DEVELOPMENT AGREEMENT BY AND AMONG THE COUNTY OF CHISAGO, THE TOWN OF LENT AND SUNRISE RIVER ENERGY, LLC

This document drafted by:

DEVELOPMENT AGREEMENT

This Agreement is entered into by and among the following Parties:

THE COUNTY OF CHISAGO, a body corporate and politic (the "County"); THE TOWN OF LENT, a public corporation (the "Town");

And

SUNRISE RIVER ENERGY, LLC, a Delaware limited liability company (the "Developer"); together herein collectively referred to as the "Parties."

RECITALS

Whereas, the County and Town are interested in fostering economic development, improving the tax base, attracting new businesses and bringing new jobs to the residents of the area; and

Whereas, the Developer is interested in constructing and operating an approximately 150–780 megawatt (summer rating) electric generation facility in the Town fueled primarily with natural gas with fuel-oil backup designed to provide electrical capacity, energy, and ancillary services (the "Project"); and

Whereas, the Developer will or expects to acquire a parcel of property approximately forty (40) acres in size, legally described as set forth in Exhibit A, which is located east of Interstate 35 and north of Chisago County Road 14 within the County and the Town on which the Project will be located (the "Site"); and

Whereas, the Site is located within five miles of two interstate pipelines and within one

mile of the Chisago County Substation, which is an electrical transmission substation with alternating current voltages of 115 kV, 345 kV and 500kV; and

Whereas, the Developer intends to only run high voltage transmission lines from the Site to the Chisago County Substation and not to otherwise construct high voltage transmission lines off of the Site associated with the Project within Chisago County; and

Whereas, pursuant to Minn. Stat. § 272.02, subd. 92, as enacted by the 2009 Minnesota Session Laws, Chapter 88, Article 2, section 9, the Minnesota Legislature has provided a personal property tax exemption which is potentially applicable to the Project; and

Whereas, Minn. Stat. § 272.02, subd. 92 requires that at the start of construction of the Project, the Developer must have signed a development agreement with the county board in the county in which the Project is located; that such development agreement must be adopted by a two-thirds vote of the county board, and must contain provisions ensuring that (i) the facility is designed to use effluent from a wastewater treatment facility as its preferred water source if it includes any combined-cycle units, and will not seek an exemption from legislative approval under section 103G.265, subdivision 3 and (ii) all processed wastewater discharge will be co-located with the outfall of a wastewater treatment facility; and

Whereas, the Developer has determined that the Project shall not appropriate any groundwater for combined-cycle cooling purposes and shall not discharge processed wastewater into any stream, river, lake, natural pond, or wetland within the County; and

Whereas, Minn. Stat. § 272.02, subd. 92 requires that at the start of construction of the Project, the Developer must have signed a development agreement with the town board in the township in which the facility is located containing provisions ensuring that noise and visual impacts of the facility are mitigated; such development agreement must be adopted by a two-thirds vote of the town board; and

Whereas, the Parties desire to enter into this Agreement to fulfill the requirements of Minn. Stat. § 272.02, subd. 92 that the Project must have signed development agreements with the County and the Town; and

Whereas, it is the intent of the Parties to enter into a separate host fee agreement between the Developer, County, Town, and ISD 138 regarding payments in lieu of personal property taxes as required by Minn. Stat. § 272.02, subd. 92.

NOW, THEREFORE, the Parties to this Agreement, in consideration of the promises, covenants and agreements made by each to the others do hereby agree as follows:

1. General Provisions

1. 1.1 Incorporation by Reference. The Recitals and Exhibits are incorporated herein by reference.
2. 1.2 Preliminary Site Plan. A concept site plan ("Site Plan") of the location of Project generating equipment on the Site is included as Exhibit B. The Site Plan identifies areas of buffer plantings along the perimeter of the Site, anticipated locations of infiltration basins, and potential plant lists.
3. 1.3 Site Access Plan. A site access plan ("Access Plan") showing how the Site will be accessed from CSAH 15 is included as Exhibit C.
4. 1.4 Environmental Review. If the Developer elects to pursue the alternative review process for the Project provided in Minn. Stat. § 216E.04, Developer agrees the environmental assessment conducted for the Project under Minn. Stat. § 216E.04, subd. 5 ("Environmental Assessment") will have the same scope, and be as rigorous, as an environmental impact statement under Minn. Stat. § 216E.03, subd. 5 ("Environmental Impact Statement"), except that the Developer shall not be required to identify and evaluate a second site unless required to do so under the rules of the Minnesota Public Utilities Commission ("PUC"). The Developer acknowledges that a number of concerns have been expressed by the public on the potential human and environmental impacts of the Project and agrees the intent of this Section is to ensure the review of the Project and the Site addresses the full range of issues that would be reviewed if an Environmental Impact Statement was being developed for the Project. To that end, the Developer agrees to request, if necessary, and to otherwise submit to an Environmental Assessment conducted by the PUC that has the same scope with respect to the Site as an Environmental Impact Statement, except that the Developer

shall not be required to identify and evaluate a second site unless required to do so under the rules of the PUC. The completeness of the Environmental Assessment shall be determined by the PUC.

1. 1.5 Use of Effluent. The Project will be designed to use effluent from local sewage treatment plants, including either or both Chisago Lakes Joint Sewage Treatment Plant and North Branch Sewage Treatment Plant, as the water source if the Project includes any combined-cycle units and the Developer will not seek an exemption from legislative approval under Minn. Stat. § 103G.265, subd. 3(b).
2. 1.6 No Discharge of Processed Wastewater. The Project shall not discharge processed wastewater into any stream, river, lake, natural pond, or wetland within the County.
3. 1.7 Distribution of Documents. Developer shall serve upon the Town and the County copies of all permit applications (including plans submitted therewith and amendments thereto) submitted by the Developer upon any federal, state or local agency. Service upon the Town and the County shall be within a reasonable time on the designated persons/offices specified in Section 6.14 herein.

