has provided one original application form, three original scale sets of all drawings, and three copies reduced to 11 inches by 17 inches or smaller of all drawings and plans. The proposed uses are a water treatment plant, uses ancillary to the operation of a water treatment plant, raw and finished water pipelines, temporary staging areas for the construction of the WTP improvements and the off-site raw and finished water pipelines.

E. The Director shall determine the names and addresses of all property owners of record within 300 feet of the perimeter of the site.

F. The applicant paid the required fee of $25,000. Based upon the West Linn-provided pre-application conference notes, the land use review deposit required is: $25,000.

APPROVAL STANDARDS AND CONDITIONS (60.070)

A. The Planning Commission shall approve, approve with conditions, or deny an application for a conditional use, except for a manufactured home subdivision in which case the approval standards and conditions shall be those specified in CDC36.030, or to enlarge or alter a conditional use based on findings of fact with respect to each of the following criteria:

1. The site size and dimensions provide:

a. Adequate area for the needs of the proposed use; and

b. Adequate area for aesthetic design treatment to mitigate any possible adverse effect from the use on surrounding properties and uses.

Applicant Response:

In 1996, the WTP site area was 6.05 acres. The Planning Commission found that the proposed 4.5-acre development, approximately 74 percent of the then total site area, was adequate for the proposed WTP upgrade. See CUP-96-04/DR-96-07, Finding No. 1.

The present total site area is 9.24 acres. The proposal would result in 21.8 percent lot coverage, which would not exceed the maximum lot coverage in R-10 zone of 35 percent of the total area. See Section 21, Figure 3.0, Note 11. Approximately 5.32 acres (58 percent of the site) will be dedicated to landscaping and open space providing an aesthetic design treatment that mitigates the perceived adverse effects of the proposed development. As with the 1996 upgrade, the proposed lot area is adequate for the proposed use.

2. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, and natural features.

Applicant Response:

The total site area is 9.24 acres. The shape of the site is 'tee' or 'cross' shaped which allows for aggregation of the more intense proposed uses in the center of the lot, thereby minimizing potential adverse impacts on abutting properties. In particular, the ability to centralize uses allows for the construction of a clearwell between the electrical/maintenance and finished water pump station buildings and Mapleton Drive. The clearwell will be sunk into the ground, covered with soil, and re-seeded, providing a meadow-like open space between the water processing uses and the Mapleton Drive residential uses. The ability to create a compact form near the center of the lot is an efficient use of land.

The location of the site is between Kenthorpe Way and Mapleton Drive. The City of Lake Oswego has operated the WTP along the Kenthorpe Way-fronting property prior to the annexation of the neighborhood into the City of West Linn. The WTP use predates the creation of the West Linn R-10 zoning district. Construction of the WTP in 1967 occurred at a time when many of the homes in the neighborhood were also constructed. The City of West Linn's emergency inter-tie with Lake Oswego is located and must continue to be located on the finished water side of the WTP.

The site is sloped less than 2 percent. The site does not contain any regulated significant features, identified streams or stream corridors, heritage trees, Goal 5 resources, or Type I or Type II lands. There is a small-unregulated drainage swale in the northwestern corner of the property. See Section 21, Figure 2.0. There are 42 significant trees on-site. See Section 12.

By virtue of lot size, shape, location, flat topography, predominance of insignificant trees, and lack of notable natural features, the proposed WTP continues to be a suitable use for this site.

3. *The granting of the proposal will provide for a facility that is consistent with the overall needs of the community.*

Applicant Response:

In 1996, the Robinwood Neighborhood Association appealed the favorable Conditional Use and Design Review decision of the Planning Commission (Misc-96-09), in part, on the grounds that there was a "Lack of evidence that the remodel is consistent with overall needs of the community".

The West Linn City Council found that the *"… Lake Oswego-West Linn water system intertie from the Lake Oswego Water Treatment Plan provides critical backup or emergency sources of water for West Linn and, therefore, serves an important community need. Based upon this finding, the appellants' ground for appeal Issue 5 was denied."* Final Order Misc-96-09, Finding #5.

The Lake Oswego-West Linn water system intertie from the Lake Oswego WTP continues to provide an important source of critical or emergency backup for the city and citizens of West Linn. The importance of this intertie to the citizens of West Linn was reinforced as recently as December 2011, when the West Linn water supply system had to rely on the finished water provided by the Lake Oswego WTP and intertie.

Expanding the WTP capacity from 16 mgd to 38 mgd, as proposed, will increase the availability of backup or emergency water supply, providing greater certainty that West Linn will have a reliable source of backup or emergency water when the critical need arises, regardless of the time of the year.

As discussed in Section I, above, the WTP expansion provides multiple benefits consistent with the overall needs of the neighborhood and the larger community. The WTP expansion:

- furthers West Linn's adopted plans and regional plans;
- fulfills an essential community need at substantial savings to West Linn ratepayers;
- enhances the environment by constructing innovative 'Green" designs to minimize stormwater impacts;
- provides attractive open space areas accessible to the general public;
- provides a vital emergency road connection between Kenthorpe Way and Mapleton Drive;

- will create a pedestrian path between Kenthorpe Way and Mapleton Drive eliminating the need for West Linn to construct this intra-urban neighborhood connection; and
- provides significant underground utility improvements in Old River Drive & Kenthorpe Way.

Therefore, the proposed expansion of the WTP is consistent with the overall needs of the community.

4. *Adequate public facilities will be available to provide service to the property at the time of occupancy.*

Applicant Response:

The public facilities necessary to serve the proposed WTP are: potable water, sanitary sewer, streets, and stormwater management. The locations of current and proposed public utilities are illustrated in Section 21, Figures 5.0 – 5.4.

Water

The WTP supplies its own potable water and water for fire flow and will continue to do so in the future.

Sanitary Sewer

There is an existing public sanitary sewer system along the project frontages on Kenthorpe Way and Mapleton Drive. The existing WTP sanitary sewer lateral is currently connected to the sanitary sewer system on Kenthorpe Way. The current flows from the WTP to the sanitary sewer ranges up to 60 gpm. After the expansion, wastewater will flow to the existing sanitary sewer from the following sources:

- reject water (pressate) from the mechanical dewatering process;
- "domestic" amenities in the existing operations building and in the new administration building and the maintenance areas;
- seal water from pumps;
- floor drains; and
- analyzer drains, if detailed design determines that they cannot be located to allow them to drain to a recycle location.

The collection, handling and discharge of on-site liquid waste streams at the expanded WTP is currently being evaluated and refined to ensure that the peak instantaneous discharge to the existing sanitary sewer does not exceed the current peak discharge rates. Options being considered include on-site equalization, feeding higher concentration sludge to the mechanical dewatering equipment, and/or reducing flows during brief peak solids dewatering periods by recycling the centrate/pressate within the plant.

Stormwater Drainage

The design team prepared a Preliminary Stormwater Management Report consistent with the Section 2.0013 and 2.0040 of the West Linn Public Works Standards. See Section 16. See also discussion in Section IV of this narrative, CDC Chapter 33.

The WTP's proposed stormwater management features will be designed using the City of West Linn Public Works Design Standards and the City of West Linn Community Development Code, both of which require that certain volumes of stormwater be treated for any new development. The City

allows the use of the Portland Stormwater Management Manual, which provides proven standards on designing vegetated stormwater facilities that treat and reduce runoff. In line with this document, the City of West Linn encourages the sustainable stormwater design practices that help to limit the impacts of development on the watersheds within the City.

Three stormwater management methods designed under the requirements of the West Linn Public Works and City of Portland Stormwater Management Manual will help to reduce total impervious area as well as capture, slow down and absorb runoff. These are green roofs, pervious paving, and vegetated stormwater facilities. Integrated seamlessly into the overall site design, the 3 stormwater management methods will be beneficial to both environment and city as they reduce the impacts of runoff on the built and natural landscape and imitate a pre-development condition.

Streets

Kenthorpe Way. The City of West Linn classifies Kenthorpe Way, the site accessway, as a local street with a 50-foot right-of-way and a posted speed limit of 25 miles per hour. The street has few sidewalks and no bike lanes.

The West Linn Transportation System Plan (TSP) classifies Kenthorpe Way as a Local Street with 56-foot wide right-of-way including 32-foot pavement with parking and a 6-foot wide sidewalk with a 6-foot wide planter strip on both sides. The TSP does not list any pedestrian or bicycle improvements for Kenthorpe Way.

The West Linn Public Works Standards require that a dedicated street, such as Kenthorpe Way, should provide:

- a 3-foot frontage dedication which Lake Oswego will provide;
- 16-foot wide half street pavement improvement;
- 4-inch AC Pavement – 2-inch Class "C" over 2 inches Class "B," 8 inches of 1-1/2 inches - 0 and 2 inches of ¾ inch - 0 leveling course (WL-502);
- a curb and gutter (WL-501);
- a 6-foot sidewalk (WL-508);
- a 36-foot maximum driveway width (WL-504A); and
- driveway spacing at least 50 feet apart.

Mapleton Drive. The City of West Linn classifies Mapleton Drive as a collector street with a 50-foot right-of-way and a posted speed limit of 25 miles per hour. The street has few sidewalks or curbs and no bike lane.

The West Linn TSP classifies Mapleton Drive as a Collector-Constrained with 48-foot wide right-of-way including 36 feet of pavement with parking on one side and bike lane on the other. Sidewalk shall be 6 feet wide on both sides with no planter strip. The City pedestrian plan requires that sidewalks be installed on both sides of the street. (See project number 26 in TSP with sidewalk along Mapleton Drive from Willamette Drive to Nixon Avenue and project number 29 in TSP with sidewalk along Nixon Avenue starting from Mapleton Drive to Elmran Avenue.)

The West Linn Public Works Standards do not require additional dedication. They do require the applicant to provide:

- 18-foot wide half street pavement improvement;
- 5-inch AC Pavement – 3 inch Class "C" over 2 inch Class "B," 10 inches of 1-1/2 inch – 0 and 2 inches of ¾ inch-0 leveling course (WL-502);
- curb and gutter (WL-501);
- a 6-foot wide sidewalk (WL-508);
- a 36-foot wide maximum drive way width (WL-504A); and
- driveway spacing at least 300 feet apart.

During the Pre-Application Conference, West Linn staff offered the applicant the opportunity to construct street improvements consistent with the "Green Street" techniques as detailed in the City of Portland Stormwater Management Manual and the West Linn Public Works Design Standards Section 2.0010 General Design Requirements. The applicant provided preliminary street improvement plans consistent with the West Linn TSP and the "Green Streets" techniques authorized by West Linn code. See Section 16, Appendix E, Portland Stormwater Management Manual, Aug. 2008. The proposed "Green Streets" approach is more contextually sensitive to the neighborhood in that it will create a meandering pedestrian experience and substitute pedestrian scaled lighting for standard street lights. See Section 21, Figure 3.0B. West Linn has the option to waive additional right-of-way dedication in order to facilitate a more neighborhood sensitive approach to frontage improvements.

The proposed site design will meet the required driveway width and driveway spacing dimensions. The existing driveway approach on Kenthorpe Way is 59 feet, 1 inch and the driveway width is 16 feet, 2 inches at its narrowest. The driveway approach will become 73 feet 7 inches to allow fire truck access and a 26-foot wide driveway lane. The applicant will provide a secondary accessway off Kenthorpe Way approximately 180 feet to the west. The driveway approach will be 64 feet wide and the drive lane will be 26 feet wide.

The applicant will construct one emergency accessway off Mapleton Drive. The accessway will provide emergency service providers access in and out of the site and it will provide neighborhood residents an emergency access route through the site. In accordance with the requirements of TVF&R, the emergency accessway must provide a minimum of 20 feet of unobstructed drive lane. The applicant proposes to construct a 12-foot wide drive lane made of porous asphalt and two 4-foot wide shoulders made of grass pavers or other acceptable material to satisfy the TVF&R emergency access requirements. A 3-foot tall swing gate will control access to the emergency lane. See Figure 3.4 in the Design Review discussion in this narrative. This emergency access lane will also provide pedestrian access through the site between Mapleton Drive and Kenthorpe Way.

Consequently, the applicant has the ability to provide adequate street access to the property today and at the time of occupancy.

5. *The applicable requirements of the zone are met, except as modified by this chapter.*

Applicant Response:

In Section II, above, the applicant demonstrates that the proposal can meet all applicable requirements of the underlying R-10 zone. The applicant is not requesting any modifications to the underlying zone requirements.

6. *The supplementary requirements set forth in Chapters 52 to 55 CDC, if applicable, are met.*

Applicant Response:

The application responds to the supplementary requirements of CDC 52 through 54 in Section IV, Supplemental Approval Criteria, in this narrative. The applicant provides a detailed response to CDC 55 in the following section.

7. *The use will comply with the applicable policies of the Comprehensive Plan.*

Applicant Response:

The applicant has identified the following West Linn Comprehensive Plan Goals and Policies, which are applicable to this land use request:

Goal 1: Citizen Involvement

Goal 1. Provide the opportunity for broadly based, ongoing citizen participation, including opportunities for two-way dialogue between citizens and City elected and appointed officials.

CDC 99.038 prescribes a specific protocol for involving citizens in the conditional use and design review process. Section 8 contains the required documentation necessary to demonstrate compliance with CDC 99.038. In addition, the Partnership designed and implemented a multi-year neighborhood coordination effort, which resulted in significant redesign of the WTP site. During the summer of 2012, the Partnership provided financial support to West Linn who retained the services of a professional facilitator and subsequently participated in a conversation with West Linn representatives and neighborhood representatives in an effort to further define and develop desired site improvements and mitigation measures that will guide construction and operation of the WTP project over many years.

Policy 2: Support neighborhood associations as a forum for discussion and advice on issues affecting the community.

Applicant Response:

The Partnership has demonstrated compliance with CDC 99.038 by engaging the RNA to create a forum for discussion of the proposed WTP expansion and potential impacts the project may have on the community.

Policy 4: Provide timely and adequate notice of proposed land use matters to the public to ensure that all citizens have an opportunity to be heard on issues and actions that affect them.

Applicant Response:

The City of West Linn notified residents and the RNA of the September 1 pre-application conference. The Partnership, consistent with CDC 99.038, notified the RNA of the proposed land use application and conducted a public meeting, as required.

Policy 5. Communicate with citizens through a variety of print and broadcast media early in and throughout the decision-making process.

Applicant Response:

The Partnership conducted neighborhood meetings, back-yard conversation, one-on-one meetings with neighbors, WTP tours, and circulated print materials by email and U.S. Post on numerous occasions throughout the multi-year planning process. See Appendix C.

Goal 2: Land Use Planning

Intergovernmental Coordination: Intergovernmental coordination activities include managing the water supply with the South Fork Water Board and the City of Lake Oswego. (p LU-12)

Applicant Response:

The City of West Linn has a water supply intertie, fed by the WTP, that is available for emergency use or as a backup. The intertie location is at Kenthorpe Way and Old River Drive. The current "West Linn Water Service Plan" anticipates strengthening the reliance on the intertie in the future, referring to the intertie with the Lake Oswego finished water pipeline as the "City of Lake Oswego Emergency Supply Connection".

Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources

Natural Environment

Policy 1. Implement site design standards that prescribe how to place roadways and buildings to preserve trees.

Applicant Response:

CDC 55.100(B)(2) provides guidance and regulations governing the placement of roadways and buildings and their relationship to trees. West Linn regulates heritage trees, significant trees, and significant tree clusters. CDC 55.100(B)(2) acknowledges that not all trees are significant and that even if the City Arborists determines that a tree is significant, not all significant trees will be protected.

The West Linn Arborist has determined that the site contains 42 significant trees or significant tree clusters. The applicant proposes to remove six significant trees on site and will mitigate for the tree loss, consistent with West Linn regulations. See Section 12.

Policy 2. Where appropriate, require the planting of trees as a condition of approval for any land development proposal, consistent with the City's street tree ordinance and recommendations of the City Arborist.

Applicant Response:

Six significant trees, totaling 182 inches DBH will be removed. Based on the 182 inches of significant tree DBH removal, mitigation will require 182 inches of DBH replacement. The project proposes conducting this replacement by planting 91 sapling trees at 2 inch caliper per tree for a total of 182 inches. In addition to the 91 trees needed for significant tree mitigation, an additional 217 trees will also be planted. This will result in a total of 308 trees being planted on-site. Although the final tree

count is subject to minor changes, the 91 trees to be planted for significant tree mitigation will not change. The Partnership will plant approximately 18 mature coniferous trees, 12 to 14 feet tall, providing additional screening from WTP lights. See Section 21, Figures 5.5B, 5.5C, and 5.5E.

Detailed planting plans, including a plant schedule are located in Section 21, Figures 11.0-12.6.

Policy 3. Provide buffer areas around heritage trees, significant trees, and tree clusters to ensure their preservation.

Applicant Response:

There are no heritage trees on site. CDC 55.100 (B)(2) and the West Linn Tree Technical Manual prescribe the preservation of up to 20 percent of a site for tree preservation and the methodologies for protecting trees during site construction. The applicant has provided detailed drawings to ensure the preservation of significant trees and clusters. See details in Section 12.

Goal 6: Air, Water, and Land Resources Quality

Water Quality

Policy 7. Require up to date erosion control plans for all construction and actively enforce applicable City codes and regulations.

Applicant Response:

The application contains a preliminary Erosion Control and Sediment Prevention (ECSP) Plan. See Section 14.

Policy 8. Encourage the use of alternative permeable materials for construction of parking areas to reduce stormwater runoff and improve water quality.

Applicant Response:

The application proposes the use of permeable paving materials for employee and guest parking areas and a portion of the emergency access road from Mapleton Drive. See Section 16.

Noise Control

Goal 7: Maintain and promote a quiet and healthful environment for the citizens of West Linn.

Policy 2: Require development proposals that are expected to generate noise to incorporate landscaping and other techniques to reduce noise impacts to levels compatible with surrounding land uses.

Applicant Response:

The application proposes the use of noise mitigation techniques to reduce noise levels that the WTP generates. These mitigation measures include: compressing the site layout so that noise generating areas are set back as far as is reasonably possible from abutting properties; housing noise generating uses, such as HVAC equipment and compressors and fans, inside buildings; requiring the use of WTP-generated compressed air for chemical delivery trucks; removing the CO_2 tank and extensive perimeter landscaping for buffering.

Policy 3. Require new commercial, industrial, and public facilities to be designed and landscaped to meet Department of Environmental Quality (DEQ) and City noise standards.

Applicant Response:

West Linn quantitative noise standards are based on DEQ regulations. The applicant proposes to design and landscape the site to be consistent with DEQ daytime and nighttime noise limits in a residential neighborhood.

Policy 4. As part of the land use application submittal for a noise-generating use, require the applicant to include a statement from a licensed acoustical engineer, and, if necessary, from DEQ, declaring that all applicable standards can be met.

Applicant Response:

The application contains a noise study prepared by ENVIRON, a licensed acoustical engineering firm. The acoustical engineer concluded that the proposed WTP can meet DEQ standards because: (a) the proposed WTP processing facility is similar in design to Willamette River Water Treatment Plant that meets DEQ standards; (b) the WTP is being designed to contain most noise-generating activity within the core of the plant; (c) noise-generating equipment will be housed in buildings; and (d) chemical trucks will be required to use plant-generated compressed air rather than on-board compressed air. Consistent with West Linn Code and the 1996 WTP conditions of Approval, the Partnership proposes to conduct a similar noise analysis within six months after the expanded WTP is in operation. If the facility is found in violation of applicable DEQ standards, the Partnership will immediately undertake additional mitigation efforts until the WTP is in compliance with the applicable DEQ standards.

Goal 8: Parks and Recreation

Policy 4. Promote connections between parks and recreation areas throughout the City.

Recommended Action Measure 3. Create a comprehensive, City-wide pathway system that provides a variety of trail experiences and connects existing and future recreational facilities.

The Draft West Linn Trail System Plan shows a Local Trail through the WTP connecting Kenthorpe and Mapleton. See map, p 39. This connection was given high priority by citizens in the public review process. See Map 3: Public Input – Intensity of Interest, in Appendix A.

Applicant Response:

The application proposes the creation of a pedestrian path from the eastern end of Kenthorpe Way to Mapleton Drive, thereby fulfilling the intent of this series of goals and recommendations.

Goal 11: Public Facilities and Services.

General

Policy 1. Establish, as the City's first priority, the maintenance of existing services and infrastructure in all areas within the existing City limits.

Applicant Response:

The Lake Oswego WTP is an existing element of West Linn's infrastructure as it provides West Linn residents with a water intertie for emergency purposes.

Policy 6. Encourage cooperation and coordination between all public service agencies to maximize the orderly and efficient development and provision of all services.

Applicant Response:

The City of Lake Oswego and the Partnership will continue to provide the water intertie to West Linn consistent with the water system plans for each jurisdiction. For example, Solution Approach C of the 2008 West Linn Water Service Plan: Improve the Emergency Supply Capacity and Reliability of the Lake Oswego Emergency Supply Connection recommends: *"This solution approach includes developing a coordinated emergency supply plan that allows the City to fully meet its emergency supply capacity needs through the existing emergency supply connection from the City of Lake Oswego's water system in the Robinwood neighborhood near Lake Oswego's water treatment plant. The City's existing emergency supply connection to Lake Oswego is interruptible and its delivery capacity is dependent on Lake Oswego's supply and demand conditions at the time of the City's need. Under peak use, high demand conditions the actual capacity of this connection may approach zero as Lake Oswego's current maximum water demands are approaching the existing supply system's capacity."*

The West Linn water supply was interrupted in December 2011, a low flow time of the year, demonstrating the importance of securing a reliable source of emergency water. Expansion of the WTP will provide West Linn with a reliable source of emergency water for many years to come.

Policy 10. Assure all visible public facilities are constructed with attractive design and materials where appropriate.

Applicant Response:

The design team conducted a neighborhood compatibility analysis, which identified several dominant architectural themes, such as, low buildings relying on horizontality and the use of wood, brick, and earth tones. The proposed WTP buildings pay tribute to these themes by emphasizing horizontal planes, building elevation within the height limits of the R-10 zone, and the use of wood, brick and metal – all in earth tones. See architectural materials sample boards delivered as part of this application.

Policy 12. Whenever feasible, utilize environmentally sensitive materials and construction techniques in public facilities and improvements.

Applicant Response:

The proposed project includes the following environmentally sensitive improvements: use of porous paving surfaces, recycled materials, green roofs, stormwater facilities that make use of existing topography, and a "Green Streets" approach to frontage improvements. Where possible, heat will be scalped from a warm area of the plant and ducted to a cooler area of the plant.

Water System

Goal: Provide municipal potable water service for public, commercial, and domestic uses within the city limits of West Linn.

Policy 1: Establish the City's Water Master Plan, 1999, which is a supporting document of the Comprehensive Plan, as a guide for development of future water storage and distribution facilities.

Applicant Response:

Elements of the 2008 West Linn *Water System Master Plan* (WSMP) encourage the integration of the Lake Oswego intertie into the West Linn water system. For example, the 2008 WSMP states, "it was further directed to pursue development of reliable emergency supply capacity with the cities of Lake Oswego, Tigard and others in accordance with Solution Approach C" (pages 6-15).

Policy 2. Coordinate water service to future users to allow for the most efficient provision of service within the City and projected subsequent expansion of the City limits within the Urban Growth Boundary as it existed in October 2002, calculated to serve a buildout population not to exceed 31,000.

Applicant Response:

The intertie water service plan polices have the potential to provide West Linn with a reliable source of emergency water. The intertie provides a reliable source of back-up water, which enables West Linn to serve some of the water needs of its population and employment projection at build-out.

Goal 12: Transportation

Pedestrians

Policy 1. Promote a comprehensive cohesive network of pedestrian paths, lanes, and routes that accomplishes the following objectives:

- *b. Provides connections to schools, recreation facilities, community centers, and transit facilities.*
- *c. Use off-street pedestrian "short-cut" pathways to provide routes where physical constraints or existing development preclude the construction of streets with sidewalks.*

Applicant Response:

The WTP proposal provides a pedestrian path that connects the eastern end of Kenthorpe Way to Mapleton Drive. Creation of this path will eliminate the need for the City of West Linn to construct this intra-neighborhood connection which will provide a benefit to children walking to and from Cedaroak Park Primary School.

Policy 2. Employ a variety of methods to promote safe and convenient pedestrian access in addition to, or instead of, sidewalks in older developed areas of West Linn without sidewalks.

Applicant Response:

The application proposes to use a "Green Streets" approach to frontage improvements that will be in keeping with the stated goal of providing alternatives to traditional sidewalks in older neighborhoods, such as Robinwood. The site design provides 12 bicycle parking spaces for staff and visitors.

Goal 13: Energy Conservation

Policy 6. Encourage the use of energy-conscious design and materials in all public facilities.

Applicant Response:

The preliminary design for several buildings within the WTP complex envisions 'green roofs' and scalping heat from warm areas of the plant and ducting to cooler areas.

Policy 7. Encourage the construction and maintenance of sidewalks and bike paths/ways to promote alternative modes of transportation.

Applicant Response:

The WTP site will include a pedestrian path connecting the eastern end of Kenthorpe Way to Mapleton Drive. An employee bike parking area will be created within the WTP's secured area.

Goal 14: Urbanization

Goal. Promote an orderly growth pattern within the UGB to preserve and enhance the natural and developed character of West Linn.

Applicant Response:

By ensuring adequate water service, even in emergency situations, the City of West Linn is better able to use the provisions of water service as a tool to promote orderly growth.

Robinwood Neighborhood Plan Policies

The Robinwood Neighborhood Plan policies relevant to the WTP conditional use application are:

Goal 3, Policy 3.3: Provide appropriate pedestrian facilities along residential streets. (p 8)

Action measures:

- *Provide sidewalks on streets leading to and from the Robinwood Main Street Area (Willamette Drive). (p 15)*

Applicant Response:

The WTP proposal will provide pedestrian walkways along both Kenthorpe Way and Mapleton Drive, streets that lead towards Willamette Drive.

Goal 3, Policy 3.4: Implement "green street" concepts for residential streets. (p 8)

Action measures:

- *Possibly: require undergrounding of utilities along residential streets as development or street reconstruction occurs. (p 16)*

Applicant Response:

The application proposes to incorporate a "Green Streets" approach to frontage improvements, one that compliments the neighborhood character. The proposed Green Streets" approach will provide a meandering sidewalk, pedestrian friendly lighting, vegetative stormwater facilities, and access to open spaces within the WTP site.

The identified Action Measure suggests that undergrounding of utilities could possibly be required as development or street improvements occur. As new residential development has occurred along the south side of Mapleton Drive, utility lines have been placed underground to a utility pole from which the utility lines are fed overhead to the existing utility poles on the north side of Mapleton Drive.

In situations where existing overhead utility lines run continuously along a street frontage, such as along Kenthorpe Way and Mapleton Drive, West Linn provides an option of a fee in-lieu-of undergrounding a small section of and overhead utility line. This avoids the disruptive effect of road cuts and service interruption to residents that a piece-meal approach to undergrounding utilities creates.

Consequently, the applicant proposes to leave the overhead utility lines in place and pay a fee, determined by West Linn or PGE, in-lieu-of undergrounding overhead utilities at this time. The applicant will bury the new secondary power feed in the Kenthorpe Way right-of-way.

Goal 3, Policy 3.7: Use pedestrian shortcuts to connect existing streets. (p 8)

Action measures:

Acquire right of way and construct pedestrian pathways from willing property owners between streets where such a path would provide a significant pedestrian shortcut. (p 16)

Applicant Response:

The WTP site plan proposes to provide a pedestrian connection that would be approximately 0.8 miles shorter than the existing pedestrian route between the segments of Kenthorpe Way and Mapleton Drive abutting the WTP property. This will be accomplished without the need for other property owners to grant right-of-way.

Goal 3, Policy 3.9: Ensure that the Lake Oswego Water Treatment Facility on Kenthorpe Drive remains compatible with the surrounding residential areas and provides benefits to Robinwood's residents as well as those of Lake Oswego. (p 8)

Action measures:

- *Require the Lake Oswego Treatment Facility to provide appropriate landscape screening and context-sensitive architecture as part of any facility expansion plan. (p 17)*
- *Ensure that construction activities associated with any facility expansion and ongoing service and maintenance activities minimize impacts upon neighboring residential streets and homes. (p 17)*
- *Mitigate negative impacts of treatment facility expansion on the surrounding neighborhood with positive contributions to transportation connectivity between Kenthorpe and Mapleton Drives. (p 17)*

Applicant Response:

The WTP site plan and landscape plans provide a high level of landscape screening between the WTP operations and the abutting residential properties. This is possible because the project designers, in consultation with neighbors, compressed WTP operations towards the center of the site; thereby providing large perimeter setbacks in which to grow dense landscape buffers.

The architectural solution and materials palette is based upon a visual assessment of architectural styles and materials within the Robinwood neighborhood. The plan reflects the horizontal planes of nearby house and the use of wood, brick, and earth tones.

The application contains a Construction Management Plan that ensures continuous access to residential streets and homes and provides a mechanism for the Partnership to notify residents about the potential impacts from scheduled construction activity.

Construction of the pedestrian path through the WTP site provides a direct pedestrian connection between Kenthorpe Way and Mapleton Drive.

The Robinwood residents will also benefit from the "Green Street" frontage improvements on Kenthorpe Way and Mapleton Drive that will improve multimodal capabilities of the street.

Centrally, Robinwood residents will benefit from the availability of an emergency water supply through the Lake Oswego intertie. Consequently, the proposed WTP expansion will be consistent with Goal 3, Policy 3.9 of the Robinwood Neighborhood Plan goals and policies.

West Linn Water System Master Plan

Expansion and construction of the new WTP, in conjunction with the upsized RWP/FWP, would save West Linn ratepayers **$11.6 million** in avoided costs for high-priority emergency supply capacity and reliability projects identified in West Linn's adopted *2008 Water System Master Plan* (WSMP). And the RWP/FWP projects will save West Linn an additional **$0.3 million** in avoided costs for high-priority capital maintenance projects in the WSMP.

Avoiding these significant short-term infrastructure costs directly benefits West Linn ratepayers today and can help West Linn fund its remaining substantial long-term water infrastructure needs in a more manageable way for the benefit of future ratepayers.

B. An approved conditional use or enlargement or alteration of an existing conditional use shall be subject to the development review provisions set forth in Chapter 55 CDC.

Applicant Response:

The application responds fully to the requirements of CDC 55 below.

C. The Planning Commission may impose conditions on its approval of a conditional use which it finds are necessary to assure the use is compatible with other uses in the vicinity. These conditions may include, but are not limited to, the following:

1. Limiting the hours, days, place, and manner of operation.

2. Requiring design features which minimize environmental impacts such as noise, vibration, air pollution, glare, odor, and dust.

3. Requiring additional setback areas, lot area, or lot depth, or width.

4. *Limiting the building height, size or lot coverage, or location on the site.*
5. *Designating the size, number, location and design of vehicle access points.*
6. *Requiring street right-of-way to be dedicated and the street to be improved including all steps necessary to address future street improvements identified in the adopted Transportation System Plan.*
7. *Requiring participation in making the intersection improvement or improvements identified in the Transportation System Plan when a traffic analysis (compiled as an element of a conditional use application for the property) indicates the application should contribute toward.*
8. *Requiring landscaping, screening, drainage, and surfacing of parking and loading areas.*
9. *Limiting the number, size, location, height, and lighting of signs.*
10. *Limiting or setting standards for the location and intensity of outdoor lighting.*
11. *Requiring berming, screening, or landscaping and the establishment of standards for their installation and maintenance.*
12. *Requiring and designating the size, height, location, and materials for fences.*
13. *Requiring the protection and preservation of existing trees, soils, vegetation, watercourses, habitat areas, and drainage areas.*

Applicant Response:

The Partnership acknowledges that the Planning Commission may impose reasonable conditions of approval.

D. *Aggregate extraction uses shall also be subject to the provisions of ORS 541.605. (Ord. 1291, 1987; Ord. 1408, 1998; Ord. 1544, 2007)*

Applicant Response:

The proposal does not entail any aggregate extraction uses; therefore, CDC 60.070(D) is not applicable to this request.

SITE PLAN AND MAP (60.080)

A. *All site plans and maps shall include the name, address, and telephone number of the applicant, the scale of the site plan, north arrow, and a vicinity map.*

B. *The applicant shall submit a site plan drawn to an appropriate scale (in order of preference, one inch equals 10 feet to one inch equals 30 feet) which contains the following information:*

Applicant Response:

The application includes an application submittal requirements locator which identifies the location within this application package of all required site plan information. The figure demonstrates that the proposed site plan is consistent with CDC 60.080, Site Plan and Map. See Section 20.

ADDITIONAL CRITERIA FOR TRANSPORTATION FACILITIES (TYPE II) (60.090)

A. Construction, reconstruction, or widening of highways, roads, bridges or other transportation facilities that are (1) not designated in the adopted West Linn Transportation System Plan ("TSP") or (2) not designed and constructed as part of an approved, active, development order are allowed in all zoning districts subject to the conditional use and all other applicable provisions of the CDC and satisfaction of all of the following criteria:

Applicant Response:

The proposed project will provide frontage improvements on Kenthorpe Way and Mapleton Drive, consistent with the TSP and West Linn Public Works Standards. Consistent with the direction from the West Linn staff, CDC 60.090 does not apply to this application.

ADDITIONAL CRITERIA FOR SCHOOLS AND OTHER GOVERNMENT FACILITIES (60.100)

Schools and other government facilities that attract a regular and significant volume of users shall, to the greatest extent possible, be centrally located relative to the majority of the population that they will serve and be serviceable by sidewalks and bike routes/lanes. Police and fire stations shall meet these standards to the greatest extent possible but it is acknowledged that access to arterials remains a key locational determinant for those uses. (Ord. 1590 § 1, 2009)

Applicant Response:

The WTP is owned by the City of Lake Oswego. However, unlike a school, city office building, fire station, or police headquarters, a water treatment plant does not attract a significant volume of public users. At full build-out, the WTP will generate fewer average daily trips than two new residences would generate. Consequently, CDC 60.100 is not applicable to this low volume trip generator.

Conditional Use Conclusion

The proposed improvements to the WTP will enhance the performance and safety of the facility. The West Linn Comprehensive Plan and West Linn Water Service Plan recognize the intrinsic benefits of maintaining the emergency intertie between the WTP and the West Linn water system. Increasing the production capacity of the WTP will increase the likelihood that West Linn will have adequate access to a backup supply of water when the need arises, regardless of the season.

The proposed site improvements maximize separation between WTP operations and neighbors and they are designed to reflect existing neighborhood architectural and landscape qualities.

The proposed pedestrian path and emergency access road will increase neighborhood accessibility, primarily to a local school and will provide local residents with an alternative evacuation route, should the need arise.

Consequently, the proposed WTP expansion is consistent with both the intent and requirements of CDC 60, Conditional Use.

DESIGN REVIEW (CDC 55)

PURPOSE AND INTENT – GENERAL (55.010)

The purpose of the design review provisions is to establish a process and standards for the review of development proposals in order to conserve and enhance the appearance of the City and to promote functional, safe, and innovative site development. Attention will be paid to the proposal's scale, layout and design, its compatibility with the surrounding natural environment, and the character of the surrounding neighborhood or area. The intent is to ensure that there is general compatibility between adjoining uses, that private and common outdoor space is provided, that vehicular access and circulation are safe, and that areas of public use are made aesthetically attractive and safe. Also of concern are the needs of persons with disabilities.

Multi-family, industrial, commercial, office, and public projects will comply with the Transportation Planning Rule (TPR). The TPR is a State requirement that jurisdictions must reduce reliance on the automobile by, in part, encouraging other modes of transportation such as transit, bicycles, and foot traffic, or through building orientation or location.

Applicant Response:

The development proposal for the WTP expansion addresses the required design review provisions, as detailed specifically below. The application has been developed over the past year with input from an extensive public and neighborhood outreach program to find ways to ensure that the proposed WTP expansion would continue to be consistent with the character of the neighborhood. As a direct result of this neighborhood coordination effort, the applicant compressed the footprint of the WTP to minimize impacts to perimeter properties. The applicant conducted an assessment of the architectural character of the neighborhood to identify key design themes, such as horizontal planes and use of native materials, to help the primary WTP buildings blend into the existing architectural aesthetic. The proposed WTP site design creates a circular traffic flow along the Kenthorpe frontage and it provides a pedestrian link between Kenthorpe and Mapleton that promotes neighborhood walkability. After consultation with TVF&R, the site design includes an emergency accessway between Kenthorpe and Mapleton that provides safety personnel better access into the site and also provides local residents with an additional emergency evacuation route through the WTP site. Noise-generating sources are either enclosed in buildings or are buffered from perimeter residential uses. Finally, the applicant's design team has provided a revegetation and landscape plan that fully mitigates for the loss of significant trees, consistent with the West Linn Code, and provides significant visual buffers between the perimeter uses and the plant itself.

The WTP is a Major Public Facility, by definition. The facility includes multiple elements that make it difficult to classify and to review under the Design Review code. The WTP complies with the West Linn design standards created to satisfy the TPR by, among other things, providing bicycle parking for visitors and employees, creating sidewalks along both frontages and by linking Kenthorpe Way and Mapleton Drive with a pedestrian pathway.

Lake Oswego has consistently worked to satisfy conditions of approval from previous WTP land use applications intended to maintain neighborhood compatibility, and will continue to do so. Clackamas County permitted the Lake Oswego WTP on this site prior to the site being annexed by the City of West Linn. Subsequently, the City of West Linn found in 1988 and 1996 that the Lake Oswego WTP, as then configured, could be permitted as a conditional use in the R-10 zone. West Linn approved the WTP through a consolidated conditional use and design review process, and Lake Oswego has met its burden with each approval to satisfy the conditions of approval.

APPLICABILITY (55.020)

This chapter provides two levels of design review: Class I and Class II. Class I design review applies to land uses and activities that require only a minimal amount of review. Class II design review is reserved for land use and activities that require comprehensive review. Class I design review applies to the following land uses and activities:

Applicant Response:

The proposal does not fit within the uses/activities listed under Class I design review and thus is subject to Class II Design Review.

EXEMPTIONS (55.025)

Applicant Response:

The proposal is not exempt from Class II Design Review.

ADMINISTRATION AND APPROVAL PROCESS (55.030)

A. A pre-application conference is required before submitting a development plan application for design review as provided by CDC 99.030(B).

B. The application shall be submitted by the record owner(s) of the property, authorized agent, or condemnor.

C. Action on the development plan application shall be as provided by Chapter 99CDC, Procedures for Decision-Making: Quasi-Judicial, and the following:

1. The Planning Director for Class I design review applications, or Planning Commission for Class II design review applications, shall approve, approve with conditions, or deny the application based on findings related to the applicable criteria set forth in CDC 99.110 and this chapter.

2. A decision by the Planning Director may be reviewed by the City Council.

D. Substantial modifications made to the approved development plan will require reapplication (e.g., more or fewer lots, different architectural design, etc.). (Ord. 1474, 2001; Ord. 1597 § 14, 2010)

Applicant Response:

The applicant and West Linn representatives participated in a pre-application conference on September 1, 2011 in compliance with CDC 55.030(A). The City of Lake Oswego is the property owner and applicant, in satisfaction of CDC 55.030(B). This is a consolidated application for conditional use and Class II design review that is subject to review by the West Linn Planning Commission in a public hearing in compliance with CDC 55.030(C).

EXPIRATION OR EXTENSION OF APPROVAL (55.040)

If substantial construction has not occurred within three years from the date of approval of the development plan, the approved proposal will be void, unless an extension is granted under CDC 99.325. (Ord. 1408, 1998; Ord. 1589 § 1 (Exh. A), 2010)

Applicant Response:

The applicant will undertake substantial construction within three years of final land use approval, or apply for an extension consistent with CDC 55.040. (Substantial construction, by CDC definition, occurs when: utilities have been installed to serve the project; approved grading has been undertaken representing at least 25 percent of all the required preliminary grading; foundation excavation has occurred; foundation or building construction has occurred; street improvements are being installed; or a major physical improvement, required as part of the approved permit, has clearly begun.)

DESIGN REVIEW AMENDMENT TRIGGER (55.050)

Amendments to design review shall be required when 10 percent or more of the housing type changes (e.g., from single-family units to multi-family units) from the tentatively approved design review plan, or when there is more than a 10 percent change in the number of units, or when the layout of streets and lots significantly changes, or adjusting more than 20 percent of the building footprint or site plan, or significant changes to the architecture that modify the style, mass, or result in elimination of significant design features. Changes in color or materials would not require an amendment unless the colors were non-earth tones and the materials were of poorer quality (for example, going from tile roof to composition roofing) than originally approved. Changes to the project/site plan to meet conditions of approval or legislative changes shall not trigger an amendment. (Ord. 1408, 1998)

Applicant Response:

CDC 55.050 applies to changes made to the proposal after the City approves the Class II design review proposal. Therefore, CDC 55.050 does not apply to the proposal, at this time.

STAGED OR PHASED DEVELOPMENT (55.060)

The applicant may elect to develop the site in stages. Staged development shall be subject to the provisions of CDC 99.125.

Applicant Response:

All proposed modifications to the site and all proposed uses are described in this land use application. Construction will occur from 2013 through early 2016 over an estimated 32-month period. Thereafter, as demand on the system increases, Lake Oswego will construct the remaining WTP elements defined in this proposal and as shown in the proposed Site Plan, Figures 3.0 – 3.4. The elements to be constructed are:

1. New administration building and modifications to the existing operations building;
2. New raw water settling facilities. New high efficiency settlement technology is proposed to reduce the footprint of new raw water settling facilities.
3. Addition of six new filters to replace the existing six filters.
4. Addition of new Ozone contact facilities to enhance water quality and improve taste and odor aspects of the water produced.
5. New 2.0 million gallon (MG) treated water storage reservoir (clearwell) buried underground with a new finished water pump station (FWPS) located above ground inside of a new building.
6. New solids handling systems including solids thickeners and mechanical dewatering units;

7. New chemical storage and feed systems;

8. New washwater (WW) handling systems to equalize, clarify and recycle waste filter backwash water;

9. The existing WTP power supply will be maintained and second PGE power supply will be installed to avoid the need to install a large backup power generator on-site.

10. Reduction of potential nuisance impacts to the residents of the Kenthorpe and Robinwood neighborhoods.

The proposed conditional use permit will include the construction of a new finished water pipeline (FWP) and raw water pipeline (RWP) on the WTP site. However, this proposal does not include work done in furtherance of the RWP and FWP off the WTP site.

SUBMITTAL REQUIREMENTS (55.070)

A. The design review application shall be initiated by the property owner or the owner's agent, or condemnor.

Applicant Response:

Lake Oswego is the property owner and the applicant.

B. A pre-application conference shall be a prerequisite to the filing of an application…

Applicant Response:

West Linn conducted a pre-application conference on September 1, 2011. The West Linn staff report for the pre-application conference is located in Section 7.

C. A prerequisite to the filing of an application for development proposals that include greater than 10 multi-family units or commercial/industrial buildings greater than 1,500 square feet in size, a four-lot or more planned unit development, a 10-lot or greater subdivision, or a zone change that requires a Comprehensive Plan amendment is a meeting with the respective City-recognized neighborhood association, per CDC 99.038, at which time the applicant will present their proposal and receive comments. Wireless communication facilities (WCF) shall also fulfill co-location protocol of CDC 57.090.

Applicant Response:

In addition to the multiple meetings the applicant conducted with the neighborhood over the past year, Lake Oswego conducted the required neighborhood coordination meeting with the Robinwood Neighborhood Association on November 10, 2011 at Cedaroak Park Primary School to satisfy the requirements of CDC 99.038. Section 8 includes a synopsis of the issues discussed during the required meeting. A recording of the meeting is included.

D. The applicant shall submit a completed application form and: …

Applicant Response:

The application includes a matrix, Section 20, which identifies all submittal requirements and the location of the required materials in this application.

ADDITIONAL INFORMATION REQUIRED AND WAIVER OF REQUIREMENTS (55.085)

A. The Planning Director may require additional information as part of the application subject to the provisions of CDC 99.035(A).

Applicant Response:

The Planning Director requested a Site Specific Seismic Analysis, which is included in the Geotechnical Report presented in Section 17.

B. The Planning Director may waive any requirements for the application subject to the provisions of CDC 99.035(B) and (C).

Applicant Response:

On February 16, 2012, the Planning Director waived the requirement for submitting a stormwater operations and maintenance manual prior to land use approval.

APPROVAL STANDARDS – CLASS II DESIGN REVIEW (55.100)

The approval authority shall make findings with respect to the following criteria when approving, approving with conditions, or denying a Class II design review application.

A. The provisions of the following chapters shall be met:

1. *Chapter 33 CDC, Stormwater Quality and Detention.*
2. *Chapter 34 CDC, Accessory Structures, Accessory Dwelling Units, and Accessory Uses.*
3. *Chapter 38 CDC, Additional Yard Area Required; Exceptions to Yard Requirements; Storage in Yards; Projections into Yards.*
4. *Chapter 40 CDC, Building Height Limitations, Exceptions.*
5. *Chapter 42 CDC, Clear Vision Areas.*
6. *Chapter 44 CDC, Fences.*
7. *Chapter 46 CDC, Off-Street Parking, Loading and Reservoir Areas.*
8. *Chapter 48 CDC, Access, Egress and Circulation.*
9. *Chapter 52 CDC, Signs.*
10. *Chapter 54 CDC, Landscaping.*

Applicant Response:

The application addresses the supplemental approval criteria in Section IV of this report.

B. Relationship to the natural and physical environment.

1. The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction.

Applicant Response:

There are no heritage trees on site. The West Linn City Arborist approved the removal of diseased trees under an earlier land use application.

2. All heritage trees, as defined in the municipal code, all trees and clusters of trees ("cluster" is defined as three or more trees with overlapping driplines ; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. In cases where there is a difference of opinion on the significance of a tree or tree cluster, the City Arborist's findings shall prevail. It is important to acknowledge that all trees are not significant and, further, that this code section will not necessarily protect all trees deemed significant.

Applicant Response:

The City Arborist concluded that the site contains 42 significant trees or significant tree clusters. Recognizing that subsection (B)(2) "will not necessarily protect all trees deemed significant," the Partnership proposes to protect 37 significant trees while removing only six significant trees during site construction. The significant trees to be protected are shown on the Proposed Site Plan sheets, Section 21, Figures 3.1 – 3.4.

a. Non-residential and residential projects on Type I and II lands shall protect all heritage trees and all significant trees and tree clusters by either the dedication of these areas or establishing tree conservation easements. Development of Type I and II lands shall require the careful layout of streets, driveways, building pads, lots, and utilities to avoid heritage trees and significant trees and tree clusters, and other natural resources pursuant to this code. The method for delineating the protected trees or tree clusters ("dripline + 10 feet") is explained in subsection (B)(2)(b) of this section. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply.

Applicant Response:

The site does not contain Type I or Type II lands.

b. Non-residential and residential projects on non-Type I and II lands shall set aside up to 20 percent of the area to protect trees and tree clusters that are determined to be significant, plus any heritage trees. Therefore, in the event that the City Arborist determines that a significant tree cluster exists at a development site, then up to 20 percent of the non-Type I and II lands shall be devoted to the protection of those trees, either by dedication or easement. The exact percentage is determined by establishing the driplines of the trees or tree clusters that are to be protected. In order to protect the roots, which typically extend further, an additional 10-foot measurement beyond the dripline shall

be added. The square footage of the area inside this "dripline plus 10 feet" measurement shall be the basis for calculating the percentage (see figure below). The City Arborist will identify which tree(s) are to be protected. Development of non-Type I and II lands shall also require the careful layout of streets, driveways, building pads, lots, and utilities to avoid significant trees, tree clusters, heritage trees, and other natural resources pursuant to this code. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply. Please note that in the event that more than 20 percent of the non-Type I and II lands comprise significant trees or tree clusters, the developer shall not be required to save the excess trees, but is encouraged to do so.

Applicant Response:

The proposal is for a non-residential project on non-Type I or Type II lands. The West Linn Arborist has determined that there are 42 significant trees and tree clusters on site. Although the site layout maximizes the preservation of the significant trees, six significant trees will be removed. The loss of six significant trees will be fully mitigated in compliance with the West Linn Tree Technical Manual. The combined area of the dripline of the trees to be protected, plus an additional 10 feet of diameter for each tree, is 2.0 acres or 87,120 of the total area of all non-Type I and Type II lands. Subsection (2)(b) requires a set-aside of up to 20 percent of the non-Type II lands on site based upon the dripline plus 10 feet calculation. Therefore, Lake Oswego will protect 18 percent of the total site area in compliance with this subsection.

In general, the following clusters of trees will be saved and protected during construction are:

- The northwest corner of the site along Kenthorpe Way,
- Trees along the western site boundary,
- Trees along the northwestern corner near Kenthorpe Way, and
- Along the eastern property boundary.

In general, treed areas that are to be cleared include:

- Trees around the sediment drying pond (Figure 2.9),
- Trees in the area of the clearwell and the construction staging area (Figures 2.10 and 2.11),
- The row of interior trees planted in 1996 (figures 2.10 and 2.11),
- A small cluster of trees near the interior northeast corner of the site (Figure 2.11), and
- Some trees along the Kenthorpe Way frontage that were planted because of the 1996 land use approval (Figures 2.9 and 2.11).

c. *Where stubouts of streets occur on abutting properties, and the extension of those streets will mean the loss of significant trees, tree clusters, or heritage trees, it is understood that tree loss may be inevitable. In these cases, the objective shall be to minimize tree loss. These provisions shall also apply in those cases where access, per construction code standards, to a parcel is blocked by a row or screen of significant trees or tree clusters.*

Applicant Response:

The application does not propose any street stubouts on abutting properties; therefore, subsection (2)(c) does not apply.

d. For both non-residential and residential development, the layout shall achieve at least 70 percent of maximum density for the developable net area. The developable net area excludes all Type I and II lands and up to 20 percent of the remainder of the site for the purpose of protection of stands or clusters of trees as defined in subsection (B)(2) of this section.

Applicant Response:

Density pertains to residential units and the use of the term in a non-residential context is confusing. Because no residential units are proposed, this subsection does not apply.

e. For arterial and collector street projects, including Oregon Department of Transportation street improvements, the roads and graded areas shall avoid tree clusters where possible. Significant trees, tree clusters, and heritage tree loss may occur, however, but shall be minimized.

Applicant Response:

Kenthorpe Way is a local street and Mapleton Drive is a collector street. There are no heritage trees on the WTP site or street rights-of-way. No significant, as identified by the West Linn City Arborist will be removed as consequence of improvements made to Mapleton Drive. Consequently, the requirements of subsection (2)(e) will be met.

f. If the protection of significant tree(s) or tree clusters is to occur in an area of grading that is necessary for the development of street grades, per City construction codes, which will result in an adjustment in the grade of over or under two feet, which will then threaten the health of the tree(s), the applicant will submit evidence to the Planning Director that all reasonable alternative grading plans have been considered and cannot work. The applicant will then submit a mitigation plan to the City Arborist to compensate for the removal of the tree(s) on an "inch by inch" basis (e.g., a 48-inch Douglas fir could be replaced by 12 trees, each four-inch). The mix of tree sizes and types shall be approved by the City Arborist.

Applicant Response:

The application does not propose any street grading; therefore, subsection (2)(f) does not apply.

3. The topography and natural drainage shall be preserved to the greatest degree possible.

Applicant Response:

The current overall site gradient is less than 2 percent; after site grading and construction the overall site gradient will be less than 2 percent. See Section 21, Figure 2.0, Note 3. As a general rule, the natural drainage pattern of the site is to the north and northwest. There is a small swale in the northwest corner of the site. After grading, stormwater will continue to flow to the north and northwest, as well as to the northeast. The northwestern swale area will be enhanced as a primary stormwater management area. Consequently, the topography and natural drainage pattern will be preserved.

4. *The structures shall not be located in areas subject to slumping and sliding. The Comprehensive Plan Background Report's Hazard Map, or updated material as available and as deemed acceptable by the Planning Director, shall be the basis for preliminary determination.*

Applicant Response:

The dominant site grade is 2 percent or less. The West Linn Natural Hazards Mitigation Plan Map does not depict the WTP site as being subject to slumping or sliding. Consequently, the WTP facilities will not be located in areas subject to slumping or sliding.