2. Town Development Agreement Provisions

2.1 Noise Impacts. Developer shall use commercially reasonable efforts to mitigate potential noise impacts of the Project through design features sufficient to avoid

violation of all state noise rules, regulations and laws. Such mitigation measures may include berms, vegetation and architectural features. A noise impact mitigation plan ("Noise Mitigation Plan") has been included in Exhibit D. The Noise Mitigation Plan identifies design features and measures that may be used to mitigate noise from the Project and to ensure compliance with applicable noise rules, regulations, and laws. The Parties understand specific noise provisions may be specified by state agencies as conditions of the state site permit.

2.1.1 Noise Surveys. In each of the first two years after the Commercial Operation Date as provided herein the Developer shall have a qualified engineering firm conduct at least two noise surveys in a sufficient number of locations around the Site and over such period of time as needed to reasonably determine the Project's compliance with state noise standards. The results of the surveys shall be presented to the Town Board during a regular or special board meeting. If the surveys indicate actual violation of applicable noise standards, the Developer shall develop and implement a plan within ninety (90) days or as soon as practicable thereafter to further mitigate the noise impacts of the Project to ensure compliance with applicable noise rules, regulations, and laws.

2. 2.2 Visual Impacts. Developer shall use commercially reasonable efforts to mitigate visual impacts of the Project by the inclusion of landscaping, fencing, shielded and down-cast lighting (unless otherwise required for personnel safety), and other architectural features in the design. Mixed plantings and earthen mounds not less than five (5) feet in height shall be placed along the north, east and western edges of the site as shown on the Site Plan. The Site Plan also identifies plant species that may be

included in the design. Plantings identified in the Site Plan shall be integrated with the drainage plan prepared for the Site as described in the Landscaping and Drainage Plan ("Landscaping and Drainage Plan") included as Exhibit E. A Lighting Plan ("Lighting Plan") has also been included in Exhibit F. The Lighting Plan describes commercially reasonable measures to be taken to mitigate light from interfering with surrounding properties and rights-of-way. In addition to the planned mitigation measures, the Developer shall also comply with all specific requirements for mitigation of visual impacts imposed by the appropriate state agencies as conditions of the state site permit.

1. 2.3 Water Appropriation. The Project shall not appropriate any groundwater for combined cycle cooling purposes. For purposes of clarity, and without limitation of the generality of the foregoing, no groundwater appropriation wells shall be drilled into the Mt. Simon-Hinckley aquifer to support the Project .

2. 2.4 Zoning Standards and Approvals. The Project is being built under a state site permit issued under the Minnesota Power Plant Siting Act contained in Minn. Stat. §§ 216E.01-.18. In order to "assure the paramount and controlling effect of the provisions" of the site permit and routing permit statutes, the Minnesota Legislature provided in Minn. Stat. § 216E.10, subd. 1 that such a permit is the sole site or route approval required. Furthermore, "[s]uch permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government." In exchange for the Town's approval of a personal property tax exemption for the Project and other consideration, the Developer

agrees, however, to comply with the development criteria, standards, and requirements set forth in this Section unless the PUC as conditions of the state site permit requires compliance with conditions other than as stated in this Section.

2.4.1 Bulk Standards:

Maximum height of buildings	90 feet
Maximum height of improvements, other than buildings	199 feet
Minimum setback from the centerline of all public roadways for buildings, electric generators and stacks	200 feet
Minimum side yard and back yard setback from the property line for buildings	100 feet
Minimum side yard and back yard setback from the property line for electric generators and associated stacks	200 feet
Minimum side yard and back yard setback from the property line for stacks	Height of stacks plus 20 feet

The color of buildings and tanks shall be selected by the Town from options identified by Developer's engineering, procurement and construction contractor.

2.4.2 Performance Standards. The Project shall comply with all applicable Performance Standards as set forth in Section 7.01 – 7.18 of the Lent Township Zoning Ordinance in effect at the time of execution of this Agreement, except as set forth below:

Noise mitigation will be as provided in the noise impact mitigation plan to be developed pursuant to this Agreement and as may otherwise be determined by the appropriate state agencies;

Screening will be as provided in the Site Plan (Exhibit B) and Landscaping and Drainage Plan (Exhibit E) or as otherwise required by the appropriate state agencies; and

This Agreement shall control over anything to the contrary in the Performance Standards.

1. 2.4.3 Impervious Surface. The amount of impervious surface of the Site must not exceed fifty (50%) percent of the total Site. In any event, the Site must accommodate a one inch rainfall event and allow for infiltration into pervious surfaces, during the rainfall event using low impact landscaping designs and techniques, including but not limited to rain gardens, etc., as described in Landscaping and Drainage Plan. The Landscaping and Drainage Plan describes how storm water will be managed on the Site

in compliance with the Minnesota Pollution Control Agency National Pollutant Discharge Elimination System ("NPDES") regulations.

2. 2.4.4 Building Code. The Town has adopted and administers the State Building Code pursuant to Chapter Five of the Lent Township Land Use Regulations in effect at the time of execution of this Agreement ("Building Code"). The Developer shall apply for such building permits from the Town as may be required under the Building Code. The fees and costs the Developer pays to the Town as part of seeking such permits shall be in accordance with the fee schedule in effect at the time of execution of this Agreement and shall be outside of the maximum reimbursable amount established in this Agreement. Notwithstanding anything in the fee schedule to the contrary, attached machinery and other personal property that is part of the electric generation facility shall not be included in the valuation for purposes of building permit fees.

3. 2.4.5 Landscaping Plan. Landscaping of the Site is described in the Site Plan and Landscaping and Drainage Plan. Trees located within 100 feet of CSAH 14 shall not be removed by Developer or its contractors, except to the extent required to construct water, wastewater or natural gas pipelines. The Developer shall otherwise take commercially reasonable steps to minimize the number of trees to be removed from the Site within two hundred (200) feet from CSAH 14, although it shall not be necessary for the Developer to alter the design of the Project in order to preserve existing trees on the Site. It is acknowledged that the trees forming the existing windbreak running from east

to west in the approximate middle of the Site will be removed from the area marked "Generation Equipment" on the Site Plan. Removal of dead or diseased trees shall not be considered a violation of this provision provided those trees identified as part of the screening plan are replanted with trees of a type and size to reasonably further the goals of the screening plan.