5. *There shall be adequate distance between on-site buildings and on-site and off-site buildings on adjoining properties to provide for adequate light and air circulation and for fire protection.*

Applicant Response:

The distance between on-site buildings is adequate for light and air circulation and fire protection. The WTP buildings are spaced around a vehicle access ring, the exception being the Mechanical De-watering building, the finished water pump station building, and the electrical/maintenance building. The access ring is 26 feet wide, wide enough to provide fire protection vehicles easy access into the WTP facility. The access ring also provides ample space for adequate light and air circulation between buildings.

Due to the compressed, central footprint of the site design, the distance between on-site buildings and off-site buildings is adequate for light and air circulation and fire protection, and is sensitive to off-site buildings and uses. In response to neighborhood concerns, the WTP process and non-process buildings are concentrated away from the site perimeter and neighboring buildings. All WTP buildings setbacks exceed the R-10 zone standards. See Section 21, Figures 3.0 – 3.4.

- On the north side of the site, the operations building is set back 114 feet from the northern property line allowing space for visitor and bike parking, an entrance water feature, and a landscaped street presence.
- To the west, the neighboring residences are set back from the WTP property line at distances of 7 feet 9 inches, 68 feet 9 inches, 65 feet 5 inches, 30 feet 6 inches, and 117 feet 11 inches. On the WTP site, the washwater buildings is set back 315 feet from the western property line and the electrical transformers are set back 82 feet 5 inches from this boundary.
- To the south, the electrical building, the closest WTP building to Mapleton Drive, is set back approximately 180 feet 10 inches from the Mapleton Drive right-of-way.
- In addition to the on-site setback for WTP buildings, as shown in Section 21, Figure 1.1, the distance between the nearby adjacent residential buildings and the WTP property line are:
  - Along the eastern property lines from north to south – 23 feet 10 inches, 56 feet 11 inches, 34 feet 8 inches, Kenthorpe Way dead end, 69 feet 7 inches, 121 feet 2 inches and 26 feet;
  - Along the southern property line from east to west – Mapleton Drive right-of-way;
  - Along the western property line from north to south – 129 feet 11 inches, 68 feet 9 inches, 65 feet 5 inches, 30 feet 6 inches, 117 feet 11 inches, and 11 feet 2 inches;
  - Along the northern property line – Kenthorpe Way right-of-way.

Consequently, the effect of the building spacing around the central access ring, the WTP setbacks from the site perimeter and the distance of neighboring residences to the proposed WTP property line provides for adequate light and air circulation and fire protection.

6. *Architecture.*

   a. *The predominant architecture of West Linn identified in the West Linn vision process was contemporary vernacular residential designs emphasizing natural materials: wood with brick and stone detail. Colors are subdued earth tones: grays, brown, off-whites, slate, and greens. Pitched roofs with overhanging eaves, decks, and details like generous multi-light windows with oversized trim are common. Also in evidence are the 1890s Queen Anne style homes of the Willamette neighborhood. Neo-traditional homes of the newer subdivisions feature large front porches with detailed porch supports, dormers, bracketed overhanging eaves, and rear parking for cars. Many of these design elements have already been incorporated in commercial and office architecture.*

Applicant Response:

At the outset of the discussion of TPR compliance it is important to consider CDC 55.100(B)(7)(i).

CDC 55.100(B)(7)(i). These architectural standards shall apply to public facilities such as … treatment plants…. It is recognized that many of these facilities, due to their functional requirements, cannot readily be configured to meet these architectural standards. However, attempts shall be made to make the design sympathetic to surrounding properties by landscaping, setbacks, buffers, and all reasonable architectural means.

The emphasis in subsection (6)(a) is on taking architectural cues from vernacular residential design and incorporating them into neo-traditional residential design. There is also an acknowledgement that some of these residential design elements can be incorporated into commercial and office architecture.

The WTP is not a commercial building nor is it an office complex; it is a major utility with a variety of non-office uses necessary to process raw water into finished water. Roughly 950 square feet of the second floor of the administration building (Area 24) will be dedicated to office uses. The balance of the WTP complex will be devoted to processing water. However, as discussed below, the applicant conducted a visual analysis of the surrounding neighborhood and has incorporated several of the significant architectural design elements into the WTP design, such as, wood, brick, earth tones, modulated roofs and horizontal planes.

   b. *The proposed structure(s) scale shall be compatible with the existing structure(s) on site and on adjoining sites. Contextual design is required. Contextual design means respecting and incorporating prominent architectural styles, building lines, roof forms, rhythm of windows, building scale and massing, materials and colors of surrounding buildings in the proposed structure.*

Applicant Response:

From the existing neighborhood, the WTP design draws cues regarding material articulation, scale, and form. The neighborhood is primarily made up of single-story ranch-style homes, most of which were constructed in the 1960s. Predominant roof forms found throughout the neighborhood tend to be low slope shed roofs, gable roofs, as well as a few flat roofs, and the predominant cladding tends to be lapped siding or vertical batten wood siding. Many of these ranch-style homes sit with their broad

side facing the street, with their long, low pitched roof forms overhanging an abundant use lap siding, ultimately displaying a common pattern of horizontality. This language of horizontality will be carried throughout the design aesthetic of the plant.

c. *While there has been discussion in Chapter 24 CDC about transition, it is appropriate that new buildings should architecturally transition in terms of bulk and mass to work with, or fit, adjacent existing buildings. This transition can be accomplished by selecting designs that "step down" or "step up" from small to big structures and vice versa (see figure below). Transitions may also take the form of carrying building patterns and lines (e.g., parapets, windows, etc.) from the existing building to the new one.*

Applicant Response:

The existing office building is a two story structure that will be remodeled into the operations building. The new administration building will extend westward from the remodeled operations building. Like most buildings in the neighborhood, the two buildings will project a broad face towards the street. Together, the two buildings will reflect the horizontality, flat roofs, and the use of wood, brick and metal materials found in the neighborhood. The elevations of the building complex will slope gradually down from Kenthorpe Way toward the Mapleton Drive; a decrease in façade elevation from approximately 30 feet at the north end to approximately 20 feet at the southern end. See Figure 10.1. The overall effect is a 'step down' from larger structures to smaller structures, consistent with the intent of subsection (B)(6)(c).

d. *Contrasting architecture shall only be permitted when the design is manifestly superior to adjacent architecture in terms of creativity, design, and workmanship, and/or it is adequately separated from other buildings by distance, screening, grade variations, or is part of a development site that is large enough to set its own style of architecture.*

Applicant Response:

The functional character of the dominant architectural form in the neighborhood is residential; the dominant form of the WTP is a public utility. The functionalities are in contrast but that does not mean that the architectural design also is in contrast.

The Partnership's design goal was not to create a contrasting architectural design that is manifestly superior to the adjacent architecture; thereby creating an alien in an iconic landscape. Rather, the Partnership intends to create an architectural form that is both functional and sympathetic to the surrounding properties. To accomplish this blending, the design team compressed the process activity into the center of the site, thereby exaggerating the setbacks; it created buildings that are more horizontal than vertical; it selected cladding materials, such as wood and brick, that reflect the materiality and tone of the neighborhood; and it employed extensive landscaping and buffering to screen the WTP functions from the surrounding properties.

e. *Human scale is a term that seeks to accommodate the users of the building and the notion that buildings should be designed around the human scale (i.e., their size and the average range of their perception). Human scale shall be accommodated in all designs by, for example, multi-light windows that are broken up into numerous panes, intimately scaled entryways, and visual breaks (exaggerated eaves, indentations, ledges, parapets, awnings, engaged columns, etc.) in the facades of buildings, both vertically and horizontally.*

The human scale is enhanced by bringing the building and its main entrance up to the edge of the sidewalk. It creates a more dramatic and interesting streetscape and improves the "height and width" ratio referenced in this section.

Applicant Response:

The design team elected to not bring the buildings and main entrance "up to the edge of the sidewalk" for two reasons. First, the existing building is set back more than 114 feet from Kenthorpe Way and the design goal is to remodel the existing operations building and to extend the front plane of the building horizontally (the dominate façade plane in the neighborhood) by adding a new administration building. Second, moving the primary building façade to the edge of the Kenthorpe Way frontage would inconsistent with Goal 3, Policy 3.9 of the Robinwood Neighborhood Plan, which seeks to ensure that the WTP remains compatible with the surrounding residential area. Few buildings in the neighborhood have their main entrance along the edge of the front setback, let alone the edge of the sidewalk. Third, there has not been any neighborhood support for the idea of bringing the buildings closer to the property line.

To achieve the sense of human scale that subsection (B)(6)(e) advances, the design team has broken up the front plane of the operations and a buildings by means of multiple windows on both levels, varied surface textures and tones, a soffit, and a prominent public entryway in the center of the building. A water feature will lead the visitor up the ramp to the central entryway that leads into an open lobby, well lit by natural light. Access from the site into the central entryway will be along a clearly marked pedestrian walkway from Kenthorpe Way and across the visitor parking lot.

f. *The main front elevation of commercial and office buildings shall provide at least 60 percent windows or transparency at the pedestrian level to create more interesting streetscape and window-shopping opportunities. One side elevation shall provide at least 30 percent transparency. Any additional side or rear elevation, which is visible from a collector road or greater classification, shall also have at least 30 percent transparency. Transparency on other elevations is optional. The transparency is measured in lineal fashion. For example, a 100-foot-long building elevation shall have at least 60 feet (60 percent of 100 feet) in length of windows. The window height shall be, at minimum, three feet tall. The exception to transparency would be cases where demonstrated functional constraints or topography restrict that elevation from being used. When this exemption is applied to the main front elevation, the square footage of transparency that would ordinarily be required by the above formula shall be installed on the remaining elevations at pedestrian level in addition to any transparency required by a side elevation, and vice versa. The rear of the building is not required to include transparency. The transparency must be flush with the building elevation.*

Applicant Response:

The WTP is a major utility, not a commercial or office complex; therefore, the 60 percent window or transparency requirement at the pedestrian level of the main front elevation does not apply. The functionality of the WTP complex does not lend itself to visual transparency. See subsection (B)(7)(i). Roughly 950 square feet of the second floor of the administration building (Area 24) will be dedicated to office uses. The majority of the uses within the WTP buildings relate directly to the functions of a water treatment facility, such as: a laboratory, control room, a technical shop, storage, mechanical de-watering, solids thickening, finished water pumps, electrical and maintenance, and chemical storage and use.

g. Variations in depth and roofline are encouraged for all elevations.

To vary the otherwise blank wall of most rear elevations, continuous flat elevations of over 100 feet in length should be avoided by indents or variations in the wall. The use of decorative brick, masonry, or stone insets and/or designs is encouraged. Another way to vary or soften this elevation is through terrain variations such as an undulating grass area with trees to provide vertical relief.

Applicant Response:

Figures 10.0-10.8 in Section 21 depict a variety of roof forms and elevation along all aspects. Roof forms include flat roofs, with and without parapets, shed roofs, a gable roof, skylights, and green roofs. The rear facades of the WTP complex are the south walls of the electrical building / maintenance and the finished water pump station. See Section 21, Figure 10.0. The length of the rear elevations of the electrical / maintenance building and finished water pump station building are, respectively, 98 feet and 120 feet. See Figures 9.6 and 9.5, Section 20. The rear elevation of the finished water pump station is broken into a 20-foot tall elevation and 10-foot elevation setback from the ground floor. The roof setback includes skylights and a "Green Roof". The ground floor elevation avoids the blank wall look by means of eight doors and louvered areas and a roof setback. The rear wall of the electrical building, the closest rear wall to the Mapleton Drive right-of-way, is setback 180 feet from Mapleton Drive and will be screened from public view along Mapleton Drive by a split rail fence, low site walls, and extensive landscaping. See Figures 12.0, 12.2, 12.4, and 14.0, Section 20. These measures ensure that the rooflines are varied and the rear elevations are not blank walls.

h. Consideration of the micro-climate (e.g., sensitivity to wind, sun angles, shade, etc.) shall be made for building users, pedestrians, and transit users, including features like awnings.

Applicant Response:

The site is not served by transit. Pedestrian access to the site, other than across the visitor parking lot, will be along tree-lined landscaped sidewalks and the emergency access/pedestrian path. The pedestrian-accessible stormwater management area in the northwest corner of the site will is heavily landscaped and shaded by trees. See Section 21, Figure 12.0. The primary visitor access is north facing and will be shielded from the summer sun. Consequently, the WTP site design and layout considers the micro-climate for building and pedestrian users.

i. The vision statement identified a strong commitment to developing safe and attractive pedestrian environments with broad sidewalks, canopied with trees and awnings.

Applicant Response:

The WTP site layout provides sidewalks along Kenthorpe Way and Mapleton Drive that meander between a "Green Street" and extensive site landscaping. The emergency access/pedestrian path also winds through a lightly and heavily landscaped area that includes several protected significant trees. Attention to crime vulnerable areas is discussed below. Consequently, the site design is consistent with the commitment to develop attractive, tree-lined, and safe pedestrian environments.

j. Sidewalk cafes, kiosks, vendors, and street furniture are encouraged. However, at least a four-foot-wide pedestrian accessway must be maintained per Chapter 53 CDC, Sidewalk Use.

Applicant Response:

The WTP is a major utility, allowed conditionally, within a residential zone. The R-10 zoning district does not encourage sidewalk cafes and vendors. Kiosks and street furniture are more frequently found in commercial zones or public parks. However, consistent with subsection (6)(j), the WTP site design provides pedestrian accessways that are more than 4 feet wide along both Kenthorpe Way and Mapleton Drive and along the emergency access/pedestrian path.

Architectural visual context and impact

The building designs will be shaped by their relationship to the neighborhood and location within the site, as well as their programmatic functions, and the need for a lasting, low-maintenance materiality in the plant environment.

Material Palette

Materials employed on this project will be durable, low maintenance, environmentally conscious, and appropriately detailed for integration into the residential environment. The primary materials for building facades will be brick and horizontally articulated metal siding. Light colored composite panels and wood will serve as secondary materials for elements like soffits, accents, and screens. See Table 3.1 for a material matrix describing these choices. See also samples delivered to City Hall.

	MATERIAL	COLOR	NOTE
	Standing Seam Metal Panel *(AEP Span)*	Cool Zinc Grey	Accent exterior material for non-process structures, Primary material for pent-house roof forms on Process Bldgs.
	Integral color composite Panel *(Swiss Pearl)*	Ivory 7091	Secondary material, between greenroof and primary bldg. form on Process bldgs. Also cladding for existing ops bldg. mechanical penthouse
	C.I.P Concrete (Horizontal board form)	Natural Grey	Building and security wall base material
	Reclaimed or FSC certified wood	Natural stain / sealer	Accent material within recessed entries and at horizontal roof soffits
	Brick Masonry *(Mutual Materials)*	Tan Terra *(Mission)*	Primary building cladding material for both Process and Non-process structures
	Anodized Aluminum Storefront entrances / windows	Dark Anodized	Provides resiliency, corrosion resistance, and maximum natural light
	Painted Metal Flashing	Cool Zinc Grey	Used on selected building elements such as canopies, roof edge flashing, etc.
	Garden Roof	"Green" of course...	Used on Process building flat roofs

Table 3.1: Material Matrix

Process Buildings

Part of the plant's secure boundaries will be defined by the process buildings, which sit broadside along these edges, primarily on the south and west. Therefore, these buildings must serve not only as the screen, but also security as well as the gradient from the neighborhood to the plant environment.

Naturally-toned brick will rise from the landscape to a datum of 12 to 16 feet, as would be proportional to the residential scale. These walls will be long and low, with windows appropriately placed to break up the form and activate the edge. Above the brick will be essentially a recessed cornice, clad in a very light colored material, which serves to reinforce the horizontal datum line atop the brick, as well as the horizontal datum of the overhanging roof form above. This roof form will also read as long and low, and in some cases will be topped with vegetation intended to grow tall enough as to be seen from the ground. This in effect will integrate these building edges into the landscape and the residential scale.

These buildings will be topped with mechanical penthouses to keep all of the equipment indoors, out of view, acoustically isolated, and weather protected. These penthouses will be pushed to the far interior side of the process building and be constructed with shed roofs sloping to a high side towards the plant interior. The materiality of these will be dark in nature, allowing the form to recede from view.

New process buildings on the edge of the plant currently include the electrical / maintenance building, the FWPS, and the mechanical dewatering building.

Process buildings on the interior of the plant such as the chemical building will also employ this design language in terms of materiality choices, datum line consistency, and basic construction, but forms will likely take on a different nature based on their internal location, circulation patterns, and programmatic needs.

Below is an example elevation of the described process building aesthetic, viewed transverse to a plant edge. See Figure 3.1.

Figure 3.1: Process Building

Non-Process Buildings

The renovation of the existing operations building, along with the new administration building, in effect creates one building that houses the non-process program of this project. This building is unique in that it serves as the public front door of the plant, as well the central work environment for the plant staff. Its very nature as both a professional work environment and a reception and education area set it apart as a two-story, more commercial/institutional face of the plant.

Though still buffered adequately from Kenthorpe Way by landscape design and setback distance, the building will be designed to face the community. Its materiality will draw from the same pallet of materials as described above, and it will take similar cues from the neighborhood context in terms of form and horizontality, but more so than the other buildings on the site, it will be designed to be outward-facing and inviting. The building, along with the public landscape within which it sits will be designed to standards of full accessibility as well as leadership in sustainable practices. A new main entrance will be designed where the new addition is joined with the renovated existing building.

Below is a partial elevation describing design direction of the north building façade as it faces Kenthorpe Way and the greater community. See Figure 3.2.

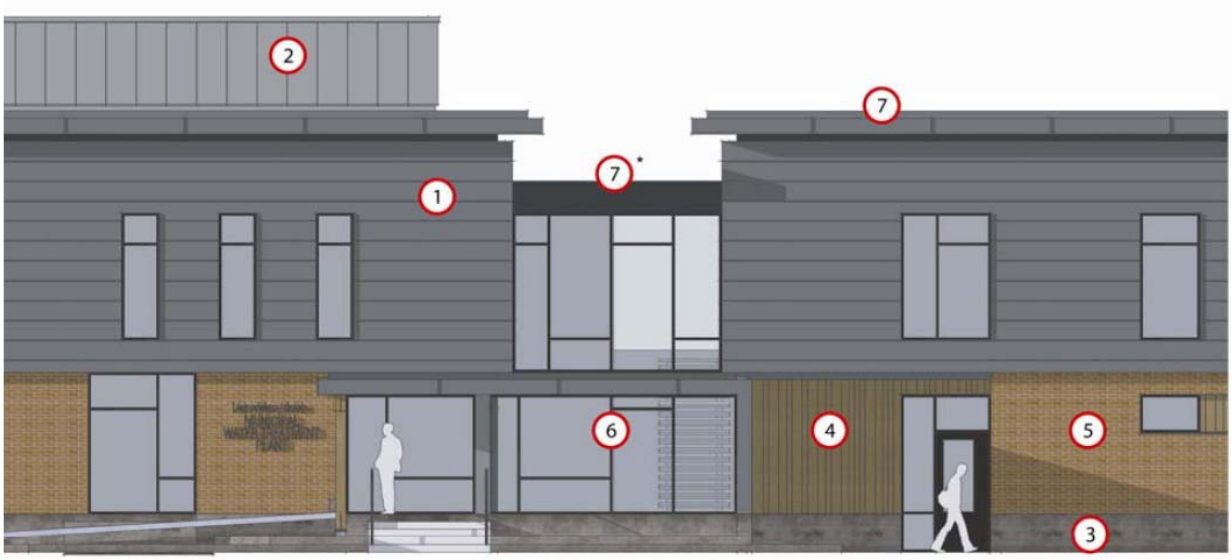


Figure 3.2: Administration and Operations Building Partial Elevation / North Entry

7. *Transportation Planning Rule (TPR) compliance. The automobile shall be shifted from a dominant role, relative to other modes of transportation, by the following means:*

Applicant Response:

At the outset of the discussion of TPR compliance, it is important to consider CDC 55.100(B)(7)(i).

> *CDC 55.100(B)(7)(i). These architectural standards shall apply to public facilities such as … treatment plants…. It is recognized that many of these facilities, due to their functional requirements, cannot readily be configured to meet these architectural standards. However, attempts shall be made to make the design sympathetic to surrounding properties by landscaping, setbacks, buffers, and all reasonable architectural means.*

The applicant proposes to expand a major utility, not a commercial or office development; therefore, the criterion does not apply. In the event the TPR is found to apply to this major utility proposal, the partnership has addressed the relevant subsections.

The TPR design rules are primarily intended to downplay the role of the automobile by design strategies, such as: directing public entrance towards a street, placing parking lots to the side or rear of a building, expanding pedestrian access to the site and buildings, and enhancing the building to height ratio. The design accomplishes this by locating employee parking within the secure facility and on the side, locating public parking adjacent to and behind significant landscaping and by creating a very pedestrian friendly and welcoming entryway.

a. *Commercial and office development shall be oriented to the street. At least one public entrance shall be located facing an arterial street; or, if the project does not front on an arterial, facing a collector street; or, if the project does not front on a collector, facing the*

local street with highest traffic levels. Parking lots shall be placed behind or to the side of commercial and office development. When a large and/or multi-building development is occurring on a large undeveloped tract (three plus acres), it is acceptable to focus internally; however, at least 20 percent of the main adjacent right-of-way shall have buildings contiguous to it unless waived per subsection (B)(7)(c) of this section. These buildings shall be oriented to the adjacent street and include pedestrian-oriented transparencies on those elevations.

For individual buildings on smaller individual lots, at least 30 lineal feet or 50 percent of the building must be adjacent to the right-of-way unless waived per subsection (B)(7)(c) of this section. The elevations oriented to the right-of-way must incorporate pedestrian-oriented transparency.

Applicant Response:

West Linn classifies a water treatment plant as a major public utility, not commercial or office development; therefore, these building orientation standards do not apply. In the event that the administration building is considered "office development," it is oriented toward Kenthorpe Way, the local street with the highest traffic level and contains pedestrian oriented transparencies. A pedestrian pathway will directly link Kenthorpe Way and the primary entrance of the utility facility.

b. *Multi-family projects shall be required to keep the parking at the side or rear of the buildings or behind the building line of the structure as it would appear from the right-of-way inside the multi-family project. For any garage which is located behind the building line of the structure, but still facing the front of the structure, architectural features such as patios, patio walls, trellis, porch roofs, overhangs, pergolas, etc., shall be used to downplay the visual impact of the garage, and to emphasize the rest of the house and front entry.*

The parking may be positioned inside small courtyard areas around which the units are built. These courtyard spaces encourage socialization, defensible space, and can provide a central location for landscaping, particularly trees, which can provide an effective canopy and softening effect on the courtyard in only a few years. Vehicular access and driveways through these courtyard areas is permitted.

Applicant Response:

Subsection (7)(b) applies to multi-family projects; therefore, this section does not apply to this major utility project.

c. *Commercial, office, and multi-family projects shall be built as close to the adjacent main right-of-way as practical to facilitate safe pedestrian and transit access. Reduced frontages by buildings on public rights-of-way may be allowed due to extreme topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations, not just inconveniences or design challenges.*

Applicant Response:

Subsection (7)(c) applies to commercial, office, and multi-family projects; therefore, this section does not apply to this major utility project.

d. Accessways, parking lots, and internal driveways shall accommodate pedestrian circulation and access by specially textured, colored, or clearly defined footpaths at least six feet wide. Paths shall be eight feet wide when abutting parking areas or travel lanes. Paths shall be separated from parking or travel lanes by either landscaping, planters, curbs, bollards, or raised surfaces. Sidewalks in front of storefronts on the arterials and main store entrances on the arterials identified in CDC 85.200(A)(3) shall be 12 feet wide to accommodate pedestrians, sidewalk sales, sidewalk cafes, etc. Sidewalks in front of storefronts and main store entrances in commercial/OBC zone development on local streets and collectors shall be eight feet wide.

Applicant Response:

Subsection (7)(d), in part, applies to the Kenthorpe Way frontage, the visitors parking area and the primary plant entrance. Pedestrians, other than WTP Operators, are not generally permitted within the secured core of the facility. The Pedestrian and Vehicle Circulation Plan, Figure 7.0, illustrates that official and service vehicles may enter the WTP site at the western site entrance and will exit via the eastern driveway onto Kenthorpe Way. Visitors to the Plant will be directed to the eastern site entrance away from operations traffic entering at the west. The site will contain a sidewalk along the entire Kenthorpe Way frontage. Visitors who park along Kenthorpe Way may enter the WTP site via a pedestrian path through the landscaped area. See Section 21, Figure 12.1. The path through the landscaped area will be separated from the parking lot surface by a 6-inch curb with an ADA accessible ramp. The pedestrian accessway through the visitor's parking area is 8 to 18 feet wide and will be a differently colored or textured paving material, such as scored concrete, which will clearly stand out from the parking lot surface. Kenthorpe Way is not an arterial street and the site is not in a commercial/OBC zone. For these reasons, the proposed accessways, parking lots, and driveways provide pedestrian circulation opportunities are consistent with the applicable provisions of subsection (7)(d).

e. Paths shall provide direct routes that pedestrians will use between buildings, adjacent rights-of-way, and adjacent commercial developments. They shall be clearly identified. They shall be laid out to attract use and to discourage people from cutting through parking lots and impacting environmentally sensitive areas.

Applicant Response:

There are three paths on site: a short pathway through the landscaped area between Kenthorpe Way and the visitor parking area, a small path from the visitors parking area through the stormwater facility to Kenthorpe Way, and the pedestrian path from Kenthorpe Way south to Mapleton Drive via, in part, the emergency access road. The first two paths connect the public right-of-way to the WTP administration and operations buildings. The path leading from Kenthorpe Way to the WTP entrance through the visitor parking area varies from 8 to 18 feet and will be of a color or texture different than the visitor parking lot surface. The stormwater facility at the northwest corner of the site is within a small swale, which is not an identified stream corridor or regulated natural area. The applicant welcomes visitors to this area that is designed to be a quiet reflective area within the neighborhood. The Kenthorpe Way to Mapleton Drive path winds around the secured WTP core area and then travels southward through a grove of five significant trees that the applicant has protected. See Section 21, Figure 3.4. The southern trail section will have signs at both entry points as shown in Section 21, Figure 8.0. Therefore, the applicant has provided pedestrian paths between right-of-ways and the WTP facility that are attractive to use, provide direct access through a parking area and do not impact any regulated environmentally sensitive area consistent with subsection (7)(e).

f. At least one entrance to the building shall be on the main street, or as close as possible to the main street. The entrance shall be designed to identify itself as a main point of ingress/egress.