1. 2.5 Compliance with Plans. The Developer shall comply with the plans included herein. The Developer shall include a copy of this Agreement and the plans attached hereto in its application to the PUC for a site permit ("Site Permit Application"). The Parties acknowledge the fact that because the plans included herein have been approved before the Developer submits its Site Permit Application that it is possible the Developer may be required to make a change to one or more of the plans as part of that process in order to comply with the specific requirements of the site permit or other state regulatory approval. Such a change to the approved plans at the direction of a state regulatory agency shall not violate this Section. If such changes are made, the Developer shall provide the Town a copy of the revised plans. However, the Developer agrees not to seek changes to the plans included herein as part of the site permitting process simply to avoid or limit one or more provisions of the plans approved by the Town.

2. 2.6 Town Roads. The Developer shall require as part of any contract it may let for the construction of the Project that the Town's roads shall not be used as haul routes or for construction traffic, except for travel by construction workers to and from the Site or as required for the construction of water and/or gas lines where other routes are not practicable. If any of Developer's contractors use the Town's roads in violation of the foregoing sentence and such use results in damage to the Town's roads, Developer shall

be responsible for any and all restoration of damaged areas. Also, if travel by construction workers on the Town's roads results in dust complaints, the Developer shall place, or reimburse the Town for placing, dust control materials on the affected Town road(s) as may reasonably be required to adequately control dust from such travel. To the extent any of the Town's road rights-of-way need to be crossed by any pipe, line, or other facilities related to the Project, the Developer shall notify the Town of the need for such crossing at least 45 days before any excavation occurs within the Town's right-of-way. The Town may require the Developer to obtain an excavation permit from the Town prior to excavating within its right-of-ways. The Developer shall be responsible for complying with the provisions of any excavation permit issued by the Town which shall include, at a minimum, that the Developer shall restore the entire right-of-way to at least the same or better condition it was in prior to the work. The Town may have the right-of-ways in which facilities are to be located inspected at the Developer's cost prior to and after the work to determine the pre-work condition of the roads and the sufficiency of the post-work restoration. The Developer shall also be responsible for correcting any settling or other repairs that may be needed related to the work within the right-of-way after experiencing a freeze and thaw cycle. If the Developer fails to restore or repair the Town rights-of-way to the Town's satisfaction and, after written notice from the Town, fails to correct the deficiencies, the Town may complete the work at the Developer's expense. The permit fees, inspection costs, and restoration costs the Developer may be required to pay under this Section are outside of the maximum reimbursable amount established herein.

2.7 Fire Protection and Cooperative Training. The Project design shall include fire extinguishers, fire protection systems for major equipment, fire pumps, fire water storage, and other features to protect the Project and personnel from fire and other potential emergencies. In addition, Project staff will be trained to operate the fire protection equipment and in basic first aid. To familiarize local fire departments with the Project and its fire protection and other safety systems, the Developer shall coordinate with the local fire departments to arrange cooperative training with respect to the fire protection and safety systems of the Project. The Developer represents that its Project does not require the fire department to obtain any specialized training or equipment in order to provide fire protection services to the Project. However, to the extent the Developer requests any such training or equipment, it shall reimburse the Town its reasonable costs to obtain such training and equipment for its fire department.

3. County Development Agreement Provisions

.3.1 County Costs. The Developer shall be responsible for the following costs borne by the County for and as a result of the Project:

1. 3.1.1 The reasonable costs of easements or right-of-way along Chisago County property, highways or roads;
2. 3.1.2 The reasonable costs associated with the improvements the Developer is

required to construct pursuant to Section 3.2; and

3. 3.1.3 Reasonable additional costs as provided in and subject to the limitations of Section 4.1 of this Agreement, including but not limited to the reasonable costs associated with the services and expenses of professionals.

.3.2 County Roads.

1. 3.2.1 Construction Traffic. Traffic for construction shall use CSAH 15 and CSAH 14 – via either TH 95 or US Hwy 8. Construction traffic shall not use CSAH 18 (Lent Trail), except as may be required for construction of water and/or natural gas pipelines.

2. 3.2.2 Haul Routes. All haul routes shall be approved by Chisago County Public Works prior to their use, which approval shall not unreasonably be withheld. Developer shall be responsible for any and all restoration of haul routes per Mn/DOT Specifications 2051.

3. 3.2.3 Turn Lane. Construction of required turn and by-pass lane at the access to the Site shall be required per access permit.

4. 3.2.4 Seal coating. After construction traffic has ceased, the full length of CSAH 14, or 11.2 miles, shall be seal coated per Chisago County Public Works specifications."

1. 3.2.5 County State Aid Highway 15. County State Aid Highway 15 (CSAH 15) shall be reconstructed from a distance of 500 feet northeast of entrance to CSAH 14. Reconstruction plans shall be approved by Chisago County Public Works and shall include a 40-foot top and 10-ton design, construction of turn and by-pass lanes and repaving of the 500 foot length and lanes.

2. 3.2.6 County Right-of-Way. The entire parcel shall be platted by the Developer and the Developer shall dedicate the required right-of-way to the County.

1. 3.3 Required Permits and Approvals. Access permit and preliminary approval of roadway plans shall be obtained from Chisago County Public Works.

2. 3.4 Security. Prior to the commencement of construction of the Project, Developer shall provide the County with a letter of credit in the amount of $500,000, from a bank and in a form reasonably satisfactory to the County, to reimburse the County for reasonable reconstruction costs incurred by the County, in the event the requirements for road reconstruction pursuant to Sections 3.2.2, 3.2.3, 3.2.4, and 3.2.5 of this Agreement are not met to the County's reasonable satisfaction. The County may not obtain reimbursement for any item of reconstruction work unless, prior to incurring costs for the work, the County provides Developer with written notice and allows Developer a minimum of thirty (30) days from the date of notice, or such longer period as is reasonable under the circumstances, to complete the work. The letter of credit shall be released upon the completion of the reconstruction by Developer or completion by the County and reimbursement of the County.

3. 3.5 Wetland Delineation. Pursuant to the Wetland Conservation Act, any wetland impacts proposed at the project site or impacts incurred as a result of water or natural gas transport infrastructure shall be mitigated in accordance with Minnesota Rule, Chapter 8420.

.3.6 Contribution to County Environmental Improvement Fund. The Developer shall annually and for each year of operation of the Project make a contribution to the County in the amount of one hundred thousand dollars and no cents ($100,000.00) for deposit in a fund to be used by the County for the improvement of the environment within the County ("Environmental Improvement Fund Contribution").

1. 3.6.1 Notice and First Payment. The first Environmental Improvement Fund Contribution payment shall be made to the County within ninety (90) days after the first combustion turbine electrical generating unit is ready for use in commercial operation as determined by Developer's acceptance of Developer's engineering, procurement and construction contractor's notice of Substantial Completion ("Commercial Operation Date"). Developer shall provide the County with written notice of the Commercial Operation Date within thirty (30) days after that date.

2. 3.6.2 Subsequent Payments. Subsequent Environmental Improvement Fund Contribution payments shall continue annually thereafter so long as this Agreement is in effect as provided herein. Payment may be made by check or

acceptable electronic transfer and shall be made by the Developer to the County within sixty (60) days of each anniversary of the Commercial Operation Date.

4. Fees and Costs

4.1 Reimbursement of Expenses. The Developer shall reimburse the County and the Town for the reasonable expenses they incur related to this Agreement and the Project, up to a maximum for the life of this Agreement of $300,000 for the County and $100,000 for the Town. Expenses to be reimbursed by the Developer, subject to these maximums, shall include, but not be limited to reasonable expenses for the following: actual expenses incurred by the County or Town for holding special meetings related to the Project; actual staff time; outside engineering and technical professional consultants related to monitoring and review of the Project; and reasonable outside attorneys fees related to the negotiation, drafting, and implementation of this Agreement. It shall be a condition for reimbursement of costs related to outside engineering and technical professional consultants and attorneys that such engineering and technical professional consultants and attorneys are not available as part of the County or Town staff. Prior to entering into any contract, work order, or similar obligation that is expected to exceed $5,000 for the services of any one outside engineering or technical professional consultant or consulting firm, the Developer shall have been given reasonable advance notice that the matter will be considered by the board of the County or the Town (as the case may be) and the board shall have approved the expenditure.

4.1.1 Avoid Duplication. In order to avoid unnecessary duplication of expenditures, the County and the Town shall make reasonable, good faith efforts to consult with the Developer to determine if data or information sought by the County or the Town is or can be made readily available from the Developer prior to incurring additional expenses. However, it shall not be considered a duplication of expenditures for the County or Town to hire engineers or other consultants to review plans, reports, or

other documents prepared by the Developer. Furthermore, in order to avoid unnecessary duplication of expenditures, the County and the Town shall make reasonable, good faith efforts to coordinate and cooperate with each other to avoid duplication in the hiring of engineers and other consultants and to share the services of the same engineer or consultant when possible.

2. 4.2 Reimbursement Procedure. The County and Town shall each submit written claims to the Developer for the amounts to be reimbursed. The Developer shall make payment to the County or Town within thirty (30) days of its receipt of such written claims. If the full amount of the claim is not received by the County or Town within forty-five

(45) days, the County or Town, or both, may refuse to grant any further reviews or approvals under this Agreement until both parties are fully reimbursed. Additionally, the County or Town may recover its unreimbursed costs through any legal method available to it including, for the Town, the imposition of a service charge on the Property pursuant to Minn. Stat. § 366.012.

4.3 Application Fees. Application fees and related review and processing costs shall be paid by the Developer in the same manner as any applicant and such fees and costs are outside of the reimbursable limits established herein.

.5. Agreement for Payment in Lieu of Personal Property Taxes

.5.1 Obligations Contingent. The obligations of the Developer under this Agreement shall be contingent upon the fulfillment of all requirements for the Project to receive the personal property tax exemption pursuant to Minn. Stat. § 272.02, subd. 92, including but not limited to a signed Host Fee Agreement for with the County, Town, and Independent School District 138 ("ISD 138") for payment in lieu of personal property taxes ("PLPPT") for a total amount not to exceed $600,000 per year for the operating life of the Project. Notwithstanding the foregoing, the Developer shall remain responsible for reimbursing the Town and County pursuant to Section 4 of this Agreement for the reimbursable costs they incurred even if the Project is for any reason not constructed.

.6. Miscellaneous Terms

1. 6.1 Legal Compliance. The Project shall be developed, constructed and operated in compliance with all applicable laws, rules and regulations of the Federal, State, County, Town, and consistent with applicable permits issued by any federal, state, or local authority.

2. 6.2 Recording the Agreement. The Developer shall be responsible for recording this Agreement with the County Recorder's office within 30 days of it being executed by all of the parties, shall pay the costs associated with recording hereof, and shall provide the Town with a copy of the recorded document with recording information stamped thereon within a reasonable time after recording.

3. 6.3 Third Parties. This Agreement does not confer any rights upon any third

parties or parties who are not signatories to this Agreement.