Applicant Response:

The primary public entrance to the WTP is from Kenthorpe Way. The entryway will be gently ramped from the parking lot level to the first floor of the administration building. See Section 21, Figures 9.2 and 10.2.

Figure 3.3: Primary visitor entry

g. Where transit service exists, or is expected to exist, there shall be a main entrance within a safe and reasonable distance of the transit stop. A pathway shall be provided to facilitate a direct connection.

Applicant Response:

There is no transit to the WTP site nor is any expected in the foreseeable future. Therefore, subsection (7)(g) does not apply.

h. Projects shall bring at least part of the project adjacent to or near the main street right-of-way in order to enhance the height-to-width ratio along that particular street. (The "height-to-width ratio" is an architectural term that emphasizes height or vertical dimension of buildings adjacent to streets. The higher and closer the building is, and the narrower the width of the street, the more attractive and intimate the streetscape becomes.) For every one foot in street width, the adjacent building ideally should be one to two feet higher. This ratio is considered ideal in framing and defining the streetscape.

Applicant Response:

CDC Section 55.100.B.7.h and 55.100.B.7.i should be read in conjunction with each other. The existing operations' building is set back approximately 114 feet from the Kenthorpe Way right-of-way. The remodeled operation's building will be the same distance from the right-of-way. The new

administration building is designed to continue the horizontal plane of the operations building. Visually and functionally, it is an extension of the operations building. Therefore, the administration building will be set back from Kenthorpe Way similarly.

Kenthorpe Way has a 50-foot right-of-way with pavement widths varying from 22 to 25 feet. See Section 7, page 14. The administration building will be 29 feet tall and the operation's building will be 35 feet tall. See Section 21, 10.2 and 10.3. By applying the height to street (pavement) width ratio of 2:1, both buildings should be between 44 and 50 feet tall. However, the maximum building height in the R-10 zone is 35 feet. Consequently, the application will maximize the height-to-width ratio to the extent allowed by West Linn code.

i. These architectural standards shall apply to public facilities such as reservoirs, water towers, treatment plants, fire stations, pump stations, power transmission facilities, etc. It is recognized that many of these facilities, due to their functional requirements, cannot readily be configured to meet these architectural standards. However, attempts shall be made to make the design sympathetic to surrounding properties by landscaping, setbacks, buffers, and all reasonable architectural means.

Applicant Response:

The WTP complex is a major public utility. The primary purpose of the facility is to process raw water into finished potable water and to pump the finished water into the delivery system. The majority of the actual work accomplished on-site will occur in or around structures that do not necessarily lend themselves to the architectural standards articulated in CDC 55.100(B)(7). The Partnership and design team, in consultation with the neighbors, made significant efforts to: assess the visual character of the neighborhood, design a complex that reflects the design qualities of the neighborhood, compress WTP operation into the center of the site, and provide a high degree of landscape plant and structural materials to buffer the neighborhood from the WTP day-to-day operations.

j. Parking spaces at trailheads shall be located so as to preserve the view of, and access to, the trailhead entrance from the roadway. The entrance apron to the trailhead shall be marked: "No Parking," and include design features to foster trail recognition.

Applicant Response:

Parking is not proposed at either head of the through-site pedestrian path. The Partnership will place a No Parking sign at the beginning of both the Kenthorpe Way and Mapleton Drive entry points. The path entry point from Mapleton Drive is via the emergency access road, the entry to which must be kept clear at all times. A swing gate will guard the emergency access; the gates will allow a 6-foot wide pedestrian entryway to the path. Asphalt or a similar material will foster trail recognition.

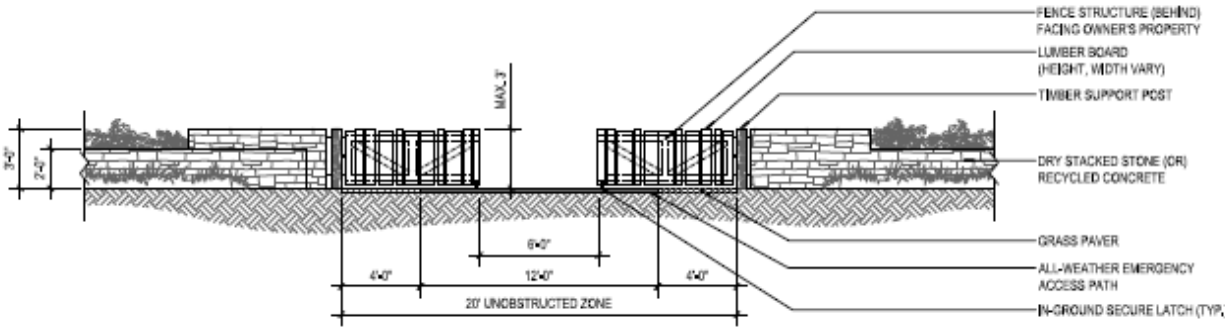


Figure 3.4: Emergency access road swing gate concept

C. Compatibility between adjoining uses, buffering, and screening.

1. In addition to the compatibility requirements contained in Chapter 24 CDC, buffering shall be provided between different types of land uses; for example, buffering between single-family homes and apartment blocks. However, no buffering is required between single-family homes and duplexes or single-family attached units. The following factors shall be considered in determining the adequacy of the type and extent of the buffer:

a. The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier.

b. The size of the buffer required to achieve the purpose in terms of width and height.

c. The direction(s) from which buffering is needed.

d. The required density of the buffering.

e. Whether the viewer is stationary or mobile.

Applicant Response:

CDC Chapter 24 applies to planned unit developments and subsection (C)(1) pertains to buffering between residential uses. However, the applicant recognizes that the WTP is in a residential zone as an allowed conditional use and that buffering and screening measures may be necessary to ensure compatibility between the major utility and nearby residential uses.

In response to (C)(1)(a), the WTP use does not generate any significant amounts of dust or air pollution. The WTP is powered by electricity that is generated off site. The facility has an emergency generator that is used only when needed. The water processing activities that occur on site are housed indoors.

The primary purpose of the buffers is to decrease noise levels and provide a visual barrier, per subsection (C)(1)(a). On-site screening is designed to visually obscure the view of the utility facility from public rights-of-way and from private residential yards; to ensure that the design of the site is compatible with the residential character of the neighborhood, to the extent possible for a major utility; and to minimize the effects potential light and noise pollution. Noise generation shall be consistent with West Linn Municipal Code Chapter 5.487 and shall comply with published DEQ standards for the use. West Linn has not adopted quantitative standards for measuring architectural compatibility or other visual impacts, such as glare or aesthetics.

Architectural compatibility and noise buffering are discussed above. The primary method to ensure compatibility between residential and utility uses is through the landscaping; particularly the use of vegetation, fences and screens, and sight lines.

The WTP property is part of a residential neighborhood, with its surrounding neighbors drawn to the area presumably in major part because of the quiet rural character of the place. Over the past 40 years, Lake Oswego has paid special attention to minimizing noise, screening less desirable views from surrounding neighbors, safely operating the facility, and maintaining the attractiveness of the property's landscaped areas, especially along its edges. Using a sensitive approach to architecture and landscape, which focuses the facility at the center of the property and screens it within the surrounding forested areas, will enable the new WTP to continue to strive to be a good neighbor.

One of the key objectives in this mission was maintaining an open dialogue with adjacent property owners. Prior to starting the conceptual design phase, the project team met with nearby property owners over 20 times. Consequently, the first step in ensuring compatibility has been to focus the footprint of WTP operations in the center of the site.

The landscape design concept has been developed with two important user groups in mind: The WTP staff, which requires a functional and attractive facility promoting employee satisfaction and a safe, efficient work environment; and the neighbors, who enjoy the quality of life currently apparent in their neighborhood. The goal is to design a facility that enhances and improves upon the current situation with respect to the aforementioned criteria for both parties.

A second major approach to ensuring compatibility through screening and buffering is the practice of landscape layering. One example of this concept in practice is found in the approach to fencing, where taller security fencing is subdued behind layers of vegetation within the core WTP area, distant from street view, with the edges delineated using split-rail fencing which preserves a residential character yet clearly marks property boundaries. Access to these "unsecured" areas is neither encouraged nor discouraged. In addition to fencing, other "layers" that both subtly screen and secure the site are the preserved woodland edges, vegetated stormwater facilities, and the buildings themselves, which create a consistent façade shielding the most intensive plant operations from view.

The security of the site is ensured using a neighborhood sensitive approach that locates fencing, walls, and gates designed to control access to the plant facility, away from main street frontages. The building edges themselves, which form an almost continuous edge on the north and south, act as secure barriers with security fencing extending out from them. By enhancing the woodland area between these edges and street frontages, site security elements fade from view behind trees and low-growing understory vegetation. By maintaining low understory growth, sightlines for periodic security monitoring are preserved. Along street frontages, split-rail fencing delineates property lines, preserves the residential character of the neighborhood, and neither discourages nor encourages public use. Fencing shall not be taller than three feet within the required front yard setback. Along the east and west boundaries of the site, a good neighbor fence built of vertical lumber pieces of high construction and material quality, becomes an attractive amenity for both neighbor and plant, and can provide security where desired, with the integration of security mesh on the plant side. Other than security walls, low site walls constructed of re-used concrete or basalt stone, act as functional site features, adding to the screening of the plant and protecting significant existing trees.

2. *On-site screening from view from adjoining properties of such things as service areas, storage areas, and parking lots shall be provided and the following factors will be considered in determining the adequacy of the type and extent of the screening:*

   a. *What needs to be screened?*

   b. *The direction from which it is needed.*

   c. *How dense the screen needs to be.*

   d. *Whether the viewer is stationary or mobile.*

   e. *Whether the screening needs to be year-round.*

Applicant Response:

In addition to the buffering requirements addressed in subsection (C)(1) above, several site-specific uses described in subsection (C)(2) require screening. These specific uses include: visitor, staff and overflow parking; waste and recycling service areas; fuel storage tank, electrical transformers, solids thickener, liquid oxygen tanks, chemical delivery area and solids loading area. These uses should be screened from public rights-of-way and from abutting residential properties year round. The visitor parking area should be visually accessible to WTP visitors; therefore, 100 percent screening between Kenthorpe Way and the visitor parking area is not needed. Uses specific to the internal operations of the WTP, such as staff and overflow parking, storage tanks, electrical transformers, and chemical and solids loading areas will be completely screened because they will be placed to the interior of the WTP complex and will be surrounded by solid building walls, architectural screening walls, rolling gates or a good neighbor fence. The single gravity solids thickener will be approximately 5 feet tall (excluding safety railings). The thickener is approximately 45 feet from the nearest WTP property line, behind an architectural security wall; the existing mature vegetation along the property line will not be removed. In addition, the Partnership conducted a supplemental lighting analysis and determined that mature coniferous trees, approximately 14 feet tall, should be installed in key locations to further minimize WTP lighting. See Section 21, Figures 5.5C and 5.5E.

Consequently, all secured WTP uses will be adequately screened from neighboring properties year-round.

3. *Rooftop air cooling and heating systems and other mechanical equipment shall be screened from view from adjoining properties.*

Applicant Response:

All rooftop mechanical and HVAC equipment will be enclosed within rooftop penthouse buildings, which will adequately screen these systems from view from adjoining properties.

D. Privacy and noise.

1. *Structures which include residential dwelling units shall provide private outdoor areas for each ground floor unit which is screened from view from adjoining units.*

Applicant Response:

Subsection (D)(1) pertains to residential dwelling units; therefore, this subsection does not apply to the WTP application.

2. *Residential dwelling units shall be placed on the site in areas having minimal noise exposure to the extent possible. Natural-appearing sound barriers shall be used to lessen noise impacts where noise levels exceed the noise standards contained in section 5.487 of the Municipal Code.*

Applicant Response:

Subsection (D)(2) pertains to residential dwelling units; therefore, this subsection does not apply to the WTP application.

3. *Structures or on-site activity areas which generate noise, lights, or glare shall be buffered from adjoining residential uses in accordance with the standards in subsection C where applicable.*

Applicant Response:

See response to subsection (C) above.

4. *Businesses or activities that can reasonably be expected to generate noise in excess of the noise standards contained in Section 5.487 of the Municipal Code shall undertake and submit appropriate noise studies and mitigate as necessary to comply with the Code (See CDC 55.110(B)(11) and 55.120(M).)*

   If the decision making authority reasonable believes that a proposed use may generate noise exceeding the standards specified in the Municipal Code, then the Authority may require the applicant to supply professional noise studies from time to time during the use's first year of operation to monitor compliance with the City standards and permit requirements.

Applicant Response:

Following West Linn approval of the 1996 WTP upgrade, the applicant conducted a professional noise study during the first year of operation. The professional analysis found that the upgraded WTP complied with DEQ noise standards for the use.

In preparation for this land use application, the design team commissioned noise analysis that evaluated existing threshold noise levels, evaluated noise generation at a similar water treatment plant, and projected what types of noise attenuation measures might be necessary to comply with DEQ standards for this use. See Section 11. See also discussion under Central Issues and CDC 55.110(B)(11) and 55.120(M).

As a condition of approval, the applicant agrees to conduct a professional noise study around the expanded WTP, similar to the noise analysis conducted for this land use application, during the first year of operation.

E. Private outdoor area. This section only applies to multi-family projects.

Applicant Response:

Subsection E only applies to multi-family projects.

F. Shared outdoor recreation areas. This section only applies to multi-family projects and projects with 10 or more duplexes or single-family attached dwellings on lots under 4,000 square feet. In those cases, shared outdoor recreation areas are calculated on the duplexes or single-family attached dwellings only. It also applies to qualifying PUDs under the provisions of CDC 24.170.

Applicant Response:

Subsection F only applies to multi-family and certain single-family projects.

G. Demarcation of public, semi-public, and private spaces. The structures and site improvements shall be designed so that public areas such as streets or public gathering places, semi-public areas, and private outdoor areas are clearly defined in order to establish persons having a right to be in the space, to provide for crime prevention, and to establish maintenance responsibility. These areas may be defined by:

1. A deck, patio, fence, low wall, hedge, or draping vine;

2. A trellis or arbor;

3. A change in level;

4. A change in the texture of the path material;

5. Sign; or

6. Landscaping.

Use of gates to demarcate the boundary between a public street and a private access driveway is prohibited.

Applicant Response:

The WTP is not intended to be a public park or a public space; it is a public utility with a secure core area that is not intended for public use and with perimeter spaces, which the public may use. The secure core area will be enclosed by buildings and by architectural security walls and good neighbor fences with integrated security chain link. See fence details in Section 21, Figure 14.0.

With consideration given to scale and existing conditions, a restrained collection of public, semi-public and private amenities provide small-scale spaces that preserve the quiet atmosphere and forested quality of the site, and are appropriate within the framework of the WTP and neighborhood. The site can be divided into three zones: the public sidewalks along Kenthorpe Way and Mapleton Drive, the semi-public "unsecured" zone on Kenthorpe and Mapleton, and the private secure core zone.

The Kenthorpe Way and Mapleton Drive street frontages will include meandering sidewalks and native and ornamental landscape plant materials that are intended for public enjoyment and use. Along Kenthorpe Way the landscaping will extend southward to the visitor parking lot and will include an ADA accessible textured path connecting Kenthorpe Way to the primary entrance of the facility, the focal point of which is low linear water feature. While preserving the screen of trees along Kenthorpe Way, a small water feature, meandering pathways, seating niches, and a secluded rain garden are integrated sensitively into this open space.

The Mapleton side of the property includes open space, where much of the site perimeter will remain forested and/or planted. The woodland/orchard character is complimented by low site walls, and forested trail, making access to Kenthorpe and nearby schools and parks much easier. A centerpiece of this open space is the meandering emergency accessway and pedestrian pathway. See Section 21, Figures 12.0-12.4. The emergency access road will be closed to all vehicles other than emergency vehicles. TVF&R has expressed a strong preference against bollards. An opening between the swing gates will allow direct pedestrian access to the pathway.

Within the secure WTP core, private space includes the process and non-process buildings.

For these reasons, the proposed site plan defines public, semi-public and private spaces by means of landscaping, textured materials, low walls, water features and fences, consistent with subsection (G).

H. Public transit.

1. Provisions for public transit may be required where the site abuts an existing or planned public transit route...

Applicant Response:

The WTP site does not abut an existing or planned public transit route. Therefore, subsection (H) does not apply.

I. Public facilities. An application may only be approved if adequate public facilities will be available to provide service to the property prior to occupancy.

1. Streets. Sufficient right-of-way and slope easement shall be dedicated to accommodate all abutting streets to be improved to the City's Improvement Standards and Specifications. The City Engineer shall determine the appropriate level of street and traffic control improvements to be required, including any off-site street and traffic control improvements, based upon the transportation analysis submitted. The City Engineer's determination of developer obligation, the extent of road improvement and City's share, if any, of improvements and the timing of improvements shall be made based upon the City's systems development charge ordinance and capital improvement program, and the rough proportionality between the impact of the development and the street improvements.

In determining the appropriate sizing of the street in commercial, office, multi-family, and public settings, the street should be the minimum necessary to accommodate anticipated traffic load and needs and should provide substantial accommodations for pedestrians and bicyclists. Road and driveway alignment should consider and mitigate impacts on adjacent properties and in neighborhoods in terms of increased traffic loads, noise, vibrations, and glare.

The realignment or redesign of roads shall consider how the proposal meets accepted engineering standards, enhances public safety, and favorably relates to adjacent lands and land uses. Consideration should also be given to selecting an alignment or design that minimizes or avoids hazard areas and loss of significant natural features (drainageways, wetlands, heavily forested areas, etc.) unless site mitigation can clearly produce a superior landscape in terms of shape, grades, and reforestation, and is fully consistent with applicable code restrictions regarding resource areas.

Streets shall be installed per Chapter 85 CDC standards. The City Engineer has the authority to require that street widths match adjacent street widths. Sidewalks shall be installed per CDC 85.200(A)(3) for commercial and office projects, and CDC 85.200(A)(16) and 92.010(H) for residential projects, and applicable provisions of this chapter.

Based upon the City Manager's or Manager's designee's determination, the applicant shall construct or cause to be constructed, or contribute a proportionate share of the costs, for all necessary off-site improvements identified by the transportation analysis commissioned to address CDC 55.125 that are required to mitigate impacts from the proposed development. Proportionate share of the costs shall be determined by the City Manager or Manager's designee, who shall assume that the proposed development provides improvements in rough proportion to identified impacts of the development.

Applicant Response:

The site abuts Kenthorpe Way to the north and Mapleton Drive to the south. Primary site access is from two driveways along Kenthorpe Way. A 20-foot unobstructed emergency access road will connect Mapleton Drive to the southern edge of the secured WTP complex. There will be a very modest increase in operation traffic when the WTP is completed. See Section 10. This slight increase in traffic will not substantially alter the character of the neighborhood streets. West Linn Public Works Standards require typical frontage profiles including curbs, gutters, and sidewalks. The City Engineer requested improvements along both frontages proportional to the level of impact generated. West Linn allows a 'Green Streets' alternative approach to frontage improvements. See Section 7, page 14. The applicant has selected this alternative approach as a means to minimize stormwater management concerns and to better integrate WTP street frontages into the existing neighborhood.

2. *Drainage. A registered civil engineer shall prepare a plan and statement which shall be supported by factual data that clearly shows that there will be no adverse impacts from increased intensity of runoff off site or the plan and statement shall identify all off-site impacts and measures to mitigate those impacts. The plan and statement shall, at a minimum, determine off-site impacts from a 25-year storm. The City Engineer shall adjust storm drainage facilities for applications which contain permeable parking surfaces based upon a quantitative analysis of the increased water retention and water quality characteristics of the permeable parking surface.*

   Catch basins shall be installed and connected to pipelines leading to storm sewers or drainageways.

   All plans will then be reviewed by the City Engineer.

Applicant Response:

There is existing public storm drainage located on Kenthorpe Way along the proposed project frontage including pipe and catch basins. There is existing public storm drainage located along Mapleton Drive consisting of open channels and pipe. West Linn requires treatment for all storm runoff generated from new and redeveloped areas including pavement and sidewalk. Facilities such as street swales, planter boxes, and rain gardens may be used for treatment purposes. When total additional impervious surfaces exceed 500 square feet, treatment facilities shall be provided. When total additional impervious surfaces exceed 5,000 square feet, detention facilities shall be provided.

The application includes a stormwater plan, prepared by a registered landscape architect & civil engineer, based upon the City of Portland Stormwater Management Manual. The stormwater plan demonstrates that there will be no adverse impacts from increased run-off and details proposed measures to mitigate potential adverse impacts. See Section 15.

The existing site is approximately 9.24 acres (402,426 S.F.) in size and includes approximately 1.51 acres (65,716 S.F.) of impervious surfaces, or 16 percent of the total site. Open process tanks and lagoons cover approximately 1.08 acres (46,902 S.F.). The remaining 6.65 acres (289,808 S.F.) of the site is pervious and includes areas of lawn, shrub beds, and existing tree canopy.

Existing Impervious Area Summary	SF	Acres
Existing Paving	45,973	1.06
Existing Roofs	19,743	0.45
Total Impervious Area	**65,716**	**1.51**

Table 3.2: Existing Impervious Area Summary

The proposed design will increase the overall impervious areas of the site by approximately 1.12 acres (49,026 S.F.) to bring the total impervious areas of the site to 2.63 acres (114,742 S.F.) This will increase the overall impervious area to 28.46 percent of the total site, less than the 35 percent maximum impervious surface area. Approximately 17,845 square feet of pervious pavement has been proposed as an impervious area reduction technique for the parking stalls near the administration building and Mapleton Drive emergency access road and path. The use of pervious pavement will reduce the overall effective impervious pavement area to 75,272 square feet, or approximately 19 percent of the site.

Proposed Impervious Area Summary	SF	Acres
Existing Impervious Area	65,716	1.51
New Impervious Area	49,026	1.12
Total Impervious Area	**114,742**	**2.63**

Table 3.3: Proposed Impervious Area Summary

The City of West Linn allows the use of the City of Portland Stormwater Management Manual for design of vegetated stormwater management facilities. Since the overall catchment areas for the stormwater system are greater than 5,000 S.F., the Presumptive Approach Calculator will be used to size the vegetated stormwater management facilities.

Both stormwater swales (Detail SW-120) and basins (Detail SW-140) per the City of Portland Stormwater Management Manual will be used in various locations on the site to manage the stormwater runoff. These facilities will be designed as infiltration facilities and be sized to manage the 25-year storm event from the required impervious surfaces. Larger storm events will be passed through the facilities via an overflow pipe to the existing storm system in the public right-of-way.

Additional stormwater treatment will be provided by "Green Streets" road improvements. At the request of the West Linn Public Works Department, half-street improvements to Kenthorpe Way and Mapleton Drive for the length of the north and south property boundaries will be provided as part of the project. This provides the opportunity to re-design these streets using a low-impact "Green Street" approach, where safe vehicular/pedestrian circulation and sustainable stormwater management are the main focuses. Between designated pedestrian sidewalk and street a vegetated stormwater swale will run along both Kenthorpe and Mapleton for the length of the property lines, where runoff is slowed down and treated before it enters the City stormwater system.

3. *Municipal water. A registered civil engineer shall prepare a plan for the provision of water which demonstrates to the City Engineer's satisfaction the availability of sufficient volume, capacity, and pressure to serve the proposed development's domestic, commercial, and industrial fire flows. All plans will then be reviewed by the City Engineer.*

Applicant Response:

There is an existing asbestos cement (AC) water main along the project frontage on Kenthorpe Way and an existing AC water main along Mapleton Drive. The current WTP does not derive its potable water supply from West Linn water mains.

There is more than sufficient water supply available for the proposed development. All potable water circulating around the upgraded WTP will continue to be finished water taken from the WTP itself. The operations and administration buildings will include numerous potable water applications such as in the toilets, bathrooms, and kitchen areas. There will also be sinks in the laboratory. See Section 21, Figures 9.2 and 9.3. Finished water is currently used for fire flow purposes and will be used in the expanded WTP, as well. See Section 18, response to TVF&R comments.

4. *Sanitary sewers. A registered civil engineer shall prepare a sewerage collection system plan which demonstrates sufficient on-site capacity to serve the proposed development. The City Engineer shall determine whether the existing City system has sufficient capacity to serve the development.*

Applicant Response:

There is an existing public sanitary sewer system along the project frontages on Kenthorpe Way and Mapleton Drive. The existing WTP sanitary sewer lateral is currently connected to the sanitary sewer system on Kenthorpe Way. The current flows from the WTP to the sanitary sewer ranges up to 60 gpm. After the expansion, wastewater will flow to the existing sanitary sewer from the following sources:

- reject water (pressate) from the mechanical dewatering process;

- "domestic" amenities in the existing operations building and in the new administration building and the maintenance areas;
- seal water from pumps;
- floor drains; and
- analyzer drains if detailed design determines that they cannot be located to allow them to drain to a recycle location.

The collection, handling and discharge of on-site liquid waste streams at the expanded WTP is currently being evaluated and refined to ensure that the peak instantaneous discharge to the existing sanitary sewer does not exceed the current peak discharge rates. Options being considered include on-site equalization, feeding higher concentration sludge to the mechanical dewatering equipment, and/or reducing flows during brief peak solids dewatering periods by recycling the centrate/pressate within the plant.

5. *Solid waste and recycling storage areas. Appropriately sized and located solid waste and recycling storage areas shall be provided. Metro standards shall be used.*

Applicant Response:

Solid waste and recycling storage areas are located adjacent to the administration building and will be screened from public view. See Section 21, Figures 3.3 and 3.1. The facilities will be designed in accordance with applicable Metro standards. Construction details are not available at this time.