4. 6.4 Effect of Agreement. This Agreement shall be binding upon and inure to the benefit of the Parties hereto, their successors or assigns. The Developer shall not attempt to avoid any requirement or obligation contained in this Agreement by asserting they are preempted by or in conflict with federal or state law. The Parties negotiated the terms of this Agreement in good faith and despite the Project being regulated primarily by the state, the Developer agrees to be bound by and to comply with the terms, conditions, and requirements of this Agreement even if they are in addition to or are more strict than those imposed by federal or state law. Neither this Agreement nor the agreement determining the division of the host fee shall constitute local approval in lieu of a PUC site permit for the purposes of Minn. Stat. § 216E.05 or Minn. R. part 7849.6200.

5. 6.5 Assignment. The Parties hereby consent to any assignment of this Agreement by Developer to any entity that provides financing for the Project, any affiliate of the Developer, or to any new owner of the Project, and the Parties shall take any such further actions as reasonably necessary to effectuate consent. However, no such

assignment shall materially alter the Parties' obligations or their successors' obligations to perform under this Agreement. Any such successor or assigns shall assume the responsibilities of the Developer under this Agreement. Notwithstanding the foregoing, Developer may be released from its obligations under this Agreement with the written consent of the County and the Town.

1. 6.6 Runs with the Land. This Agreement constitutes a covenant running with the land and is enforceable by all legal and equitable remedies including, but not limited to, specific performance.

2. 6.7 Modifications. Any changes or alterations to this agreement must be in writing and must be executed by all Parties; provided, however, that changes or alterations to the Town Development Agreement Provisions shall only require the signatures of the Town and Developer and changes or alterations to the County Development Agreement Provisions shall only require the signatures of the County and the Developer.

3. 6.8 Entire Agreement. This Agreement constitutes the entire agreement between the Parties with respect to the Project, there being no other agreements except the agreement by and among the Parties and ISD 138 as to the PLPPT, the separate agreement by and among the County, Town and ISD 138 as to the split of the PLPPT, and as may be set forth herein.

4. 6.9 Term. This Agreement shall be in effect as long as a combustion turbine electric generating unit is located on the Site and the Project is in commercial operation on the Site, or until the earlier termination of this Agreement upon the mutual agreement of the Parties. The Project shall be deemed to be in commercial operation from and after the Commercial Operation Date and through and including the date on which the Developer provides written notice to the Parties of a permanent halt to all current and future generation of electricity on the Site. The project shall continue to be deemed to be in commercial operation notwithstanding: (i) downtime due to installation, repair, maintenance, and replacement of turbines; (ii) periods during which electricity is not

being generated due to market, contractual, or other commercial factors; (iii) "mothballing" of the Project for possible future generation of electricity; or (iv) any other circumstances resulting in a temporary, intermittent, or reversible cessation of the generation of electricity.

6.10 Indemnification and Hold Harmless. Developer agrees to protect, indemnify, hold harmless, save and defend the County, and the Town, and their present, future and former officers, members (individually and collectively), agents, administrators, employees, successors, representatives, attorneys and assigns and each and every one of them, of and from any and all claims, demands, liens, obligations and causes of action or actions of every kind or nature, at law or in equity, including reasonable attorneys' fees and costs related thereto, arising out of or in connection with Developer's breach of this Agreement, or personal injury or death occurring on or about the Site to the extent caused by Developer, its employees, agents, officers, contractors, or Consultants, except to the extent that such claims, demands, liens, obligations and causes of action or actions result from the County's or the Town's

breach of this Agreement or are caused by the County or the Town, their employees, agents officers and elected officials past, current and future, contractors, or Consultants. "Consultants" shall mean, without limitation, attorneys engineers, planners, and environmental consultants. The Developer, at its option, may elect to appear and/or defend any such litigation. If the Developer elects to appear and/or defend the litigation, it shall use counsel reasonably acceptable to the County and the Town. Nothing in this Agreement shall constitute a waiver or limitation of any immunity or limitation on liability to which the County or the Town is entitled under Minnesota Statutes, Chapter 466, or otherwise. Furthermore, the Parties do not intend by this Agreement to create a joint venture or joint enterprise. However, to the extent a court of competent jurisdiction finds such a relationship exists, the County and the Town shall be considered a single governmental entity as provided in Minnesota Statutes, section 471.59, subdivision 1a for the purposes of determining total liability. The limits of liability for the County and the Town shall not be added together to determine the maximum amount of liability for any of the parties.

1. 6.11 Followed Procedures. The Developer hereby acknowledges and agrees that the County and the Town have followed proper procedures in executing this Agreement.

2. 6.12 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota. Any legal action arising under this Agreement shall be brought in the State of Minnesota, Chisago County District Court, unless otherwise agreed by the Parties in writing.

3. 6.13 On-site Contact Person. The Developer shall make reasonable efforts to provide the County and the Town with the name and telephone number of an on-site contact person for the Developer, during both the construction and operation phases of

the Project.

4. 6.14 Notices. All notices required by this Agreement shall be in writing and shall be delivered personally or be sent to the Parties by certified or registered mail, return receipt requested as follows:

County of Chisago: Chisago County

With Copy to:

Town of Lent:

Attn: County Administrator Chisago County Government Center 313 North Main Street, Rm 174 Center City, Minnesota 55012

Chisago County Attorney Chisago County Government Center 313 North Main Street, Rm. 313 Center City, Minnesota 55012

Lent Township Attn: Clerk to the Town Board 33155 Hemingway Avenue Stacy, Minnesota 55079

With Copy to: Troy Gilchrist
Kennedy & Graven, Chartered
470 U.S. Bank Plaza
200 South 6th Street
Minneapolis, MN 55402

Developer: Sunrise River Energy, LLC
c/o LS Power Development, LLC
Attn: Project Manager
Two Tower Center,
11th Floor
East Brunswick, NJ 08816

With Copy to: Sunrise River Energy, LLC
c/o LS Power Development LLC
Attn: General Counsel
Two Tower Center,

11th Floor
East Brunswick, NJ 08816

Or to such other address or party as may be designated in a notice sent as provided herein. A notice given by certified mail shall be deemed given three (3) business days after such notice is deposited in the United States mail, whether or not such notice is actually received.

1. 6.15 Notice of Transfer. In the event of the conveyance, sale, or transfer of the Site, Developer shall within ten (10) business days thereof, give notice to the County and the Town of such conveyance, sale or transfer. Such notice shall include the name, address, contact information of the transferee who will be authorized to give and receive notices.

2. 6.16 Captions. The captions of the Agreement are for convenience only, and do not affect the interpretation of, and are not to be interpreted as part of this Agreement. This Agreement shall not be construed more strictly against one party than against the other party merely by virtue of the fact that it may have been prepared primarily by counsel for one of the Parties. The Parties acknowledge that they have had the benefit of independent counsel with respect to each of the terms of this Agreement and that the terms were drafted for the mutual benefit of all Parties.

3. 6.17 Provisions Severable. The provisions of this Agreement shall be severable so that the unenforceability or invalidity of any provision or provisions of this Agreement shall not render any other provision or provisions unenforceable or invalid. If for any reason this Agreement or any provision hereof, is ruled invalid, in whole or in part, such decision shall not affect the validity of the remaining portions of the Agreement. The Parties or any party claiming by or through them, shall not contest or dispute the validity, legality or enforceability, or assert the invalidity, illegality or unenforceability, of any part of the Agreement.

1. 6.18 Time is of Essence. Time is of the essence with respect to each provision of this Agreement.

2. 6.19 No Waiver. The failure of the Parties to insist upon the strict and prompt performance of the terms, covenants, or agreements, and conditions contained herein, or any of the, upon any other party imposed, shall not constitute or be construed as a waiver or relinquishment of any party's right thereafter to enforce any such term, covenant agreement or condition, but the same shall continue in force and effect.

3. 6.20 Approvals. The County and the Town each represent and warrant that this Agreement has been adopted by a two-thirds vote of its governing board pursuant to Minn. Stat. § 272.02, subd. 92.

IN WITNESS WHEREOF, the Developer, the County, and the Town have caused this Agreement to be executed in their names and on their behalf, and which shall be effective as of the last dated signature below.

COUNTY OF CHISAGO:

By: Dated: Ben Montzka Chair of the Board of Commissioners, Chisago County

Attest: Dated:
DeAnna Lilienthal,
Clerk to the Board

Reviewed: Dated:
Janet Reiter,
Chisago County Attorney

STATE OF)
MINNESOTA
) ss.
COUNTY OF CHISAGO)

The forgoing instrument was acknowledged before me this ___ day of _____, 2009 by _____ and _____, the _____ and _____, respectively, of the **County of Chisago**, a Minnesota County, on behalf thereof.

NOTARY PUBLIC

TOWN OF LENT:

By: _____ Dated: _____

Gene Olson
Chair of the Board of Supervisors,
Lent Township

Attest: _____ Dated: _____

Clerk to the Board

STATE OF MINNESOTA)
) ss.
COUNTY OF CHISAGO)

The forgoing instrument was acknowledged before me this ____ day of _____, 2009 by _____ and _____, the _____ and _____, respectively, of the **Town of Lent**, a public corporation, on behalf thereof.

NOTARY PUBLIC

DEVELOPER - SUNRISE RIVER ENERGY, LLC:

By: Dated:

Position/title:

STATE OF MISSOURI)
)
ss COUNTY OF ST.
LOUIS)

This instrument was acknowledged before me on the _____ day of _____, 2009 by _____ (name) _____ (title) of **Sunrise River Energy, LLC**, who being duly sworn, represents and warrants that said party is authorized by law and all necessary board actions to execute this Contract/Agreement on behalf of the limited liability corporation intending this Contract/Agreement to be a legally binding obligation of the corporation/organization.