J. Crime prevention and safety/defensible space.

Applicant Response:

A connecting system of building walls and an architectural security wall will encircle the core of the WTP. See Section 21, Figures 3.1-3.4 and 14.0. Rolling access gates control the vehicular access entry point into the WTP core (visitor entrance, delivery entrance and emergency access). This system of enclosures provides a safe and defensible space.

There are three areas outside of the secured WTP that are of special interest under subsection (J):

A. Along Kenthorpe Way, the public and service driveways, visitor parking area, building entryway, landscaping and stormwater feature are all on Lake Oswego-owned property but are accessible to the public. A six-foot tall good neighbor fence flanks both sides of this accessible space. See Section 21, Figures 3.1, 3.3 and 14.0.

B. South of the WTP interior, a good neighbor fence encloses the western property boundary. The emergency access road is flanked by a good neighbor fence to the east with a split rail fence to the west that both run from Mapleton Drive north to the secure rolling access gate. See Section 21, Figures 3.2, 3.4 and 14. Between the split rail fence along Mapleton Drive and the building walls and security fencing is an open area containing the underground clearwell, landscaping and low landscape accent walls. See Section 21, Figures 3.2, 3.4, 12.2, 12.4 and 14.0.

C. A pedestrian path along the southeast corner of the WTP core connects Kenthorpe Way to Mapleton Drive via the proposed emergency accessway. See Section 21, Figure 3.0. This portion of the pedestrian path lies, in part, between the property line fence north of Tax Lots 2201 and 1501 and the good neighbor fence with integrated security chain link around the solids lagoon. See Section 21, Figure 12.4.

1. *Windows shall be located so that areas vulnerable to crime can be surveyed by the occupants.*

Applicant Response:

The first and second story windows of the administration and operations buildings face northward towards Kenthorpe Way, west toward the stormwater facility and east toward Tax Lot 200. Windows in the southern walls of the electrical and finished water pump stations buildings face south toward to open meadow and landscape area above the clearwell. See Section 21, Figures 10.0 and 10.1. Consequently, the three areas of special interest outside the WTP interior can be viewed from building windows.

2. *Interior laundry and service areas shall be located in a way that they can be observed by others.*

Applicant Response:

Public access into the WTP interior spaces, such as the locker rooms, mudroom, and kitchen is carefully controlled and limited to WTP employees. Consequently, these spaces are not crime vulnerable areas.

3. *Mailboxes, recycling, and solid waste facilities shall be located in lighted areas having vehicular or pedestrian traffic.*

Applicant Response:

The WTP mailbox is located along Kenthorpe Way frontage and is accessible to vehicular and pedestrians alike. See Section 21, Figure 3.0. The driveway light illuminates the mailbox. See Section 21, Figure 5.6. The recycling and solid waste areas are located behind the northwestern secured access gate and are accessible to trash and recycling trucks and to WTP employees. See Section 21, Figure 3.1. However, because the recycling and solid waste facilities are secured inside the WTP core and are not accessible to visitor vehicle or pedestrian traffic, the recycling and solid waste facilities are not illuminated.

4. *The exterior lighting levels shall be selected and the angles shall be oriented towards areas vulnerable to crime.*

Applicant Response:

Exterior building lighting and outdoor site lighting will be fully shielded. Light will be directed to the areas of concern with the WTP core, and visitor parking. To the extent practicable, light will be directed away from abutting properties. See Section 13, Outdoor Illumination Study and Section 21, Figures 5.5 – 5.12. The Kenthorpe Way driveways and visitor parking areas accessible to the public are fully illuminated by on-site lighting. See Section 21, Figure 5.12. The applicant does not propose to provide streetlights along the Kenthorpe Way and Mapleton Drive frontages. Neither Kenthorpe Way nor Mapleton Drive is illuminated by streetlights in the vicinity of the WTP. While West Linn typically requires streetlights along abutting frontages, the applicant, in accordance with the neighborhood requests to minimize plant lighting and thereby become better integrated into the darkened neighborhood, does not propose to install streetlights along Kenthorpe Way or Mapleton Drive.

The site area between Mapleton Drive and the WTP interior will not be lighted because (a) the sight line between Mapleton Drive and the buildings is open and unobstructed and (b) the applicant desires to minimize potential light pollution in this area. Around the pedestrian path connecting the

emergency access road to Kenthorpe Way, the applicant will install low-level lighting along the thickener and solid lagoon to illuminate the pathway. See Section 21, Figure 5.12 and discussion in Section 13. Consequently, all exterior lighting levels and lighting angles are directed towards crime vulnerable areas.

5. *Light fixtures shall be provided in areas having heavy pedestrian or vehicular traffic and in potentially dangerous areas such as parking lots, stairs, ramps, and abrupt grade changes.*

Applicant Response:

The heavy pedestrian and vehicle use areas, such as parking lots, stairs into the building and the main entrance ramp, are accessible from Kenthorpe Way. Section 21, Figure 5.12 depicts how these areas are illuminated. The emergency access and pedestrian path areas are not intended for heavy pedestrian or vehicular use but are illuminated.

6. *Fixtures shall be placed at a height so that light patterns overlap at a height of seven feet, which is sufficient to illuminate a person. All commercial, industrial, residential, and public facility projects undergoing design review shall use low or high pressure sodium bulbs and be able to demonstrate effective shielding so that the light is directed downwards rather than omni-directional. Omni-directional lights of an ornamental nature may be used in general commercial districts only.*

Applicant Response:

Section 21, Figure 5.12 depicts how the Kenthorpe Way driveways , visitor parking lot and east side pedestrian path are illuminated at a 7-foot above grade standard. The lighting fixtures will be fully shielded and will use low-pressure sodium bulbs. Within the WTP compound and away from abutting properties, the applicant proposes to install metal halide bulbs that are fully shielded. Along the pedestrian path and within the accessible water feature, the applicant proposes to use low pressure sodium bulbs.

Consequently, the proposed lighting plan is consistent with subsection 55.100(J)(6).

7. *Lines of sight shall be reasonably established so that the development site is visible to police and residents.*

Applicant Response:

The lines of sight from Kenthorpe Way to the WTP and from Mapleton Drive to the WTP are unobstructed. See Section 21, Figure 10.0. The line of sight from Kenthorpe Way and Mapleton Drive to the pedestrian path connecting the emergency accessway and Kenthorpe Drive is obstructed.

While the trail from Kenthorpe to Mapleton is a desired community feature, trail alignment options are limited by the WTP uses on-site. West Linn Comprehensive Plan Policies (Goal 8, Parks and Recreation and Goal 12, Transportation) encourage the creation of a trail network in West Linn. The Draft West Linn Trail System Plan (page 39) also encourages construction of a local trail connecting Mapleton Drive and Kenthorpe Way. In order to minimize impacts in the neighborhood, the WTP design has been pushed to the center of the site. For security reasons, it is not possible to build a pedestrian path through the core area of the WTP. Consequently, the pedestrian path must go to the east of the WTP operations area.

It is not possible to construct a path around the WTP core so that it does not have an unobstructed view. Consequently, the applicant proposes that a reasonable solution to the problem is to light this portion of the pathway so that the pathway is safe and defensible.

8. *Security fences for utilities (e.g., power transformers, pump stations, pipeline control equipment, etc.) or wireless communication facilities may be up to eight feet tall in order to protect public safety. No variances are required regardless of location.*

Applicant Response:

The perimeter good neighbor fence will be six feet high. See Section 21, Figure 14.0. The location of all utilities is behind the architectural security fencing. See Section 21, Figure 14.0, and or buildings surrounding the core area. These interior security fences are not located within the lot setbacks. Consequently, the proposed development is consistent with subsection 55.100(J)(8).

K. Provisions for persons with disabilities.

1. *The needs of a person with a disability shall be provided for. Accessible routes shall be provided between all buildings and accessible site facilities. The accessible route shall be the most practical direct route between accessible building entries, accessible site facilities, and the accessible entry to the site. An accessible route shall connect to the public right-of-way and to at least one on-site or adjacent transit stop (if the area is served by transit). All facilities shall conform to, or exceed, the Americans with Disabilities Act (ADA) standards, including those included in the Uniform Building Code.*

Applicant Response:

Americans with Disabilities Act Accessibility Guidelines (ADAAG) apply to the public areas of the utility. Public sidewalks and the pedestrian pathways will be designed, consistent with West Linn Public Works Standards to comply with ADA requirements. Two ADA accessible parking stalls flank the pedestrian walkway leading from the visitor parking area to the primary entrance of the remodeled operations building. See Section, Figure 7.0. Both parking stalls are connected by a grade level pathway to the proposed sidewalk on Kenthorpe Way. An ADA compliant ramp leads directly from roadway level into the primary public building entrance. An elevator connects the first and second floors of the operations building. The first floor lobby of the administration building is connected to the first floor of the operations building by a level hallway. The second floors of the administration and operations Buildings are also connected by an ADA accessible hallway. See Section 21, Figures 9.2 and 9.3. Consequently, the proposal complies with CDC 55.100(K) by providing ADA compliant pedestrian access around the site, parking stalls, and access into and through the publically accessible spaces of the administration and operations buildings.

L. Signs.

1. *Based on considerations of crime prevention and the needs of emergency vehicles, a system of signs for identifying the location of each residential unit, store, or industry shall be established.*

2. *The signs, graphics, and letter styles shall be designed to be compatible with surrounding development, to contribute to a sense of project identity, or, when appropriate, to reflect a sense of the history of the area and the architectural style.*

3. *The sign graphics and letter styles shall announce, inform, and designate particular areas or uses as simply and clearly as possible.*
4. *The signs shall not obscure vehicle driver's sight distance.*
5. *Signs indicating future use shall be installed on land dedicated for public facilities (e.g., parks, water reservoir, fire halls, etc.).*
6. *Signs and appropriate traffic control devices and markings shall be installed or painted in the driveway and parking lot areas to identify bicycle and pedestrian routes.*

Applicant Response:

The applicant proposes to provide three types of signage: a monument sign at the service entry and at the parking entrance; a building mounted sign at the administration building; and pole mounted signs at both entries to the pedestrian pathway. A No Parking sign will be placed at the through-site pedestrian path at both the Kenthorpe Way and Mapleton Drive access points. The general locations for this sign system are shown in Section 21, Figure 8.0. However, the applicant is not proposing any particular sign designs at this preliminary stage of design. Lake Oswego will apply for a sign permit after approval of the building permits and prior to issuance of an occupancy permit for the administration or operations buildings.

The signs shall demonstrate compliance with CDC 55.100(L)(2)(3)(4) and (6). Pedestrian and vehicle circulation signs shall be consistent with the travel mode and direction shown in Section 21, Figure 8.0. Traffic control devices are not proposed other than secure access gates. Individual buildings and loading areas within the core are will be signed and marked consistent with the requirements of Tualatin Valley Fire and Rescue. Consequently, signage at the WTP will be consistent with the intent of CDC 55.100(L).

M. *Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground, as practical. The design standards of Tables 1 and 2 above, and of subsection 5.487 of the West Linn Municipal Code relative to existing high ambient noise levels shall apply to this section.*

Applicant Response:

Subsection (M) requires placing electrical wires underground, "as practical". The existing overhead utility lines are shown in Section 21, Figures 5.0-5.4. All electrical lines within the WTP property will be located underground. Portland General Electric (PGE) Company will provide the WTP with a secondary power supply connected to a separate power transformer. The secondary power supply will be placed underground in the Kenthorpe Way right-of-way. See Section 21, Figure 5.1.

In situations where existing overhead utility lines run continuously along a street frontage, such as along Kenthorpe Way and Mapleton Drive, West Linn provides an option of a fee in-lieu-of undergrounding a small section of and overhead utility line. This avoids the disruptive effect of road cuts and service changes to residents that a piece-meal approach to undergrounding utilities creates.

Consequently, the applicant proposes to leave the overhead utility lines in place and pay a fee, determined by West Linn or PGE, in-lieu-of undergrounding overhead utilities at this time.

N. Wireless communication facilities (WCFs). (This section only applicable to WCFs.) WCFs as defined in Chapter 57 CDC may be required to go through Class I or Class II design review. The approval criteria for Class I design review is that the visual impact of the WCF shall be minimal to the extent allowed by Chapter 57 CDC. Stealth designs shall be sufficiently camouflaged so that they are not easily seen by passersby in the public right-of-way or from any adjoining residential unit. WCFs that are classified as Class II design review must respond to all of the approval criteria of this chapter.

Applicant Response:

The WTP operators employ a WCF system to enhance and facilitate communications functions on-site, consistent with CDC 57.050(C) and to gather radio telemetry with off-site water system components. Therefore, subsection (N) is not applicable.

O. Refuse and recycling standards.

1. All commercial, industrial and multi-family developments over five units requiring Class II design review shall comply with the standards set forth in these provisions. Modifications to these provisions may be permitted if the Planning Commission determines that the changes are consistent with the purpose of these provisions and the City receives written evidence from the local franchised solid waste and recycling firm that they are in agreement with the proposed modifications.

Applicant Response:

The WTP is a Major Utility and is not a commercial, industrial or multi-family development. Therefore, subsection (O)(1) does not apply.

2. Compactors, containers, and drop boxes shall be located on a level Portland cement concrete pad, a minimum of four inches thick, at ground elevation or other location compatible with the local franchise collection firm's equipment at the time of construction. The pad shall be designed to discharge surface water runoff to avoid ponding.

Applicant Response:

The applicant proposes to locate the trash container immediately west of the administration building. Section 21, Figure 3.1. Construction details are not available at this time but the Partnership shall demonstrate compliance with the design requirements of this subsection at the time of building permit submittal.

3. Recycling and solid waste service areas.

a. Recycling receptacles shall be designed and located to serve the collection requirements for the specific type of material.

b. The recycling area shall be located in close proximity to the garbage container areas and be accessible to the local franchised collection firm's equipment.

c. Recycling receptacles or shelters located outside a structure shall have lids and be covered by a roof constructed of water and insect-resistive material. The maintenance of enclosures, receptacles, and shelters is the responsibility of the property owner.

d. The location of the recycling area and method of storage shall be approved by the local fire marshal.

e. Recycling and solid waste service areas shall be at ground level and/or otherwise accessible to the franchised solid waste and recycling collection firm.

f. Recycling and solid waste service areas shall be used only for purposes of storing solid waste and recyclable materials and shall not be a general storage area to store personal belongings of tenants, lessees, property management or owners of the development or premises.

g. Recyclable material service areas shall be maintained in a clean and safe condition.

Applicant Response:

The applicant proposes to locate the recycling center immediately west of the administration building. Section 21, Figure 3.1. Construction details are not available at this time but the Partnership shall demonstrate compliance with the design requirements of this subsection at the time of building permit submittal.

4. Special wastes or recyclable materials.

a. Environmentally hazardous wastes defined in ORS 466.005 shall be located, prepared, stored, maintained, collected, transported, and disposed in a manner acceptable to the Oregon Department of Environmental Quality.

b. Containers used to store cooking oils, grease or animal renderings for recycling or disposal shall not be located in the principal recyclable materials or solid waste storage areas. These materials shall be stored in a separate storage area designed for such purpose.

Applicant Response:

The applicant shall comply with the requirements of ORS 466.005 and shall at time of application for construction permits, the applicant will demonstrate with subsection (O)(4). The partnership has prepared a Hazardous Materials Management Plan and shall be responsible for meeting applicable DEQ requirements.

5. Screening and buffering.

a. Enclosures shall include a curbed landscape area at least three feet in width on the sides and rear. Landscaping shall include, at a minimum, a continuous hedge maintained at a height of 36 inches.

b. Placement of enclosures adjacent to residentially zoned property and along street frontages is strongly discouraged. They shall be located so as to conceal them from public view to the maximum extent possible.

c. All dumpsters and other trash containers shall be completely screened on all four sides with an enclosure that is comprised of a durable material such as masonry with a finish that is architecturally compatible with the project. Chain link fencing, with or without slats, will not be allowed.

Applicant Response:

All dumpsters, trash collection boxes, recycling and solid waste areas will be fully screened on all four sides. The Partnership shall demonstrate compliance with this requirement at the time of building permit submittal.

6. *Litter receptacles.*

   a. *Location. Litter receptacles may not encroach upon the minimum required walkway widths.*

   b. *Litter receptacles may not be located within public rights-of-way except as permitted through an agreement with the City in a manner acceptable to the City Attorney or his/her designee.*

   c. *Number. The number and location of proposed litter receptacles shall be based on the type and size of the proposed uses. However, at a minimum, for non-residential uses, at least one external litter receptacle shall be provided for every 25 parking spaces for first 100 spaces, plus one receptacle for every additional 100 spaces. (Ord. 1547, 2007)*

Applicant Response:

The WTP will provide 17 visitor parking spaces; therefore, the visitors parking area shall provide one trash receptacle. The trash receptacle will not encroach on the public right-of-way or any visitor accessible walkway. See Section 21, Figure 3.1.

SITE ANALYSIS (55.110)

The site analysis shall include….

Applicant Response:

The application includes an application submittal locater, Section 20, which identifies the location, within this land use application, of all required site analysis information. The figure demonstrates that the proposed site analysis is consistent with CDC 55.110, Site Analysis.

SITE PLAN (55.120)

The site plan shall be at the same scale as the site analysis (CDC 55.110) and shall show:

Applicant Response:

The application includes an application submittal locater, Section 20, which identifies the location, within this land use application, of all required site plan information. The figure demonstrates that the proposed site plans are consistent with CDC 55.110, Site Plan.

TRANSPORTATION ANALYSIS (55.125)

Certain development proposals required that a Traffic Impact Analysis (TIA) be provided which may result in modifications to the site plan or conditions of approval to address or minimize any adverse impacts created by the proposal. The purpose, applicability and standards of this analysis are found in CDC 85.170(B)(2). (Ord. 1584, 2008)

Applicant Response:

CDC 85.170(B)(2)(c)(1) provides that a TIA may be required when the development:

(A) involves a zone change or plan amendment; or (B) A land use action that ODOT states may have operational or safety concerns along a State highway; and (C) The development shall cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT:(1) An increase in site traffic volume generation by 250 average daily trips (ADT) or more (or as required by the City Engineer); or (2) An increase in use of adjacent streets by vehicles exceeding the 20,000-pound gross vehicle weights by 10 vehicles or more per day; or (3) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate on the State highway, creating a safety hazard; or (4) The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or (5) A change in internal traffic patterns that may cause safety problems, such as backup onto the highway or traffic crashes in the approach area.

The WTP proposal does not involve a zone change or a plan amendment nor has ODOT opined that it has operational or safety concerns along a State highway, because of this proposal. Therefore, a TIA is not required.

In addition, the proposed improvements to the WTP will increase site traffic from approximately 15 to approximately 20 (numbers are rounded up) and traffic from trucks exceeding 20,000-pound gross vehicle weight might increase by approximately 1 ADT. Because of the modest increase in projected traffic, West Linn does not require a Traffic Impact Analysis. See Section 10 for an analysis of current and projected vehicle trips.

GRADING PLAN (55.130)

The grading and drainage plan shall be at the same scale as the site analysis (CDC55.110) and shall include the following:

A. *The location and extent to which grading will take place indicating general contour lines, slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed.*

B. *Plans and statements to demonstrate the ability of the project to meet Appendix 33 requirements of the Uniform Building Code.*

C. *A registered civil engineer shall prepare a plan and statement that shall be supported by factual data that clearly shows that there will be no adverse impacts from increased intensity of runoff off site, or the plan and statement shall identify all off-site impacts and measures to mitigate those impacts. The plan and statement shall, at a minimum, determine the off-site impacts from a 10-year storm.*

D. *Storm detention and treatment plans may be required.*

E. *Identification, information, including the name and address of the owner, developer, project designer, and the project engineer. (Ord. 1463, 2000)*

Applicant Response:

The Grading Plan is provided in Section 21, 4.0-4.5. The required Preliminary Stormwater Management Report is provided in Section 16.

ARCHITECTURAL DRAWINGS (55.140)

This section does not apply to single-family residential subdivisions or partitions, or up to two duplexes or single-family attached dwellings.

Architectural drawings shall be submitted showing:

A. Building elevations and sections tied to curb elevation;

B. Building materials: color and type;

C. The name of the architect or designer. (Ord. 1408, 1998)

Applicant Response:

The required architectural drawings are provided in Section 21, Figures 9.0 – 10.8.

LANDSCAPE PLAN (55.150)

This section does not apply to detached single-family residential subdivisions or partitions, or up to two duplexes or single-family attached dwellings.

A. The landscape plan shall be prepared and shall show the following:

1. Preliminary underground irrigation system.

2. The location and height of fences and other buffering of screening materials.

3. The location of terraces, decks, patios, shelters, and play areas.

4. The location, size, and species of the existing and proposed plant materials.

5. Building and pavement outlines.

B. The landscape plan shall be accompanied by:

1. The erosion controls that will be used, if necessary.

2. Planting schedule.

3. Supplemental information as required by the Planning Director or City Arborist. (Ord. 1408, 1998)

Applicant Response:

The required landscape planting schedule and irrigation plans are provided in Section 21, Figures 11.0 – 14.1.

EXCEPTIONS TO UNDERLYING ZONE, YARD, PARKING, SIGN PROVISIONS, AND LANDSCAPING PROVISIONS (55.170)

A. The Planning Director may grant an exception to the dimensional building setback or yard requirements in the applicable zone based on findings that the approval will satisfy the following criteria:

Applicant Response:

The applicant is not requesting an exception to the dimensional building setback or yard requirements.

B. The Planning Director may grant an exception to the off-street parking dimensional and minimum number of space requirements in the applicable zone so long as the following criteria are met:

Applicant Response:

The applicant is not requesting an exception to the off-street parking requirements.

C. The Planning Director may grant an exception to the sign dimensional requirements in the applicable zone when the following criteria are met:

Applicant Response:

The applicant is not requesting an exception to the sign dimensional requirements. The application identifies proposed locations for future signs but does not request sign permit approval at this time.

D. The Planning Director may grant an exception to the landscaping requirements in the applicable zone based on findings that the following criteria will be met:

Applicant Response:

The applicant is not requesting an exception to the landscaping requirements.

MAINTENANCE (55.180)

All on-site improvements shall be the ongoing responsibility of the property owner or occupant.

Applicant Response:

Lake Oswego continues to accept the on-going responsibility for site maintenance.

SHARED OPEN SPACE (55.190)

Where the open space is designated on the plan as common open space, the following shall apply:

A. The open space area shall be shown on the final plan and recorded with the Planning Director.

B. The open space shall be conveyed in accordance with one of the following methods:

1. By dedication to the City as publicly owned and maintained as open space. Open space proposed for dedication to the City must be acceptable to it with regard to the size, shape, location, improvement, and budgetary and maintenance limitations.

2. *By leasing or conveying title (including beneficial ownership) to a corporation, home association, or other legal entity with the City retaining the development rights to the property. The terms of such lease or other instrument of conveyance must include provisions suitable to the City Attorney for guaranteeing the following:*

    a. *The continued use of such land for intended purposes.*
    b. *Continuity of property maintenance.*
    c. *When appropriate, the availability of funds required for such maintenance.*
    d. *Adequate insurance protection.*
    e. *Recovery for loss sustained by casualty and condemnation, or otherwise.*

3. *By any method that achieves the objectives set forth in subsection (B)(2) of this section.*

Applicant Response:

West Linn CDC 2.0 does not include a definition for common open space. In ordinary land use terms, common open space generally refers to a park or playground within a residential development. The proposed pedestrian path and northwestern stormwater management facility will be accessible to the public. However, these areas are not designated on the site plan as common open space and will not be dedicated to West Linn. Therefore, the requirements of CDC 55.190 do not apply.

ANNEXATION AND STREET LIGHTS (55.195)

As a condition of approval for design review for any project that is being annexed to the City, the developer and/or homeowners association shall pay for all expenses related to street light energy and maintenance costs until annexed into the City. The approval for any property annexed must state: "This approval is contingent on voter approval of annexation of the subject property." This means that no permit, final plat, or certificate of occupancy may be issued or approved until annexation is complete.

Applicant Response:

The WTP site is located within the West Linn's corporate jurisdiction. Therefore, CDC 55.195 is not applicable.

IV. Supplemental Approval Criteria

APPROVAL STANDARDS – CLASS II DESIGN REVIEW (55.100 A)

The approval authority shall make findings with respect to the following criteria when approving, approving with conditions, or denying a Class II design review application.

STORMWATER QUALITY AND DETENTION (CDC 33)

PURPOSE (33.010)

The purpose of this chapter is to implement the Comprehensive Plan; meet the objectives of the "Clean Water Act" of the federal government by restoring and maintaining the chemical, physical, and biological integrity of waterbodies and waterways; provide water purification, flood control and streambank stability; provide aesthetic value; and provide for stormwater management to reduce the impacts of stormwater runoff (water quantity) and pollution (water quality) resulting from development. As development results in the replacement of large areas of existing pervious surface cover such as meadows or wooded areas with impervious material such as roads, parking lots, and roofs, stormwater detention is necessary to ensure that post-development stormwater runoff volumes do not exceed pre-development runoff volumes. Stormwater treatment is necessary in order to reduce sediment, nutrient, and pollutant loading into waterbodies and waterways.

Applicant Response:

Site Overview

The WTP site covers approximately 9.24 acres (402,426 square feet). Currently, approximately 1.51 acres (16 percent) of the site is covered by impervious rooftops, driveways, and other paved surfaces. 6.65 acres (72 percent) of the site is pervious and is covered with native trees and vegetation, including parking lot landscaping. Approximately 1.08 acres (12 percent) of the site is covered by the existing lagoons and other open process tanks. See Section 15, Table G-1. The existing areas of the half street impervious and pervious areas along both Kenthorpe Way and Mapleton Drive include 0.40 acres of existing street paving and 0.26 acres of vegetated right-of-way. See Section 16, Table G-2.

The proposed improvements will increase the overall impervious surfaces of the site from 16percent (65,716 square feet) of the total site area to 28.46 percent (114,742 square feet). Approximately 17,845 square feet of pervious pavement has been proposed as an impervious area reduction technique for the parking stalls near the administration building and Mapleton Drive emergency access road and path. The use of pervious pavement will reduce the overall effective impervious pavement area to 75,272 square feet, or approximately 19 percent of the site.

The additional impervious surfaces include six new buildings, new filter structures, gravity thickener tanks, and washwater equalization and recovery areas. The internal roadway area will be expanded to accommodate access to the new buildings and structures. The open water lagoons and other process basins are not included as new impervious surfaces because stormwater management is not required for these areas. The new meandering 6-foot-wide sidewalk along both Kenthorpe Way and Mapleton Drive will increase the overall impervious surfaces within the public right-of-way by approximately 3,384 square feet (0.08 acres). As discussed below, 64 percent of the site will be dedicated to pervious pavement, landscaped areas, and green roofs. See Section 16, Table G-3 and G-4.

Design Requirements

The WTP's proposed stormwater management features will be designed using the City of West Linn Public Works Design Standards and the City of West Linn Community Development Code, both of which require that certain volumes of stormwater be treated for any new development. The City allows the use of the Portland Stormwater Management Manual, which provides proven standards on designing vegetated stormwater facilities that treat and reduce runoff. In line with this document, the City of West Linn encourages the sustainable stormwater design practices that help to limit the impacts of development on the watersheds within the City. Specifically, Public Works Design Standards require for all new impervious area created on site storage of a 25-year storm event and safe discharge of a 100-year event. Additionally, post-development discharge rates must match pre-development rates for 2, 5, 10, and 25-year storm events.

Stormwater Strategy

The topography of the WTP property is predominantly flat, descending roughly 6 feet from south to north, over approximately 860 feet, or at roughly a 1 percent gradient. The expanded WTP facility will be focused in the central part of the site, with grading being shaped so that runoff flows naturally towards the perimeter where stormwater facilities are to be located. Three stormwater management methods designed under the requirements of the West Linn Public Works and City of Portland Stormwater Management Manual will help to reduce total impervious area as well as capture, slow down and absorb runoff. These are green roofs, pervious paving, and vegetated stormwater facilities.

Green Roofs

- Total proposed green roof area = approximately 5,580 square feet
- Proposed for 3 buildings
  - Mechanical dewatering building
  - Electrical building
  - Finished water pump station building
- The primary benefits of green roofs include:
  - Overall impervious area reduction
  - Increased lifespan of roof membrane
  - Additional insulation to reduce energy consumption
  - Noise reduction
- Secondary benefits include:
  - Habitat creation, reduction in urban heat island effect, improvement to air quality through removal of total suspended solids (TSS).

Pervious paving

- Total proposed pervious paving area = approximately 17,845 square feet
- The primary benefits of pervious paving include:
  - The pavers act as an additional impervious area reduction technique.
  - Instead of going to storm drain inlets, rain is allowed to infiltrate where it falls, reducing downstream impacts on storm drain infrastructure and recharging groundwater systems.

Vegetated Stormwater Facilities

- Total proposed area of vegetated swales, planters, and infiltration basins = approximately 231,766 square feet
- Vegetated stormwater facilities have benefits at both the micro and macro scale:
  - Swales, planters, and basins all perform the duties of slowing runoff, which gives time for pollutants and sediments to settle, runoff to infiltrate
  - Overall these facilities are effective in reducing peak flow volumes which imitates a natural water cycle and reduces downstream impacts to stormwater infrastructure and watersheds.
- These facilities will be sized appropriately to contain storm volumes as required by the City of West Linn using City of Portland Presumptive Approach Calculator (PAC).

Guiding Principles

Integrated seamlessly into the overall site design, the 3 stormwater management methods outlined above will be beneficial to both environment and city as they reduce the impacts of runoff on the built and natural landscape and imitate a pre-development condition.

By promoting the use of vegetated surface stormwater management, and impervious reduction techniques like green roofs and pervious paving, water resources are being protected, groundwater is recharged, and the volume and intensity of flow during storm events is reduced, leading to less frequent flooding and storm/sewer overflows downstream. With less runoff occurring at weaker intensities, pollution, temperature, erosion and sedimentation, all important variables in ecosystem health, are also drastically reduced, which positively effects terrestrial and aquatic life of the entire water catchment. Finally, costs are often reduced both upfront and long-term due to lower installation cost during construction and reduction in maintenance and strain on water infrastructure.

It is the overall intent of this project to design stormwater facilities that are integral to the landscape design, and when designed properly with appropriate plant and soil material, will provide a constant landscape benefit during both wet and dry periods.

APPLICABILITY (33.020)

This chapter applies to all new development and redevelopment sites, as required by the City's Public Works Design Standards, except one- and two-family dwellings that do not involve a land division.

Applicant Response:

The proposal is subject to CDC Chapter 33.

APPLICATION (33.030)

In conjunction with a design review or land division application, the following materials shall be submitted:

A. *An application submittal shall include the completed application form and three copies of responses to the approval criteria, except for any plans, which shall include three copies at the original scale and three copies reduced to a paper size not greater than 11 inches by 17 inches.*

B. A site plan and topographic map consistent with CDC 33.050 shall be submitted with the application.

C. The design details of the stormwater detention and treatment facilities shall be submitted per the standards set forth in the Public Works Design Standards. The application submittal shall include an operation and maintenance plan per the standards set forth in the Public Works Design Standards.

D. The application submittal shall include a planting plan consistent with CDC33.070. (Ord. 1463, 2000)

Applicant Response:

The Class II design review application includes: The application form and three copies; a site plan, Section 21, Figures 3.0 - 3.4; a topographic map, Section 21, Figure 2.1 – 2.4; a stormwater detention and treatment plan, Section 16; and a planting plan, Section 21, Figures 11.0 – 12.6 and Section 16.

APPROVAL CRITERIA (33.040)

The Planning Director and City Engineer shall make written findings with respect to the following criteria when approving, approving with conditions, or denying applications for stormwater detention permits and stormwater quality permits.

A. Stormwater quality facilities shall meet non-point source pollution control standards required by the Public Works Design Standards.

Applicant Response:

The WTP stormwater management features will be designed using the City of West Linn Public Works Design Standards and the City of West Linn Community Development Code and; therefore, will meet the West Linn non-point pollution control standards.

B. Design of stormwater detention and pollution reduction facilities and related detention and water quality calculations shall meet Public Works Design Standards and shall be prepared by a professional engineer licensed to practice in the State of Oregon.

Applicant Response:

A professional engineer, licensed to practice in the State of Oregon, prepared the preliminary stormwater detention and pollution reduction facilities and related detention and water quality calculations using the City of West Linn Public Works Design Standards and the City of West Linn Community Development Code. See Section 16.

C. Soil stabilization techniques, erosion control, and adequate improvements to accommodate the intended drainage through the drainage basin shall be used. Storm drainage shall not be diverted from its natural watercourse unless no feasible alternatives exist. Interbasin transfers of storm drainage will not be permitted.

Applicant Response:

The WTP stormwater management features will be designed using the soil stabilization, erosion control and drainage techniques found in the City of West Linn Public Works Design Standards, the City of West Linn Community Development Code. The preliminary plan shows that stormwater drainage will not be diverted from the natural watercourse.

D. Stormwater detention and treatment facilities shall encroach no further than 25 feet into the outside boundary of a water quality resource area. The area of encroachment must be replaced by adding an equal area to the water quality resource area on the subject property.

Applicant Response:

There are no water quality resource areas on site or within 25 feet of the WTP site.

E. Stormwater detention and treatment facilities shall be vegetated with plants from the Metro's Native Plant List as described in CDC 33.070.

Applicant Response:

The City allows the use of the Portland Stormwater Management Manual, which provides proven standards on designing vegetated stormwater facilities that treat and reduce runoff. Plant materials selected for vegetating stormwater facilities will be native plants. See Section 21, Figure 11.

F. Projects must either stockpile existing topsoil for reuse on the site or import topsoil, rather than amend subsoils. Soil amendments are allowed only where the applicant can demonstrate they are the only practical alternative for enabling the soil to support healthy plantings, promoting better stormwater treatment, or improving soil infiltration capacity (where appropriate).

Applicant Response:

The final construction documents shall ensure that planting practices will use either stockpiled soil or, if necessary, imported topsoil. Soil amendments are not envisioned or proposed.

G. Interim erosion control measures, such as mulching, shall be placed immediately upon completion of grading of the facilities. (Ord. 1463, 2000)

Applicant Response:

As discussed in Section 14, the Contractor shall implement interim erosion control measures required by the "*Erosion Prevention and Sediment Control: Planning and Design Manual*" published by Clackamas County Water Environment Services, December 2008. For these reasons, the proposal satisfies the approval criteria in CDC 33.040.

SITE PLAN (33.050)

A. All site plans and maps shall include the name, address, and telephone number of the applicant, the scale of the plan, a north arrow, and a vicinity map.

B. The applicant shall submit a site plan drawn to a one inch equals 10 feet or other approved scale, which contains the following information:

1. *Existing and proposed contour lines at the following minimum intervals:*
   a. *Two-foot intervals for slopes from zero to 25 percent; and*
   b. *Five-foot intervals for slopes in excess of 25 percent.*
2. *Location of proposed stormwater facilities including cross-sections.*
3. *Location of all existing natural features including, but not limited to, delineation of water quality resource areas.*
4. *Location of all trees measured at six-inch diameter at breast height or greater and a description of existing vegetation species. Where only a portion of a water quality resource area is to be disturbed by a stormwater facility, the tree inventory need only apply to the impacted area. The remaining treed area shall be depicted by outlining the canopy cover.*
5. *Location, width, and material of access road to facilities for maintenance purposes according to Public Works Design Standards. (Ord. 1463, 2000)*

Applicant Response:

The application includes an application submittal requirements locator, which identifies the location within this application package of all required site plan information. See Section 21. The site plans are found in Section 21, Figures 3.0 – 3.4. The Vicinity Maps are located in Section 21, Figures 1.0 and 1.1. The overview site plan was prepared at a 1:50 scale and the four Site Area Plans were prepared at a 1:20 scale as allowed by West Linn staff. Topography is shown at 1-foot contours because the site is sloped at less than 2 percent overall. The only natural feature on site is a drainage swale in the northwest corner of the site. The site does not contain a water quality resource area. The location of all trees of 6 inch diameter or more at 5 feet DBH is provided in Section 21, Figures 2.5 -0 2.8. The location and width of access roads is shown on the proposed site plans in Section 21, Figures 3.0 – 3.4. The access roads from Kenthorpe Way will be pavement and the emergency access road from Mapleton Drive will be pervious pavement and porous "grass pavers" or similar material as recommend by the TVF&R.

33.060 MAINTENANCE AND ACCESS REQUIREMENTS

Maintenance and access requirements shall meet Public Works Design Standards. (Ord. 1463, 2000)

Applicant Response:

The applicant shall meet the Public Works Design Standards regarding maintenance and access standards.

ACCESSORY STRUCTURES & USES (CDC 34)

CHAPTER 34
ACCESSORY STRUCTURES, ACCESSORY DWELLING UNITS, AND ACCESSORY USES

Applicant Response:

Chapter 34 applies to accessory uses, such as: greenhouses, television and satellite disks, accessory dwelling units, carports, garages, garden/tool sheds, and similar structures. It provides for reductions to side and rear yard setbacks under certain circumstances.

The applicant does not propose to construct any accessory structures or dwellings regulated by CDC Chapter. Therefore, CDC 34 does not apply.

ADDITIONAL YARD AREA REQUIRED; EXCEPTIONS TO YARD REQUIREMENTS; STORAGE IN YARDS; PROJECTIONS INTO YARDS (CDC 38)

38.020 NO YARD REQUIRED; STRUCTURE NOT ON PROPERTY LINE

In zones where a side yard or a rear yard setback is not required, a structure which is not to be built on the property line shall be set back from the property line by at least three feet.

Applicant Response:

CDC 38.020 applies to zones that do not have side or rear yard setbacks. The R-10 zoning district provides for side and rear yard setbacks. Therefore, CDC 38.020 does not apply.

SETBACK FROM STREET CENTERLINE REQUIRED (38.030)

A. *To assure improved light, air, and sight distance and to protect the public health, safety and welfare, a setback in addition to the yard requirements of the zone may be required where the right-of-way is inadequate. A determination shall be made based on the street standards contained in CDC 85.200(A).*

B. *The minimum yard requirement shall be increased to provide for street widening in the event a yard abuts a street having a right-of-way width less than required by its functional classification on the City's Comprehensive Plan Map, and in such case the setback shall be not less than the setback required by the zone plus one-half of the projected road width as required under CDC 85.200(A); however*

C. *The minimum distance from the wall of any structure to the centerline of an abutting street shall not be less than 25 feet plus the yard required by the zone. This provision shall not apply to rights-of-way of 50 feet or greater in width.*

Applicant Response:

The R-10 zone requires a 20-foot front yard setback. Buildings and structures on the WTP site are set back approximately 114 feet from Kenthorpe Way and will be set back 180 feet from Mapleton Drive. The WTP site abuts Kenthorpe Way and Mapleton Drive, which West Linn classifies as 50-foot right-of-ways. The City Engineer may require a 3-foot dedication on Kenthorpe Way. Consequently, CDC 38 does not require any additional setbacks.

EXCEPTIONS TO YARD REQUIREMENTS (38.040)

A. *If there are dwellings on both abutting lots with front yard depths less than the required depth for the zone, the depth of the front yard for the intervening lot need not exceed the average depth of the front yards of the abutting lots.*

B. *If there are garages on both abutting lots with front yard depths less than the required depth for the zone, the depth of the front yard for the garage for the intervening lot need not exceed the average depth of the front yards of the abutting lots.*

C. *If there is a dwelling on one abutting lot with a front yard of less depth than the required depth for the zone, the front yard for the lot need not exceed a depth one-half way between the depth of the abutting lot and the required front yard depth.*

D. If there is a garage on one abutting lot with a front yard of less depth than the required depth for the zone, the front yard for the garage for the lot need not exceed a depth one-half between the depth of the abutting lot and the required front yard depth. (Ord. 1276, 1990)

Applicant Response:

There will be no dwellings or garages on abutting lot lines. The project does not require any exceptions to the yard requirements thus CDC 38.040 does not apply.

STORAGE IN FRONT YARD (38.050)

Boats, trailers, campers, camper bodies, house trailers, recreation vehicles or commercial vehicles in excess of three-quarter-ton capacity shall not be stored in a required front yard in a residential zone if the location creates an obstruction to the vision of passing motorists which constitutes a potential traffic hazard.

Applicant Response:

The front yard will be used for landscaping, stormwater management, and visitor parking. The application does not propose any storage use in the required front yard.

PROJECTIONS INTO REQUIRED YARDS (38.060)

Applicant Response:

The project will not create any additional projections, such as cornices, eaves, decks, porches balconies, fireplaces, or living spaces, into required yards. Therefore, CDC 38.060 does not apply.

BUILDING HEIGHT LIMITATIONS, EXCEPTIONS (CDC 40)

Applicant Response:

The West Linn City Council repealed CDC Chapter 40 on September 26, 2011.

CLEAR VISION AREAS CDC (42)

CLEAR VISION AREAS REQUIRED, USES PROHIBITED (42.020)

A. A clear vision area shall be maintained on the corners of all property adjacent to an intersection as provided by CDC 42.040 and 42.050.

B. A clear vision area shall contain no planting, fence, wall, structure or temporary or permanent obstruction (except for an occasional utility pole or tree) exceeding three feet in height, measured from the top of the curb, or, where no curb exists, from the street centerline grade, except that trees exceeding this height may be located in this area, provided all branches below eight feet are removed. (Ord. 1192, 1987)

Applicant Response:

The property is not located on an intersection corner. Thirty foot distant clear vision triangles from the driveways onto Kenthorpe Way, which are 26 feet wide or more, are shown in Section 21, Figure 3.1and 3.3. The landscape planting plans, Section 21, Figures 12.1, 12.3 and 12.4 provide for plant materials that are three feet tall or less at maturity or include trees with branches 8 feet or more above grade level. The emergency access gate will not exceed 3 feet in compliance with subsection CDC 42.020.B. See Section 21, Figure 14 series.

42.030 EXCEPTIONS

Applicant Response:

The WTP site does not lie in any of the exception areas identified in this subsection. Therefore, CDC 40.030 does not apply.

COMPUTATION; STREET AND ACCESSWAY 24 FEET OR MORE IN WIDTH (42.040)

The clear vision area for all street intersections and street and accessway intersections (accessways having 24 feet or more in width) shall be that triangular area formed by the right-of-way or property lines along such lots and a straight line joining the right-of-way or property line at points which are 30 feet distant from the intersection of the right-of-way line and measured along such lines.

Applicant Response:

The two driveways on Kenthorpe Way will have 26-foot drive lanes and driveway approaches between 73 feet 7 inches and 64 feet. See Section 21, Figure 3.0. The apex of the 30-foot clear vision triangle is shown in Section 21, Figures 3.1 and 3.3. Therefore, the emergency access road clear vision triangle is consistent with CDC 40.050.

COMPUTATION; ACCESSWAY LESS THAN 24 FEET IN WIDTH (42.050)

The clear vision area for street and accessway intersections (accessways having less than 24 feet in width) shall be that triangular area whose base extends 30 feet along the street right-of-way line in both directions from the centerline of the accessway at the front setback line of a single-family and two-family residence, and 30 feet back from the property line on all other types of uses.

Applicant Response:

The emergency accessway onto Mapleton Drive has a drive lane of 20 feet. The 30-foot clear vision triangle is shown in Section 21, Figure 3.4. The drive swing gate will be a maximum of 3 feet tall. Therefore, the emergency access road clear vision triangle is consistent with CDC 40.050.

FENCES (CDC 44)

SIGHT-OBSCURING FENCE; SETBACK AND HEIGHT LIMITATIONS (44.020)

A. A sight- or non-sight-obscuring fence may be located on the property line or in a yard setback area subject to the following:

1. The fence is located within:

a. A required front yard area, and it does not exceed three feet, except pillars and driveway entry features subject to the requirements of Chapter 42 CDC, Clear Vision Areas, and approval by the Planning Director;

b. A required side yard which abuts a street and it is within that portion of the side yard which is also part of the front yard setback area and it does not exceed three feet;

c. A required side yard which abuts a street and it is within that portion of the side yard which is not also a portion of the front yard setback area and it does not exceed six feet provided the provisions of Chapter 42 CDC are met;

d. A required rear yard which abuts a street and it does not exceed six feet; or

e. A required side yard area, which does not abut a street or a rear yard and it, does not exceed six feet.

Applicant Response:

No fence will be constructed within the 20-foot Kenthorpe Way front yard setback other than a 6-foot tall good neighbor fence where the eastern and western property lines intersection with Kenthorpe Way. Both side yard fences are outside the clear vision triangles for the two driveways entering Kenthorpe Way. The good neighbor side yard fences can be reduced to three feet in height within front yard setback. The side yard good neighbor fences will be six feet tall. Along Mapleton Drive, the fence in the rear yard setback will be a three-foot tall split rail fence. The swing gate will be a maximum of 3 feet tall. See also Section 21, Figures 12.1 – 12.4 and 14.0- and 14.1 regarding fence type by location and fence details. .

B. Fence or wall on a retaining wall. When a fence is built on a retaining wall or an artificial berm, the following standards shall apply:

Applicant Response:

No fence or wall will be built on a retaining wall; therefore, CDC 44.020(B) does not apply.

44.030 SCREENING OF OUTDOOR STORAGE

A. All service, repair, and storage activities carried on in connection with any commercial, business or industrial activity and not conducted within an enclosed building shall be screened from view of all adjacent properties and adjacent streets by a sight-obscuring fence.

B. The sight-obscuring fence shall be in accordance with provisions of Chapter 42 CDC, Clear Vision Areas, and shall be subject to the provisions of Chapter 55 CDC, Design Review.

Applicant Response:

All WTP service, repair and storage activities will occur with the secured core of the facility which will be screened from view of all adjacent properties and adjacent streets by means of sight obscuring architectural security walls, architectural security wall gates, visual screening fence or building walls. See Section 21, Figures 14.0 and 14.1 for wall, gate and fence detail. The fences and wall are outside of clear vision areas and are subject to Class II Design Review. Therefore, the WTP proposal screens outdoor storage, service and repairs areas consistent with CDC 44.030.

44.040 LANDSCAPING

Landscaping which is located on the fence line and which impairs sight vision shall not be located within the clear vision area as provided in Chapter 42 CDC.

Applicant Response:

Landscaping within the clear vision areas will either grow to less than three feet at maturity or will be pruned so that branches are higher than 8 feet off the ground as required by C DC 42020(B).

44.050 STANDARDS FOR CONSTRUCTION

A. The structural side of the fence shall face the owner's property; and

B. The sides of the fence abutting adjoining properties and the street shall be maintained. (Ord. 1291, 1990)

Applicant Response:

The proposed good neighbor fence, see Section 21, Figure 14.0, will be constructed so that the structural side of the fence faces the WTP. Any chainlink element in a good neighbor fence will be located on the WTP property side. The City of Lake Oswego shall be responsible for maintaining both side of any fence in good condition.

OFF-STREET PARKING, LOADING AND RESERVOIR AREAS (CDC 46)

46.010 PURPOSE

The purpose of this chapter is to provide standards for the number and arrangement of off-street parking, loading, and reservoir areas. Most of these provisions relate to commercial, office, and industrial uses. Parking lot design has often been criticized for creating large expanses of paved areas, separating the business from the public street. That arrangement makes it less attractive for pedestrians to access these buildings. The challenge is balancing the business community's desire for ample visible parking to attract prospective customers with the community interest of encouraging safe, non-vehicular access, minimizing the visual impact of parking, and creating a more attractive streetscape and urban environment.

Most parking facilities in non-residential developments contain spaces which are infrequently used, available for the few days a year when parking is at a premium. For these spaces, permeable parking surfaces provide a suitable parking surface which can reduce surface runoff and increase water quality, as well as improve the aesthetic appearance of the parking lot. West Linn encourages the use of permeable parking surfaces in appropriate situations. (Ord. 1463, 2000)

Applicant Response:

The WTP is a public utility. Parking is provided inside the secured core area for employees and in front of the administration and operations buildings for visitors. Both parking areas will be pervious surfaces. See Section 16, Figure 2.0.

46.020 APPLICABILITY AND GENERAL PROVISIONS

A. *At the time a structure is erected or enlarged, or the use of a structure or parcel of land is changed within any zone, off-street parking spaces, loading areas and reservoir areas shall be provided in accordance with the requirements of this chapter unless other requirements are otherwise established as a part of the development approval process.*

B. *The provision and maintenance of off-street parking and loading spaces are the continuing obligation of the property owner.*

C. *No building or other permit shall be issued until plans are approved that show the property that is and will remain available for exclusive use as off-street parking and loading space as required by this chapter. The use of property for which the building permit is issued shall be conditional upon the unqualified continuance and availability of the amount of parking and loading space required by this chapter.*

D. *Required parking spaces and loading areas shall be improved to the standards contained in this chapter and shall be available for use at the time of the final building inspection except as provided in CDC 46.150. (Ord. 1463, 2000)*

Applicant Response:

The applicant is responding to the requirements of this chapter at time of land use application. Lake Oswego shall be responsible for the maintenance of all WTP off-street parking and loading areas. All required parking and loading areas will be designed and improved according to the standards of CDC Chapter 46.

46.030 SUBMITTAL REQUIREMENTS

For any application requiring design review approval, which includes parking areas, the applicant shall submit, within the design review package, a plan drawn to scale showing all the elements necessary to indicate that the requirements of Chapter 55 CDC are met and it shall include but not be limited to:

A. The delineation of individual parking and loading spaces and their dimensions;

B. The identification of compact parking spaces;

C. The location of the circulation area necessary to serve spaces;

D. The access point(s) to streets, alleys, and properties to be served;

E. The location of curb cuts;

F. The location and dimensions of all landscaping, including the type and size of plant material to be used, as well as any other landscape material incorporated into the overall plan;

G. The proposed grading and drainage plans and the slope (percentage) of parking lot;

H. Specifications as to signs and bumper guards;

I. Identification of disabled parking spaces;

J. Location of pedestrian walkways and crossings; and

K. Location of bicycle racks. (Ord. 1463, 2000)

Applicant Response:

The required information is provided on the following Figures in Section 21:

A. Staff parking and visitor parking areas are shown on Figures 3.1 and 7.0. Each stall is 18 feet deep and 9 feet wide.

B. There are no compact parking spaces.

C. The site circulation plan is provided on Figure 7.0.

D. Access points to the parking areas are shown on Figure 3.0.

E. Locations of curb cuts are shown on Figures 3.1, 3.3 and 3.4.

F. Landscape plans and details are provided on Figures 11.0 – 14.0.

G. The grading and drainage plans for parking lots are shown on Figures 4.1 and 4.3.

H. The locations of bumper guards and ADA parking signs are shown on Figure 3.0 and 8.0. Typical parking lot guards will be approximately 74" x 6" x 4" and made of concrete or recycled material. The two ADA parking signs will be approximately 12" x 8" with white letters on a blue background and mounted on a metal or wood pole in front of the ADA reserved parking spaces.

I. Two ADA accessible parking spaces are provided on Figure 7.0.

J. The location of pedestrian walkways and crossings is shown on Figure 3.1.

K. The visitor and employee bicycle racks are shown on Figure 3.1

46.040 APPROVAL STANDARDS

Approval shall be based on the standards set forth in this chapter and Chapter 48 CDC, Access, Egress and Circulation; Chapter 52 CDC, Signs; and Chapter 54 CDC, Landscaping.

Applicant Response:

The WTP parking areas are designed in accordance with the standards specific in CDC 46.040, as described in this application.

46.050 JOINT USE OF A PARKING AREA

Applicant Response:

The applicant does not propose any joint use parking; therefore CDC 46.050 does not apply.

46.060 STORAGE IN PARKING AND LOADING AREAS PROHIBITED

Required parking spaces shall be available for the parking of passenger automobiles of residents, customers, patrons and employees only, and the required parking spaces shall not be used for storage of vehicles or materials or for the parking of trucks connected with the business or use with the exception of small (under one-ton) delivery trucks or cars.

Applicant Response:

The designated parking areas are reserved for visitors and employees. They will not be used for vehicle or material storage. The overflow parking area is not required for employee use on a daily basis and WTP operational vehicles and materials will be stored here on an as needed basis. All storage areas are internal to the WTP central core and not visible to the public.