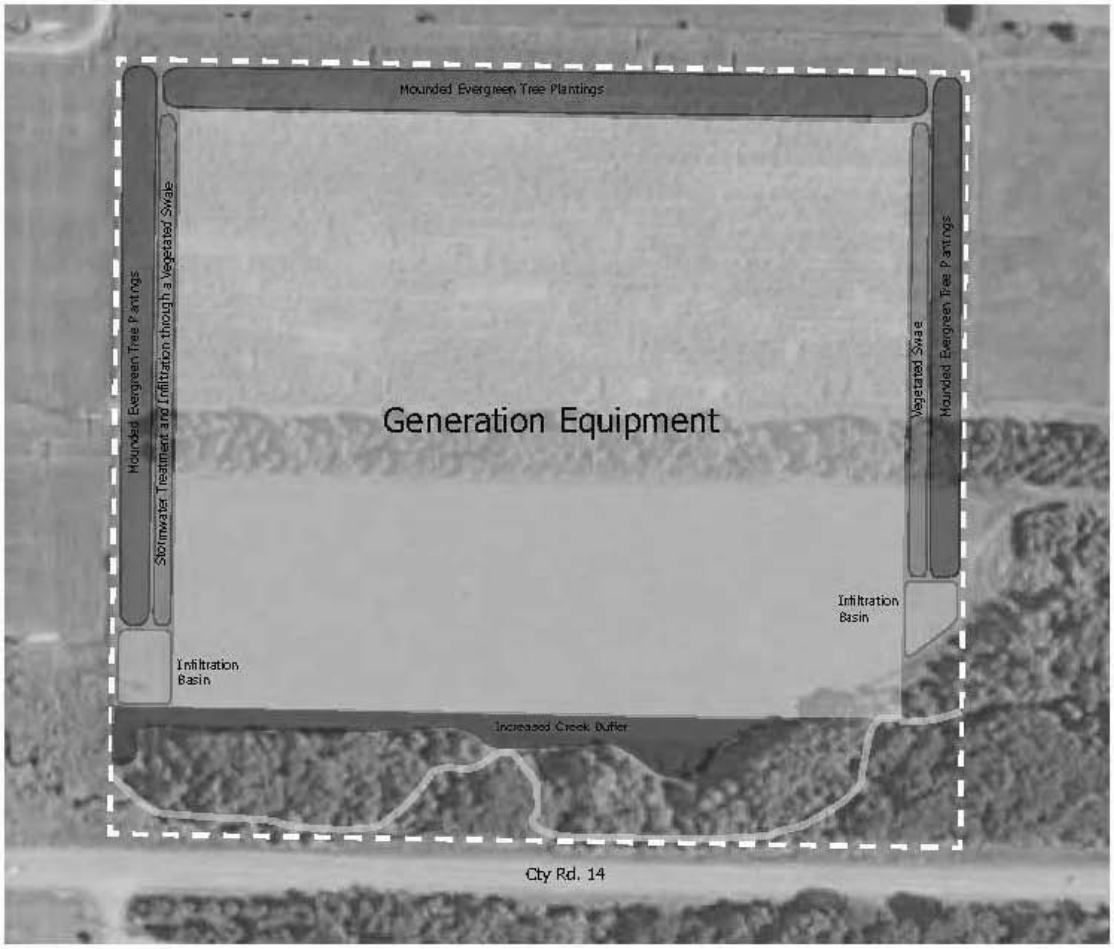
NOTARY PUBLIC

EXHIBIT A Legal Description of the Site

The West Half of the South Half of the Southeast Quarter of Section 1, Township 34 North, Range 21 West, Chisago County, Minnesota, comprising of approximately 40 acres.

EXHIBIT B Site Plan

(to be attached)



Sunrise Riv
Chisago County,

Concept S

Stormwater Managen
Stormwater runoff from
with slightly sloping vege
infiltration, water uptake
Swales on two sides of t
area will lead to larger
near the expanded cree
be planted with trees, s
in infiltration.

Mounded Screening F
To screen the interior of
will be planted with a v
evergreen trees. The ea
minimum of 5' tall. Con
and drought, exposure,
be used to select species
limitation.

Plant Species List (

Mixed Evergreen Plan
Black Hills Spruce (45' +
Ponderosa Pine (70' +)
White Pine (70' +)
Red Pine (80' +)
Red Cedar (30' +)
Scotch Pine (25' +)
Norway Spruce (60' +)
Colorado Spruce (50' +)

Creek Buffer
Ponderosa Pine (70' +)
White Pine (70' +)
Red Pine (80' +)
Red Cedar (30' +)
Red Oak (70' +)
Basswood (50' +)
Staghorn Sumac (10' +)
Elderberry (12' +)
Serviceberry (8' +)
Hackberry (65' +)

Stormwater Treatmen
Switchgrass (4' +)
Feather Reed Grass (4' +
Bicolor Oak (60' +)
'Accolade' Elm (70' +)
Grey Dogwood (8' +)
Red-Osier Dogwood (10
Smooth Sumac (10' +)
Staghorn Sumac (10' +)

EXHIBIT C Access Plan

(to be attached)

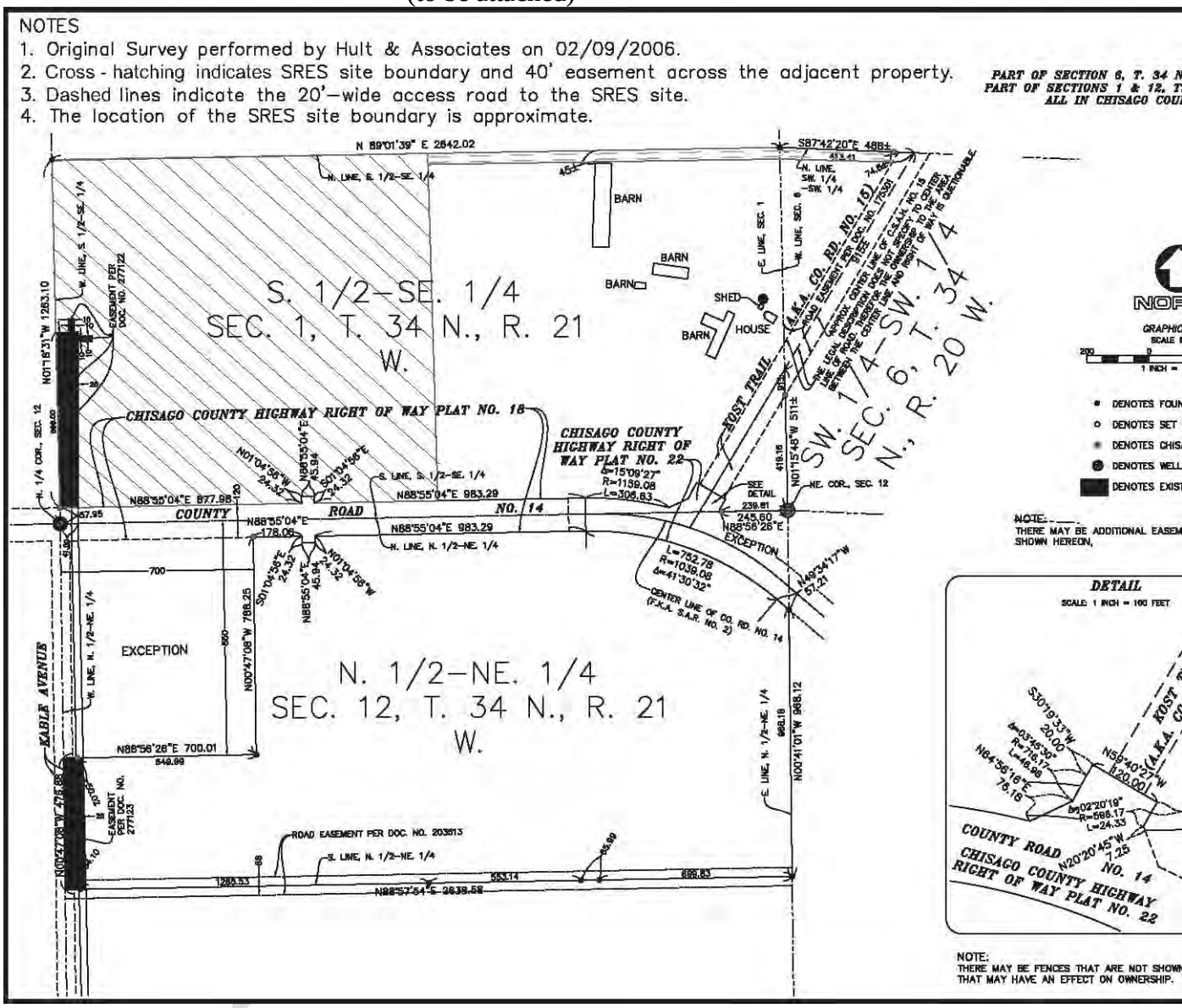


EXHIBIT D Noise Mitigation Plan

(to be attached)