46.070 MAXIMUM DISTANCE ALLOWED BETWEEN PARKING AREA AND USE

A. *Off-street parking spaces for single- and two-family dwellings shall be located on the same lot with the dwelling.*

B. *Off-street parking spaces for uses not listed in subsection A of this section shall be located not farther than 200 feet from an entryway to the building or use they are required to serve, measured in a straight line from the building, with the following exceptions:*

   1. *Shared parking areas for commercial uses which require more than 40 parking spaces may provide for the spaces in excess of the required 40 spaces up to a distance of 300 feet from the entryway to the commercial building or use.*

   2. *Industrial and manufacturing uses which require in excess of 40 spaces may locate the required spaces in excess of the 40 spaces up to a distance of 300 feet from the entryway to the building.*

   3. *Employee parking areas for carpools and vanpools shall be located closer to the entryway to the building than general employee parking.*

4. *Stacked or valet parking is allowed if an attendant is present to move vehicles. If stacked parking is used for required parking spaces, the applicant shall ensure that an attendant will always be present when the lot is in operation. The requirements for minimum or maximum spaces and all parking area development standards continue to apply for stacked parking.*

5. *All disabled parking shall be placed closest to building entrances than all other parking. Appropriate ADA curb cuts and ramps to go from the parking lot to the ADA-accessible entrance shall be provided unless exempted by ADA code. (Ord. 1547, 2007)*

Applicant Response:

There are no residential uses on site. Employee and visitor parking areas are approximately 50 feet from their respective building entrances. There are no parking areas in excess of 40 spaces. There are no designated carpool or vanpool areas. Valet and stacked parking is not proposed. The two ADA parking spaces are closest to the pedestrian access point into administration and operations buildings. See Section 21, Figure 7.0. An ADA accessible ramp leads from the parking lot into the operations and administration buildings. Consequently, the proposal is consistent with CDC 46.0709.

46.080 COMPUTATION OF REQUIRED PARKING SPACES AND LOADING AREA

A. *Where several uses occupy a single structure or parcel of land or a combination of uses are included in one business, or a combination of uses in the same or separate buildings share a common parking area as in the case of a shopping center, the total off-street parking spaces and loading area shall be the sum of the requirements of the several uses, computed separately. For example, parking for an auto sales and repair business would be calculated using the "retail-bulky" calculation for the sales area and the "service and repair" calculation for the repair area. In another example, parking for a shopping center with a grocery store, a restaurant, and a medical office would be calculated using the "general retail store" calculation for the grocery store, the "restaurant" calculation for the restaurant, and the "medical/dental clinics" calculation for the medical office. The total number of required parking spaces may be reduced by up to 10 percent to account for cross-patronage (when a customer visits several commercial establishments during one visit to the commercial center) of adjacent businesses or services in a commercial center with five or more separate commercial establishments.*

B. *To calculate building square footage as a basis for determining how many parking spaces are needed, the area measured shall be gross floor area under the roof measured from the faces of the structure, including all habitable floors and excluding only space devoted to covered off-street parking or loading.*

C. *Where employees are specified, the employees counted are the persons who work on the premises including proprietors, executives, professional people, production, sales, and distribution employees, during the largest shift.*

D. *Fractional space requirements shall be counted as a whole space.*

E. *Parking spaces in the public street shall not be eligible as fulfilling any part of the parking requirement except open space/park areas with adjacent street frontage.*

F. *When an office or commercial development is proposed which has yet to identify its tenants, the parking requirement shall be based upon the "office" or "general retail" categories, respectively.*

G. As permitted uses are replaced with new permitted uses within an existing commercial or business center, modification of the number of parking spaces relative to the new mix of uses is not required unless other modifications of the site which require design review approval pursuant to Chapter 55 CDC are proposed. (Ord. 1463, 2000)

Applicant Response:

The WTP is a multi-use major utility; there are process and non-process uses as well as visitor use areas. Both employees and visitors access the site, parking will be on-site because transit does not serve this location. Therefore, the parking demand is calculated based on square footage and employees as provided for in subsection A. Parking on the public street is not counted toward fulfilling parking demand.

46.090 MINIMUM OFF-STREET PARKING SPACE REQUIREMENTS

Applicant Response:

The WTP currently has eleven marked parking spaces, including one ADA space. The parking lot also accommodates seven or more cars in an unmarked paved area during overflow times.

The parking space calculation table in CDC 46.090 does not include a water treatment plant; therefore CDC 46.100, Parking Requirements for Unlisted Uses, applies. Consequently, the design team calculated parking space demand using a combination of building square footage and employee count for similar uses.

C. Commercial.	
5. Professional offices, banks and savings and loans, and government offices.	One space for every 350 sq. ft. of gross area.
E. Industrial.	
1. Manufacturing use; may include assembly and distribution.	One space per employee. (Multi-shift businesses only need to provide for peak shift number of employees on site at one time.)

Table 4.1: CDC Table 46.090

The WTP will eventually employ approximately 12-13 FTE employees who will work shifts over the 24-hour period. It is not anticipated that more than half of the employees will be on site at the same time. Although the WTP is not an industrial facility, subsection (E)(1) of Table CDC 46.090 provides that one parking space shall be provided for each employee, however, in the case of multiple shifts, fewer spaces are permitted. Consequently, there will be seven employee parking spaces inside the secured core of the WTP. See Section 21, Figure 7.0.

To calculate the correct number of office and visitor parking spaces, the design team used the square footage calculation method as provided in CDC 46.080(B). The second story of the administration and operations buildings provide space for offices, a laboratory, control room, conference room, training room and office/visitor support areas. The total square footage of the second stories of both buildings is approximately 5,700 square feet. At a ratio of one parking space for every 350 square feet of gross area, the WTP public area should provide 16.2 parking spaces which, when rounded up, equals 17 parking spaces. Consequently, the visitor's parking area provides 17 parking spaces.

F. *Maximum parking. While it is important to establish minimum standards to ensure that adequate parking is available, it is equally important to establish maximum parking standards to reduce paved impermeable areas, to reduce visual impact of parking lots, and to encourage alternate modes of transportation. For these reasons, parking spaces (except for single-family and two-family residential uses) shall not exceed the minimum by more than 10 percent except by variance.*

Applicant Response:

Seventeen parking spaces are required for general office and visitor use and seven parking spaces are required for employee use. The applicant does not propose to exceed this standard; therefore, subsection (F) does not apply.

G. *Parking reductions. CDC 55.100(H)(5) explains reductions of up to 10 percent for development sites next to transit stops and up to 10 percent for commercial development sites adjacent to large multi-family residential sites.*

Applicant Response:

The WTP site is not next to a transit stop nor is it a large multi-family development. Therefore, subsection (G) does not apply.

H. *For office, industrial, and public uses where there are more than 20 parking spaces for employees on the site, at least 10 percent of the required employee parking spaces shall be reserved for carpool use before 9:00 a.m. on weekdays. The spaces will be the closest to the building entrance, except for any disabled parking and those signed for exclusive customer use. The carpool/vanpool spaces shall be clearly marked "Reserved – Carpool/Vanpool Before 9:00 a.m."*

Applicant Response:

The WTP is a public use and seven employee spaces are identified within the secured area of the WTP site. Therefore, subsection (H) does not apply.

I. *Existing developments along transit streets or near transit stops may redevelop up to 10 percent of the existing parking spaces to provide transit-oriented facilities, including bus pullouts, bus stops and shelters, park and ride stations, and other similar facilities.*

Applicant Response:

The WTP site is not located along a transit site; therefore subsection (I) does not apply.

46.100 PARKING REQUIREMENTS FOR UNLISTED USES

A. Upon application and payment of fees, the decision-making authority, as provided by CDC 99.060(B), may rule that a use not specifically listed in CDC 46.090 is a use similar to a listed use and that the same parking standards shall apply. The ruling on parking requirements shall be based on the requirements of Chapter 99 CDC and findings that:

1. The use is similar to and of the same general type as a listed use;

2. The use has similar intensity, density and off-site impacts as the listed use; and

3. The use has similar impacts on the community facilities as the listed use.

B. This section does not authorize the inclusion of a use in a zone where it is not listed, or a use which is specifically listed in another zone or which is of the same general type, and is similar to a use specifically listed in another zone.

Applicant Response:

See discussion for CDC 46.090.

46.110 RESERVOIR AREAS REQUIRED FOR DRIVE-IN USES

All uses providing drive-in service as defined by this code shall provide, on the same site, a reservoir space a minimum of 15 feet long for each car, as follows:

Applicant Response:

The WTP does not provide a drive-in use; therefore CDC 46.110 does not apply.

46.120 DRIVEWAYS REQUIRED ON SITE

Any school or other meeting place which is designed to accommodate more than 25 people at one time shall provide a 15-foot-wide driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers. Depending on functional requirements, the width may be increased with Planning Director approval.

Applicant Response:

The WTP is not a school but groups of 25 or more school children visit the site frequently, sometimes arriving by bus. The school visitors may be dropped off directly in front of the primary WTP entryway. The WTP also hosts meetings, primarily meetings of Lake Oswego staff or technical groups who generally arrive by car. The proposed driveway from Kenthorpe Way has a 26-foot travel lane and provides for the continuous flow of traffic from one entry point to the other. Consequently, the WTP driveway design accommodates a continuous flow of traffic as required by CDC 46.120.

46.130 OFF-STREET LOADING SPACES

Buildings or structures to be built or substantially altered, which receive and distribute material or merchandise by truck, shall provide and maintain off-street loading and maneuvering space. The dimensional standard for loading spaces is a minimum of 14 feet wide by 20 feet long or proportionate to accommodate the size of delivery trucks that typically serve the proposed use as follows:

Applicant Response:

Table 46.130 does not identify the WTP as a use requiring off-street loading spaces. However, the WTP receives weekly deliveries of materials by truck; therefore the site design provides a chemical delivery area and solids loading area, See Section 21, Figure 7.0. The drive lanes are 26 feet wide for more than 1200 feet in length. The loading areas can accommodate delivery vans and trucks as well as semi-trailers.

46.140 EXEMPTIONS TO PARKING REQUIREMENTS

To facilitate the design requirements of Chapter 58 CDC, properties in the Willamette Falls Drive Commercial District/Overlay Zone, located between 10th and 16th Streets, shall be exempt from the requirements for off-street parking as identified in this chapter. Any off-street parking spaces provided shall be designed and installed per the dimensional standards of this code.

Applicant Response:

The WTP site is not within the exempt overlay area described; therefore, CDC 46.140 does not apply.

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

A. Design standards.

1. *"One standard parking space" means a minimum for a parking stall of eight feet in width and 16 feet in length. These stalls shall be identified as "compact." To accommodate larger cars, 50 percent of the required parking spaces shall have a minimum dimension of nine feet in width and 18 feet in length (nine feet by 18 feet). When multi-family parking stalls back onto a main driveway, the stalls shall be nine feet by 20 feet.*

Applicant Response:

Parking spaces, other than ADA spaces, are 9 feet by 18 feet.

2. *Disabled parking and maneuvering spaces shall be consistent with current federal dimensional standards and subsection B of this section and placed nearest to accessible building entryways and ramps.*

Applicant Response:

The two disabled parking spaces are directly alongside the pedestrian entrance walk to the primary visitor entrance. They will be designed to meet federal and West Linn standards.

3. *Parking spaces located in the public right-of-way that require backing movements or other maneuvering within a street or right-of-way are permitted with City Engineer approval as is in the case of Willamette Falls Drive parking facilities.*

Applicant Response:

There are no parking spaces within the public right-of-ways that required backing movements within the right-of-way.

4. *Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.*

Applicant Response:

The service drives are located off of Kenthorpe Way. The drive lanes are a minimum of 26 feet wide, accommodating two-way traffic. The pedestrian across the parking lot to Kenthorpe Way is clearly marked. The 26-foot wide service drive continues through the secured area of the WTP providing safe traffic movement and emergency access throughout the site.

5. *Each parking and/or loading space shall have clear access, whereby the relocation of other vehicles to utilize the parking space is not required.*

Applicant Response:

Loading spaces in the WTP interior are accessible from two directions. The visitor parking area is served by a 26-foot wide travel lane which provides for clear access into the parking spaces.

6. *Except for single- and two-family residences, any area intended to be used to meet the off-street parking requirements as contained in this chapter shall have all parking spaces clearly marked using a permanent paint. All interior drives and access aisles shall be clearly marked and signed to show direction of flow and maintain vehicular and pedestrian safety. Permeable parking surface spaces may have an alternative delineation for parking spaces.*

Applicant Response:

The employee and pedestrian parking area will be permeable. All parking spaces shall be clearly marked and all drive lanes and access aisles shall be marked and signed to show the flow of traffic. See Section 21, Figure 7.0.

7. *Except for residential parking, and parking for public parks and trailheads, at least 50 percent of all areas used for the parking and/or storage and/or maneuvering of any vehicle, boat and/or trailer shall be improved with asphalt or concrete surfaces according to the same standards required for the construction and acceptance of City streets. The remainder of the areas used for parking may use a permeable paving surface designed to reduce surface runoff. Parking for public parks or trailheads may use a permeable paving surface designed to reduce surface runoff for all parking areas. Where a parking lot contains both paved and unpaved areas, the paved areas shall be located closest to the use which they serve.*

Applicant Response:

The visitor and employee parking spaces will be covered with a pervious surface. The drive lanes servicing the parking areas will be paved with impervious asphalt or concrete. The drive lanes cover at least 50 percent of the total parking/drive area.

8. *Off-street parking spaces for single- and two-family residences shall be improved with an asphalt or concrete surface, or a permeable parking surface designed to reduce surface runoff, to specifications as approved by the Building Official. Other parking facilities for two- and single-family homes that are to accommodate additional vehicles, boats, recreational vehicles, and trailers, etc., need not be paved. All parking for multi-family residential development shall be paved with concrete or asphalt. Driveways shall measure at least 20 feet from the back of sidewalk to garage or the end of the parking pad to accommodate cars and sport utility vehicles without the vehicles blocking the public sidewalk.*

Applicant Response:

Subsection 8 applies to residential parking areas; therefore, subsection (A)(8) does not apply.

9. *Access drives from the street to off-street parking or loading areas shall be designed and constructed to facilitate the flow of traffic and provide maximum safety for pedestrian and vehicular traffic on the site. The number of access drives shall be limited to the minimum that will allow the property to accommodate and service the anticipated traffic. Access drives shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers on frontage not occupied by service drives.*

Applicant Response:

The WTP site currently has two access drives onto Kenthorpe Way, but they are not connected. The revised access plan will connect the two driveway openings to provide direct and continuous flow of traffic. The pedestrian walkway that connects Kenthorpe Way to the WTP entryway is well marked.

10. *Access drives shall have a minimum vision clearance as provided in Chapter 42 CDC, Clear Vision Areas.*

Applicant Response:

The clear visions areas are designed in accordance with CDC 42 and are shown on Figure 7.0 in Section 21.

11. *Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four inches high located two feet back from the front of the parking stall. Alternately, landscaped areas or sidewalks adjacent to the parking stalls without wheel stops shall be two feet wider.*

Applicant Response:

The parking spaces in the visitor parking lot abut the central Kenthorpe Way landscaped area. Consequently, each of the 17 parking spaces will have a wheel stop at least 4 inches high located two feet back from the front of the parking stall. The employee parking area does not abut a landscape area or sidewalk.

12. *Off-street parking and loading areas shall be drained in accordance with plans and specifications approved by the City Engineer. Storm drainage at commercial sites may also have to be collected to treat oils and other residue.*

Applicant Response:

See Section 16 for discussion on stormwater drainage.

13. *Artificial lighting on all off-street parking facilities shall be designed to deflect all light downward away from surrounding residences and so as not to create a hazard to the public use of any road or street.*

Applicant Response:

All parking area lights shall be full shielded and will be aimed downward as described in Section 13.

14. *Directional arrows and traffic control devices which are placed on parking lots shall be identified and installed.*

Applicant Response:

Directional arrows and traffic control devices are not proposed.

15. *The maximum driveway grade for single-family housing shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. Regardless, the last 18 feet in front of the garage must maintain a maximum grade of 12 percent as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.*

Applicant Response:

The WTP is not a single-family housing project; therefore, subsection (A)(15) does not apply.

16. *Visitor or guest parking must be identified by painted "GUEST" or "VISITOR."*

Applicant Response:

The visitor parking lot will be labeled as a "Visitor" lot as required by subsection (A)(17).

17. *The parking area shall have less than a five percent grade. No drainage across adjacent sidewalks or walkways is allowed.*

Applicant Response:

The entire slope grade is less than 2 percent. Stormwater on the western end of the visitor parking lot will flow towards Catchment Area A while run-off on the eastern end of the visitor parking lot, including the pedestrian walkway, will flow toward Catchment Area B. Consequently, drainage will not cross the interior walkway.

18. *Commercial, office, industrial, and public parking lots may not occupy more than 50 percent of the main lot frontage of a development site. The remaining frontage shall comprise buildings or landscaping. If over 50 percent of the lineal frontage comprises parking lot, the landscape strip between the right-of-way and parking lot shall be increased to 15 feet wide and shall include terrain variations (e.g., one-foot-high berm) plus landscaping. The defensible space of the parking lot should not be compromised.*

Applicant Response:

The WTP a major utility use not a commercial, industrial, office or public parking lot use. The Kenthorpe Way frontage is approximately 500 across. The width of the visitor parking lot is approximately 180 feet. Therefore, the visitor parking lot width is less than 50 percent of the Kenthorpe Way frontage. The depth of the Kenthorpe Way landscaping is 150 feet on the west, 121 feet on the east, and approximately 46 feet in the middle. Consequently, the visitor parking lot is consistent with the intent of subsection (A)(18).

19. *Areas of the parking lot improved with asphalt or concrete surfaces shall be designed into areas of 12 or less spaces through the use of defined landscaped area. Groups of 12 or less spaces are defined as:*

    a. *Twelve spaces in a row, provided there are no abutting parking spaces, as in the case when the spaces are abutting the perimeter of the lot; or*

    b. *Twelve spaces in a group with six spaces abutting together; or*

    c. *Two groups of twelve spaces abutting each other, but separated by a 15-foot wide landscape area including a six-foot-wide walkway.*

    d. *Parking areas improved with a permeable parking surface may be designed using the configurations shown in subsections (A)(19)(a), (b) and (c) of this section except that groups of up to 18 spaces are allowed.*

Applicant Response:

The employee parking area has seven spaces. The visitor parking area has 17 spaces, including 2 ADA spaces. Both parking areas will be improved with a permeable parking surface. Subsection (A)(19)(d) provides that groups of 18 spaces are allowed. Consequently, both the employee and visitor parking areas are consistent with sub section (A)(19).

20. *Pedestrian walkways shall be provided in parking areas having 20 or more spaces. Walkways or sidewalks shall be constructed between major buildings/activity areas (an example in multi-family housing: between recreation center, swimming pool, manager's office, park or open space areas, parking lots, etc.) within a development, between adjacent developments and the new development, as feasible, and between major buildings/activity areas within the development and adjacent streets and all adjacent transit stops. Internal parking lot circulation and design should maintain ease of access for pedestrians from streets and transit stops. Walkways shall be constructed using a material that visually contrasts with the parking lot and driveway surface. Walkways shall be further identifiable to pedestrians and motorists by grade separation, walls, curbs, surface texture (surface texture shall not interfere with safe use of wheelchairs, baby carriages, shopping carts, etc.), and/or landscaping. Walkways shall be six feet wide. The arrangement and layout of the paths shall depend on functional requirements.*

Applicant Response:

Subsection (A)(2) applies to parking areas with 20 or more spaces. The largest parking on site will have 17 parking spaces. Therefore, subsection (A)(20) does not apply. However, the visitor parking lot will be connected to the primary WTP entrance; it will be 6 feet wide, ADA accessible and will be clearly delineated as a walkway.

21. The parking and circulation patterns are easily comprehended and defined. The patterns shall be clear to minimize traffic hazards and congestion and to facilitate emergency vehicles.

Applicant Response:

The pedestrian and vehicle circulation plan is shown in Section 21, Figure 7.0. The circulation system provides looped two-way access from Kenthorpe Way, through the visitor parking lot, and back onto Kenthorpe Way. Similarly, the internal WTP circulation pattern provides a two-way loop through the secured area. TVF&R staff reviewed the circulation plan.

22. The parking spaces shall be close to the related use.

Applicant Response:

The employee parking spaces are 26 feet from the employee entrance. The visitor parking area is approximately 46 feet from the WTP public entrance.

23. Permeable parking spaces shall be designed and built to City standards.

Applicant Response:

The pervious parking areas will be built to West Linn Public Works Standards.

B. Accessible parking standards for persons with disabilities. If any parking is provided for the public or visitors, or both, the needs of the people with disabilities shall be based upon the following standards or current applicable federal standards, whichever are more stringent:

1. Minimum number of accessible parking space requirements (see following table):

MINIMUM REQUIRED NUMBER OF TOTAL PARKING SPACES	TOTAL NUMBER OF ACCESSIBLE SPACES	NUMBER OF VAN-ACCESSIBLE SPACES REQUIRED, OF TOTAL	SPACES SIGNED "WHEELCHAIR USE ONLY"
1 – 25	1	1	–

Table 4.2: Accessible Parking Spaces

2. *Location of parking spaces. Parking spaces for the individual with a disability that serve a particular building shall be located on the shortest possible accessible circulation route to an accessible entrance to a building. In separate parking structures or lots that do not serve a particular building, parking spaces for the persons with disabilities shall be located on the shortest possible circulation route to an accessible pedestrian entrance of the parking facility.*
3. *Accessible parking space and aisle shall meet ADA vertical and horizontal slope standards.*
4. *Where any differences exist between this section and current federal standards, those standards shall prevail over this code section.*
5. *One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96 inches wide.*
6. *Van-accessible parking spaces shall have an additional sign marked "Van Accessible" mounted below the accessible parking sign. A van-accessible parking space reserved for wheelchair users shall have a sign that includes the words "Wheelchair Use Only." Van-accessible parking shall have an adjacent eight-foot-wide aisle. All other accessible stalls shall have a six-foot-wide aisle. Two vehicles may share the same aisle if it is between them. The vertical clearance of the van space shall be 96 inches.*

Applicant Response:

The WTP site will provide seven employee parking spaces and 17 visitor parking spaces; two of the 17 visitor spaces will be ADA compliant and one of the ADA spaces will be a minimum of 96 inches wide. The two ADA spaces abut the pedestrian walkway that leads into the WTP public entrance.

C. Landscaping in parking areas. Reference Chapter 54 CDC, Landscaping.

Applicant Response:

See discussion regarding Chapter 54 CDC below.

D Bicycle facilities and parking.

1. *Provisions shall be made for pedestrian and bicycle ways if such facilities are shown on an adopted plan.*
2. *Bicycle parking facilities shall either be lockable enclosures in which the bicycle is stored, or secure stationary racks which accommodate bicyclist's locks securing the frame and both wheels. The bicycle parking shall be no more than 50 feet from the entrance to the building, well-lit, observable, and properly signed.*
3. *Bicycle parking must be provided in the following amounts:*

LAND USE CATEGORY	MINIMUM REQUIRED BICYCLE PARKING SPACES	MINIMUM COVERED AMOUNT
Libraries, Museums, Government Offices, etc.	2, or 1.5 spaces per 1,000 gross sq. ft., whichever is greater	25 percent

Table 4.3: Bicycle Parking

Applicant Response:

Kenthorpe Way and Mapleton Drive are not identified as West Linn bicycle ways; therefore subsection (C) does not apply. However, the Partnership recognizes the importance of the bicycle mode of transportation. Consequently, an employee bicycle parking area is proved adjacent to the employee parking area and a visitor bicycle parking area is provided in the Kenthorpe Way landscaped area directly across from the WTP public entrance, adjacent to the visitor parking area. The Partnership will provide 12 bicycle spaces, at least three of which are covered. See Section 21, Figure 3.0.

E. Office or industrial developments shall be allowed a 10 percent reduction in the number of required parking spaces when the property owner agrees to a demand management program that includes three or more of the following measures:

Applicant Response:

The applicant does not propose to reduce the amount of parking; therefore section (E) does not apply.

F. Minimum standards for parking lot layout.

Applicant Response:

The parking stalls in both the employee parking lot and the visitor parking lot will be 90-degree stalls. Each stall is a minimum of 18 feet deep and a minimum of 9 feet wide. The aisle width of each parking area exceeds 23 feet. Therefore, the design of both the employee and visitor parking areas complies with the design requirements of subsection (F).

ACCESS EGRESS AND CIRCULATION (CDC 48)

48.010 PURPOSE

The purpose of this chapter is to ensure that efficient, safe, and well-directed vehicular, bicycle, and pedestrian access, circulation, and egress are designed into development proposals. Access management seeks to balance mobility, the need to provide efficient, safe and timely travel with the ability to allow access to individual properties. Proper implementation of access management techniques should guarantee reduced congestion, reduced accident rates, less need for roadway widening, conservation of energy, and reduced air pollution.

Applicant Response:

The WTP site provides access to vehicle, bicycle, pedestrian and emergency users.

48.020 APPLICABILITY AND GENERAL PROVISIONS

A. *The provisions of this chapter do not apply where the provisions of the Transportation System Plan or land division chapter are applicable and set forth differing standards.*

B. *All lots shall have access from a public street or from a platted private street approved under the land division chapter.*

C. *No building or other permit shall be issued until scaled plans are presented to the City and approved by the City as provided by this chapter, and show how the access, egress, and circulation requirements are to be fulfilled. Access to State or County roads may require review, approval, and permits from the appropriate authority.*

D. *Should the owner or occupant of a lot or building enlarge or change the use to which the lot or building is put, resulting in increasing any of the requirements of this chapter, it shall be unlawful and a violation of this code to begin or maintain such altered use until the provisions of this chapter have been met, and, if required, until the appropriate approval authority under Chapter 99 CDC has approved the change.*

E. *Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same access and egress when the combined access and egress of both uses, structures, or parcels of land satisfies the requirements as designated in this code; provided, that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases, or contracts to establish joint use. Copies of said instrument shall be placed on permanent file with the City Recorder.*

F. *Property owners shall not be compelled to access their homes via platted stems of flag lots if other driveways and easements are available and approved by the City Engineer.*

Applicant Response:

The WTP lot has access onto Kenthorpe Way, a local street. Emergency access is provided onto Mapleton Drive, a collector street. A Pedestrian and Vehicle Circulation Plan, see Section 21, Figure 7.0, portrays the proposed site access and circulation. Shared access is not proposed. Site development shall not occur until the review authority has issued a final land use decision and site development or building permits are granted.

48.025 ACCESS CONTROL

A. *Purpose. The following access control standards apply to public, industrial, commercial and residential developments including land divisions. Access shall be managed to maintain an adequate level of service and to maintain the functional classification of roadways as required by the West Linn Transportation System Plan. Major roadways, including arterials and collectors, serve as the primary system for moving people and goods within and through the City. Access management is a primary concern on these roads. Local streets and alleys provide access to individual properties. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function. The regulations in this section further the orderly layout and use of land, protect community character, and conserve natural resources by promoting well-designed road and access systems and discouraging the unplanned subdivision of land.*

B. *Access control standards.*

1. *Traffic impact analysis requirements. The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also CDC 55.125, Traffic Impact Analysis.)*

Applicant Response:

The proposal does not warrant a TIA. See response to CDC 55.125.

2. *The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.*

Applicant Response:

West Linn has access permit jurisdiction but has not suggested closing or consolidating curb cuts or access points. TVF&R has requested an emergency access point from Mapleton Drive. There currently are three access points into the Lake Oswego property from Mapleton Drive; only one, an emergency accessway, will remain. Currently, there are two access points from the WTP site onto Kenthorpe Way. No vehicles will need to back onto Kenthorpe Way because the WTP vehicle circulation plan provides for two-way looped access from and to Kenthorpe Way. See Section 21, Figure 7.0.

3. *Access options. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (planned access shall be consistent with adopted public works standards and TSP). These methods are "options" to the developer/subdivider.*

a) Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.

b) Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.

c) Option 3. Access is from a public street adjacent to the development parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in subsection (B)(6) of this section.

Applicant Response:

Option 3, access from a public street adjacent to the development is the current approach and will continue to be the access approach for the upgraded WTP.

4. *Subdivisions fronting onto an arterial street. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).*

Applicant Response:

Subsection (B)(3)applies to subdivisions. The WTP proposal is not a subdivision; therefore subsection (B)(3) does not apply.

5. *Double-frontage lots. When a lot has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. When a lot has frontage opposite that of the adjacent lots, access shall be provided from the street with the lowest classification.*

Applicant Response:

The WTP lot fronts Kenthorpe Way, a local Street, and Mapleton Drive, a collector street. The WTP has taken access from Kenthorpe Way since 1967. To move the site access onto Mapleton Drive would cause additional disruption in the neighborhood and would be inconsistent with the intent of the Robinwood Neighborhood Plan, Goal 3, Policy 3.9, and the GNP. Because the Partnership desires to minimize impacts to the neighborhood, it proposes to leave site access onto Kenthorpe Way.

6. *Access spacing. The access spacing standards found in Chapter 8 of the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections, private drives, and non-traversable medians.*

Applicant Response:

The two driveways onto Kenthorpe Way currently exist. The proposed emergency access drive follows the approximate alignment of an existing driveway. No new driveways are proposed. Therefore, subsection (B)(6) does not apply.

7. *Number of access points. For single-family (detached and attached), two-family, and duplex housing types, one street access point is permitted per lot, when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (B)(6) of this section. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (B)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.*

Applicant Response:

The WTP proposal does not create any new access points onto Kenthorpe Way. Because the driveways form a two-way loop, vehicles do not have to back into a public street. The proposed upgraded WTP will generate fewer than 20 ADTs, far less than what the site could generate if fully developed to the required residential density. The emergency access road relies on the location of an existing driveway and will only be accessible to emergency vehicles. Consequently, the proposed access strategy protects the function, safety and operation of the abutting public streets.

8. *Shared driveways. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:*

Applicant Response:

The project does not propose to create any shared driveways.

C. *Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:*

1. *Block length and perimeter. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.*

2. *Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.*

3. *Exception. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of CDC 85.200(C), Pedestrian and Bicycle Trails, or cases where extreme topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations preclude implementation, not just inconveniences or design challenges.*

Applicant Response:

The West Linn TSP does not propose creating new blocks by joining Kenthorpe Way and Mapleton Drive in this area. However, the Robinwood Neighborhood Plan, Goal 3, Policy 3.9, suggests mitigating negative impacts of the WTP upgrade on the surrounding neighborhood with "*positive*

contributions to transportation connectivity between Kenthorpe and Mapleton Drives." Consequently, the proposed site design includes an attractive, lighted, secure pedestrian pathway along the east side of the WTP property connecting Kenthorpe Way and Mapleton Drive.

48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES

Applicant Response:

The WTP proposal does not involve residential use; therefore, CDC 48.030 does not apply.

MINIMUM VEHICLE REQUIREMENTS FOR NON-RESIDENTIAL USES (48.040)

Access, egress, and circulation system for all non-residential uses shall not be less than the following:

A. Service drives for non-residential uses shall be fully improved with hard surface pavement:

1. With a minimum of 24-foot width when accommodating two-way traffic; or

2. With a minimum of 15-foot width when accommodating one-way traffic. Horizontal clearance shall be two and one-half feet wide on either side of the driveway.

3. Meet the requirements of CDC 48.030(E)(3) through (6).

4. Pickup window driveways may be 12 feet wide unless the Fire Chief determines additional width is required.

B. All non-residential uses shall be served by one or more service drives as determined necessary to provide convenient and safe access to the property and designed according to CDC 48.030(A). In no case shall the design of the service drive or drives require or facilitate the backward movement or other maneuvering of a vehicle within a street, other than an alley.

C. All on-site maneuvering and/or access drives shall be maintained pursuant to CDC 46.130.

D. Gated accessways to non-residential uses are prohibited unless required for public safety or security. (Ord. 1408, 1998, Ord. 1463, 2000)

Applicant Response:

The access, egress, and circulation system for the WTP complex is provided as follows:

A. The two driveway access points from Kenthorpe Way are 26 feet wide; the width is carried through the interior of the WTP complex, providing two-way traffic opportunities through the facility. See Section 21, Figures 3.1 – 3.4. There are no one-way drive lanes or pick-up windows.

CDC 48.030(E) applies only to multi-family projects. However, assuming that these multi-family standards are to be applied to a non-residential project, the WTP access driveways will:

- be a minimum of 26 feet wide;
- provide a vertical clearance of a minimum of 13 feet 6 inches;
- provide circular, rather than one-way travel, that has an average grade of less than 7 percent;

- provide a minimum centerline turning radius of 45 degrees for the curve; and
- provide an approach grade of less than 10 percent because the average site grade is less than 2 percent.

B. The WTP facility provides two driveways from Kenthorpe Way. In no case will any service vehicle be required to maneuver backwards into a street or alley.

C. The internal access road provides chemical delivery and solids loading areas, consistent with CDC 46.130 requirements for off-street loading spaces. See Section 21, Figure 7.0.

D. Gated accessways are required for public safety and security at the WTP. The WTP is a critical public facility, providing clean drinking water to tens of thousands of people on a daily basis and emergency water to West Linn. In addition, water-processing activities, which occur within the secure WTP core area, require professional management and oversight and these work spaces are not readily accessible to the public. Consequently, three security gates, consistent with the requirements of the TVF&R, will control the interior of the WTP complex. See Section 18. The emergency access road from Mapleton Drive will also be controlled by a swing gate with a pedestrian entryway, as recommended by the neighbors and by TVF&R. See Section 21, Figure 14.1, Detail 2.

48.050 ONE-WAY VEHICULAR ACCESS POINTS

Where a proposed parking facility plan indicates only one-way traffic flow on the site, it shall be accommodated by a specific driveway serving the facility, and the entrance drive shall be situated closest to oncoming traffic, and the exit drive shall be situated farthest from oncoming traffic.

Applicant Response:

The proposed employee and visitor parking areas are served by a minimum 26-foot wide, two-way driveway.

48.060 WIDTH AND LOCATION OF CURB CUTS AND ACCESS SEPARATION REQUIREMENTS

A. Minimum curb cut width shall be 16 feet.

B. Maximum curb cut width shall be 36 feet, except along Highway 43 in which case the maximum curb cut shall be 40 feet. For emergency service providers, including fire stations, the maximum shall be 50 feet.

Applicant Response:

Along Kenthorpe Way, the existing curb cuts are approximately 59 feet on the western driveway and 39 feet at the eastern driveway. See Section 21, Figures 2.1 and 2.3. The proposed curb cuts will be 73 feet 7 inches and 64 feet wide to fully accommodate access by all emergency vehicles, including ladder trucks.

C. No curb cuts shall be allowed any closer to an intersecting street right-of-way line than the following:

1. *On an arterial when intersected by another arterial, 150 feet.*
2. *On an arterial when intersected by a collector, 100 feet.*
3. *On an arterial when intersected by a local street, 100 feet.*
4. *On a collector when intersecting an arterial street, 100 feet.*
5. *On a collector when intersected by another collector or local street, 35 feet.*
6. *On a local street when intersecting any other street, 35 feet.*

Applicant Response:

Kenthorpe Way is a local street. The existing curb cut on the eastern site of the site is approximately 200 feet from the point where Kenthorpe Way turns south, exceeding the 35-foot minimum standard for a local street.

D. There shall be a minimum distance between any two adjacent curb cuts on the same side of a public street, except for one-way entrances and exits, as follows:

1. *On an arterial street, 150 feet.*
2. *On a collector street, 75 feet.*
3. *Between any two curb cuts on the same lot on a local street, 30 feet.*

Applicant Response:

The existing curb cuts on Kenthorpe Way, approved in 1996, are approximately 180 apart, exceeding the 30-foot minimum standards for a local street.

E. A rolled curb may be installed in lieu of curb cuts and access separation requirements.

Applicant Response:

The proposed design is to use curb cuts.

F. Curb cuts shall be kept to the minimum, particularly on Highway 43. Consolidation of driveways is preferred. The standard on Highway 43 is one curb cut per business if consolidation of driveways is not possible.

Applicant Response:

The WTP proposal proposes only two curb cuts on Kenthorpe Way, the same number approved in 1996. Therefore, curb cuts are kept to a minimum.

G. Adequate line of sight pursuant to engineering standards should be afforded at each driveway or accessway. (Ord. 1270, 1990; Ord. 1584, 2008)

Applicant Response:

Kenthorpe Way is straight and generally level in proximity to the WTP. The two driveways were designed in 1996 to meet West Linn line of sight engineering standards. No changes are proposed.

48.070 PLANNING DIRECTOR'S AUTHORITY TO RESTRICT ACCESS APPEAL PROVISIONS

A. In order to provide for increased traffic movement on congested streets and eliminate turning movement problems, the Planning Director and the City Engineer, or his designee, may restrict the location of driveways on said street and require the location of driveways on adjacent streets upon the finding that the proposed access would:

1. Provide inadequate access for emergency vehicles; or

2. Cause or increase hazardous conditions to exist which would constitute a clear and present danger to the public health safety and general welfare.

B. A decision by the Planning Director may be appealed to the Planning Commission as provided by CDC 99.240(B).

Applicant Response:

The applicant acknowledges the authority of the Planning Director.

48.080 BICYCLE AND PEDESTRIAN CIRCULATION

A. Within all multi-family developments (except two-family/duplex dwellings), each residential dwelling shall be connected to vehicular parking stalls, common open space, and recreation facilities by a pedestrian pathway system having a minimum width of six feet and constructed of an all-weather material. The pathway material shall be of a different color or composition from the driveway. (Bicycle routes adjacent to the travel lanes do not have to be of different color or composition.)

B. Bicycle and pedestrian ways within a subdivision shall be constructed according to the provisions in CDC 85.200(A)(3).

C. Bicycle and pedestrian ways at commercial or industrial sites shall be provided according to the provisions of Chapter 55 CDC, Design Review.

Applicant Response:

The WTP is not a multi-family project, a subdivision, or a commercial or industrial site; it is a major utility. The site plan provides employee and visitor bicycling areas, sidewalks along both Kenthorpe Way and Mapleton Drive frontages, and a pedestrian path connecting the two streets in accordance with the requirements of Chapter 55 CDC.

SIGNS (CDC 52)

PURPOSE (52.010)

The purpose of this chapter is to maintain or improve the aesthetic quality of the City's residential and business environment; to prevent the proliferation of signs and sign clutter; to minimize adverse visual safety factors to travelers on public roadways and private areas open to public vehicular travel; to provide for safe construction, location, erection and maintenance of signs; and to improve the effectiveness of signs in identifying and advertising businesses, all by classifying and regulating signs. (Ord. 1276, 1990)

Applicant Response:

The application provides the proposed location of future signs. See Section 21, Figure 8.0. At this preliminary design stage, the Partnership asks that sign use be allowed in the identified locations. At building permit application, the design team will provide the necessary detail about the size and type of signs proposed and will file a sign permit for review by the West Linn Planning Director. The future request for a sign permit will not include a request for a variance and will comply with these requirements. The general sign types to be proposed are:

- Monument service signs for service entry and visitor parking,
- Building mounted sign at operations building, and
- Pole mounted pedestrian trail signs.

LANDSCAPING (CDC 54)

APPROVAL CRITERIA (54.020)

A. *Every development proposal requires inventorying existing site conditions which include trees and landscaping. In designing the new project, every reasonable attempt should be made to preserve and protect existing trees and to incorporate them into the new landscape plan. Similarly, significant landscaping (e.g., bushes, shrubs) should be integrated. The rationale is that saving a 30-foot-tall mature tree helps maintain the continuity of the site, they are qualitatively superior to two or three two-inch caliper street trees, they provide immediate micro-climate benefits (e.g., shade), they soften views of the street, and they can increase the attractiveness, marketability, and value of the development.*

Applicant Response:

The applicant's professional arborist prepared an inventory of trees on consistent with the West Linn Tree Technical Manual. See Section 12. The West Linn Arborist determined that there are 42 significant trees or significant tree clusters. By compressing WTP functions to the center of the site, the applicant has been able to protect all but six of the 42 significant trees. The significant trees are protected in clusters along the northeast and northwest corners of the Kenthorpe Way frontage and around the property perimeter.

Conflicts inevitably arise in a development code between the desire to protect vegetation on the one hand and the need to allow future development and the associated construction demands on the other hand. To help mediate this conflict CDC 55.100(B)(2) makes it clear that significant trees should be protected but that not all significant shall be saved. One area of conflict is along Kenthorpe Way. The proposed site design protects the significant trees and tree clusters, along with the non-protected vegetation, at the northeast and northwest site corners. Although the City Arborist did not identify any significant trees in the landscaped area between the current visitors' parking lot and the WTP operations building, the present landscaping provides a desirable visual buffer. However, CDC 55.100(B)(7), implementing the Transportation System Rule (TPR) strongly encourages pedestrian access from public right-of-ways to the primary building entryway. Consequently, the applicant has proposed a pedestrian walkway from Kenthorpe Way directly to the WTO public entrance, as required. One significant tree to the east of the operations building will be removed to provide the necessary driveway turning radius for delivery trucks and emergency vehicles.

Similarly, a conflict between vegetation protection and site functionality arises in the south end of the site. The City Arborist identified significant trees along the southern perimeter of the site and within the open area in the south-center. The WTP must store finished water to pump into the system for both daily customers and for emergency back-up in West Linn. Such storage requires a holding tank with 2.0 MG of storage capacity. One way to create such capacity is to erect a large tank above ground; but this solution would not be possible with a 35-foot height limitation in the zone and it would present a very large blank wall facing Mapleton Drive. The alternative is to bury the tank, a clearwell, in a 30-foot deep hole. The excavation and construction staging will necessitate the removal of designated significant trees. The design team considered moving the clearwell to the east and to the west but in each direction there are more significant trees. The location of the clearwell was also determined by the need to build an emergency access lane from Mapleton to the WTP facilities. See the TVF&R memorandum in Section 18. As a result, five significant trees in the southern side of the site will be removed.

Creative site planning, responsive to neighborhood concerns forced the WTP facilities into the center of the site. The design decision results in the protection of all but six of the 42 significant, primarily along the site perimeter. Together with the non-significant bushes and trees along the site frontages and residential perimeter, the WTP site design has made every reasonable to effort incorporate existing vegetation into the landscape plan.

B. To encourage tree preservation, the parking requirement may be reduced by one space for every significant tree that is preserved in the parking lot area for a maximum reduction of 10 percent of the required parking. The City Parks Supervisor or Arborist shall determine the significance of the tree and/or landscaping to determine eligibility for these reductions.

Applicant Response:

The visitor parking lot is near Kenthorpe Way. There are no significant trees being removed to accommodate the parking lot.

C. Developers must also comply with the municipal code chapter on tree protection.

Applicant Response:

The applicant has proved an Arborist Report and Tree Protection Plan in conformance with the Municipal Code. See Section 12.

D. Heritage trees. Heritage trees are trees which, because of their age, type, notability, or historical association, are of special importance. Heritage trees are trees designated by the City Council following review of a nomination. A heritage tree may not be removed without a public hearing at least 30 days prior to the proposed date of removal. Development proposals involving land with heritage tree(s) shall be required to protect and save the tree(s). Further discussion of heritage trees is found in the municipal code.

Applicant Response:

The City Arborist has determined that there are no heritage trees on site. See Section 12. The determination is corroborated by the Lake Oswego Arborists report.

E. Landscaping – By type, location and amount.

1. Residential uses (non-single-family). A minimum of 25 percent of the gross area including parking, loading and service areas shall be landscaped, and may include the open space and recreation area requirements under CDC 55.100. Parking lot landscaping may be counted in the percentage.

Applicant Response:

Subsection (E)(1) applies to residential development; therefore, it does not apply to this proposal.

2. *Non-residential uses. A minimum of 20 percent of the gross site area shall be landscaped. Parking lot landscaping may be counted in the percentage.*

Applicant Response:

5.32 acres, or 58 percent, of the total WTP site area will be landscaped, excluding parking areas. See Section 16, Table G-3, Page 4.

3. *All uses (residential uses (non-single-family) and non-residential uses):*

   a. *The landscaping shall be located in defined landscaped areas which are uniformly distributed throughout the parking or loading area. There shall be one shade tree planted for every eight parking spaces. These trees shall be evenly distributed throughout the parking lot to provide shade. Parking lots with over 20 spaces shall have a minimum 10 percent of the interior of the parking lot devoted to landscaping. Pedestrian walkways in the landscaped areas are not to be counted in the percentage. The perimeter landscaping, explained in subsection (E)(3)(d) of this section, shall not be included in the 10 percent figure. Parking lots with 10 to 20 spaces shall have a minimum five percent of the interior of the parking lot devoted to landscaping. The perimeter landscaping, as explained above, shall not be included in the five percent. Parking lots with fewer than 10 spaces shall have the standard perimeter landscaping and at least two shade trees. Non-residential parking areas paved with a permeable parking surface may reduce the required minimum interior landscaping by one-third for the area with the permeable parking surface only.*

Applicant Response:

The employee parking area contains seven parking spaces; therefore, it is not shaded. The visitor parking area contains 17 parking spaces; the existing dense foliage will be retained to the extent possible and additional large deciduous trees will be planted along the parking lot edge. See Section 21, Figures 12.1 and 12.3.

   b. *The landscaped areas shall not have a width of less than five feet.*

Applicant Response:

All landscaped areas are deeper than five feet wide, including the landscaping between the pedestrian path and the property perimeter, which is approximately eight feet wide at its narrowest.

   c. *The soils, site, proposed soil amendments, and proposed irrigation system shall be appropriate for the healthy and long-term maintenance of the proposed plant species.*

Applicant Response:

The planting soils will be topsoil and the irrigation system will reach all landscaped areas. See Section 21, Figures 11.0 – 13.5 The WTP will be able to provide ample water for the irrigation system.

d. A parking, loading, or service area which abuts a street shall be set back from the right-of-way line by perimeter landscaping in the form of a landscaped strip at least 10 feet in width. When a parking, loading, or service area or driveway is contiguous to an adjoining parcel, there shall be an intervening five-foot-wide landscape strip. The landscaped area shall contain:

1) Street trees spaced as appropriate to the species, not to exceed 50 feet apart on the average;

2) Shrubs, not to reach a height greater than three feet, six inches, spaced no more than five feet apart on the average; or

3) Vegetative ground cover such as grass, wildflowers, or other landscape material to cover 100 percent of the exposed ground within two growing seasons. No bark mulch shall be allowed except under the canopy of low level shrubs.

Applicant Response:

The visitor parking landscape area provides approximately 46 feet of separation from the Kenthorpe Way right-of-way. Parking, loading, service areas, and driveways are not contiguous to abutting properties.

e. If over 50 percent of the lineal frontage of the main street or arterial adjacent to the development site comprises parking lot, the landscape strip between the right-of-way and parking lot shall be increased to 15 feet in width and shall include terrain variations (e.g., one-foot-high berm) plus landscaping. This extra requirement only applies to one street frontage.

Applicant Response:

The landscaped area abutting Kenthorpe Way is approximately 46 feet deep.

f. A parking, loading, or service area which abuts a property line shall be separated from the property line by a landscaped area at least five feet in width and which shall act as a screen and noise buffer, and the adequacy of the screen and buffer shall be determined by the criteria set forth in CDC55.100(C) and (D), except where shared parking is approved under CDC46.050.

Applicant Response:

No parking, loading, or service area abuts a property line; therefore, subsection (f) does not apply.

g. All areas in a parking lot not used for parking, maneuvering, or circulation shall be landscaped.

Applicant Response:

All areas within the two parking lots are used for parking maneuvering, or circulation, consistent with subsection (g).

h. The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation.

Applicant Response:

The proposed landscaping does not overhang either parking area or the drive lanes. Consistent with the clear vision standards, no vegetation within the clear vision areas will be taller than three feet at maturity unless the limbs and vegetation are pruned to a height of eight feet.

i. Outdoor storage areas, service areas (loading docks, refuse deposits, and delivery areas), and above-ground utility facilities shall be buffered and screened to obscure their view from adjoining properties and to reduce noise levels to acceptable levels at the property line. The adequacy of the buffer and screening shall be determined by the criteria set forth in CDC 55.100(C)(1).

Applicant Response:

The applicant fully responded to the requirements of CDC 55.100(C)(1). All of the WTP storage areas, service areas and process utility functions are buffered and screened by building walls, architectural security fencing, visual screening barriers, existing vegetation and a dense planting of new vegetation, including 308 new trees.

j. Crime prevention shall be considered and plant materials shall not be located in a manner which prohibits surveillance of public and semi-public areas (shared or common areas).

Applicant Response:

See the discussion in the Design Review section, CDC 55, regarding crime vulnerable areas. All areas accessible to the public have open lines of sight or, in the case of the pedestrian path, are illuminated.

k. Irrigation facilities shall be located so that landscaped areas can be properly maintained and so that the facilities do not interfere with vehicular or pedestrian circulation.

Applicant Response:

The applicant's irrigation plan provides for adequate plant maintenance and all irrigation lines are underground, thereby minimizing conflict with vehicular and pedestrian circulation. See Section 21, Figures 11.0 and 13 – 13.5.

l. For commercial, office, multi-family, and other sites, the developer shall select trees that possess the following characteristics:

1) Provide generous "spreading" canopy for shade.

2) Roots do not break up adjacent paving.

3) Tree canopy spread starts at least six feet up from grade in, or adjacent to, parking lots, roads, or sidewalks unless the tree is columnar in nature.

4) No sticky leaves or sap-dripping trees (no honey-dew excretion).

5) *No seed pods or fruit-bearing trees (flowering trees are acceptable).*

6) *Disease-resistant.*

7) *Compatible with planter size.*

8 *Drought-tolerant unless irrigation is provided.*

9) *Attractive foliage or form all seasons.*

Applicant Response:

The applicant selected trees that are consistent with subsection (l) standards. See Section 21, Figure 11.0 for a plant schedule.

m. *Plant materials (shrubs, ground cover, etc.) shall be selected for their appropriateness to the site, drought tolerance, year-round greenery and coverage, staggered flowering periods, and avoidance of nuisance plants (Scotch broom, etc.).*

Applicant Response:

The applicant selected native plant materials that are drought tolerant and provide year or staggered round foliage. None of the plants are classified as nuisance plants. See Section 21, figure 11.0 for a plant schedule.

F. Landscaping (trees) in new subdivision.

Applicant Response:

Subsection F applies to new subdivision; therefore, it does not apply to this proposal.

V. Conclusions

The WTP is a major utility. It has been a fixture in the Robinwood Neighborhood since it was constructed under Clackamas County jurisdiction in 1967, a time of substantial residential construction in the neighborhood. The West Linn Community Development Code allows a major utility in an R-10 residential zone as a conditional use, subject to Class II design review. West Linn approved conditional use requests for the WTP in 1980, 1988 and 1996. In each instance, the City of Lake Oswego made a substantial investment in the facility in a good faith effort to be compatible with the surrounding residential neighborhood.

In developing plans for the expanded, upgraded WTP, the Partnership has placed a high priority on neighborhood coordination. The Partnership has carefully carried out its responsibilities under CDC 99.038 and has undertaken a significant neighborhood coordination program of its own in an honest effort to be a good neighbor.

As a direct consequence of neighborhood input, the Partnership design team compressed the WTP processing activity into the center of the site. The compact design benefits the neighborhood by moving noise-generating activities to the center of the site, burying the clearwell, providing ample room for buffering and screening, and creating opportunities for both emergency and pedestrian access between Kenthorpe Way and Mapleton Drive.

The West Linn Comprehensive Plan and West Linn Water Service Plan recognize the intrinsic benefits of maintaining the emergency intertie between the WTP and the West Linn water system. The ability of Lake Oswego to provide West Linn citizens with an emergency source of finished water in December 2011 underscores the importance of upgrading the WTP and maintaining the finished water intertie.

The application provides detailed plans and reports in response to the requirements of the conditional use and Class II design review requirements. The application demonstrates that the proposed upgrade of the WTP either satisfies or, by means of conditions of approval, can satisfy all relevant applicable approval criteria. Therefore, the Partnership asks that the West Linn Planning Commission approve this request for conditional use and Class II design review.