SITE DEVELOPMENT PLAN
NOISE IMPACT MITIGATION PLAN

The Sunrise River Energy Station (SRES, or Facility) will be designed to ensure

the safety and security of the Facility. The Facility will adhere to the Minnesota State Noise Pollution Control regulations and regulations of the Occupational Safety and Health Administration ("OSHA")]. The Minnesota Pollution Control Agency's *A Guide to Noise Control in Minnesota: Acoustical Properties, Measurement, Analysis and Regulation* (Minnesota Pollution Control Agency, October 2008)("MPCA Guide") will be provided to Facility engineers for use in the design of the Facility.

The Minnesota State Noise Pollution Control regulations describe the sound levels established to preserve public health and welfare. The standards are consistent with speech, sleep, annoyance and hearing conservation requirements. The regulations define a noise area classification system (NAC) which is based on land use activity. The NAC divides all land uses into three classifications (1, 2, and 3) and defines the acceptable noise level limits for each. For example, residential homes are classified as NAC 1 and farming is classified as NAC 3.

An excerpt from the MPCA Guide is attached. This document explains the Minnesota State Noise Pollution Control regulations. The noise level limits for each NAC and a list of land use activities under each NAC is detailed in the regulations.

In order to ensure compliance with the state regulations, the Facility will conduct a detailed noise study. The existing sound levels will be measured at the points of human activity nearest to the Facility to establish a background noise level. A computer model will be used simulate the expected noise generated by the facility and determine if it will meet the noise standards at each NAC.

The preliminary Facility design includes various sound abatement features. For example any steam turbine, condenser, lube oil system or condensate pumps will be housed in a building for noise control. If the noise study determines that additional noise abatement is needed, there are a variety of options available. Potential noise control measures include:

x Acoustical equipment enclosures
x Sound barrier walls on one or more sides of equipment
x Exhaust, vent and inlet silencers
x Acoustical treatment to building walls
x Acoustical upgrades to duct work
x Waterfall attenuators on one or more sides of the cooling tower
x Low noise fans for the cooling tower

The computer model will assist in the selection of noise control measures. However, the acoustical design will be optimized during the final plant design stage.

In the event that Noise Surveys required by Section 2.1.1 of the [Development Agreement] identify the need for additional sound abatement, Developer shall

review the MPCA Guide and make appropriate modifications to the Facility with due consideration of the above identified list of potential noise control measures.

6333012v1

A Guide to Noise Control in Minnesota: Acoustical Properties, Measurement, Analysis and Regulation, Minnesota Pollution Control Agency, October 2008

This document includes an overview of the Minnesota regulations on Noise control and detailed explanations of proper testing procedures. Below is an excerpt that explains the noise standards.

Minnesota Noise Pollution Statute and Rule

Minn. Stat. § 116.07 Powers and duties.

Subd. 2. Adoption of standards

The MPCA shall … also adopt standards describing the maximum levels of noise in terms of sound pressure level which may occur in the outdoor atmosphere, recognizing that due to variable factors no single standard of sound pressure is applicable to all areas of the state. Such standards shall give due consideration to such factors as the intensity of noises, the types of noises, the frequency with which noises recur, the time period for which noises continue, the times of day during which noises occur, and such other factors as could affect the extent to which noises may be injurious to human health or welfare, animal or plant life, or property, or could interfere unreasonably with the enjoyment of life or property.

In adopting standards, the MPCA shall give due recognition to the fact that the quantity or characteristics of noise or the duration of its presence in the outdoor atmosphere, which may cause noise pollution in one area of the state, may cause less or not cause any noise pollution in another area of the state, and it shall take into consideration in this connection such factors, including others which it may deem proper, as existing physical conditions, zoning classifications, topography, meteorological conditions and the fact that a standard which may be proper in an essentially residential area of the state, may not be proper as to a highly developed industrial area of the state. Such noise standards shall be premised upon scientific knowledge as well as effects based on technically substantiated criteria and commonly accepted practices.

No local governing unit shall set standards describing the maximum levels of sound pressure which are more stringent than those set by the MPCA.

Subd. 2a. Exemptions from standards

No standards adopted by any state agency for limiting levels of noise in terms of sound pressure which may occur in the outdoor atmosphere shall apply to:

A. segments of trunk highways constructed with federal interstate substitution money, provided that all reasonably available noise mitigation measures are employed to abate noise,

B. an existing or newly constructed segment of a highway, provided that all reasonably available noise mitigation measures, as approved by the commissioners of the Department of Transportation and MPCA, are employed to abate noise,

C. except for the cities of Minneapolis and St. Paul, an existing or newly constructed segment of a road, street, or highway under the jurisdiction of a road authority of a town, statutory or home rule charter city, or county, except for roadways for which full control of access has been acquired,

D. skeet, trap or shooting sports clubs, or

E. motor vehicle race events conducted at a facility specifically designed for that purpose that was in operation on or before July 1, 1996.

Nothing herein shall prohibit a local unit of government or a public corporation with the power to make rules for the government of its real property from regulating the location and operation of skeet, trap or shooting sports clubs, or motor vehicle race events conducted at a facility specifically designed for that purpose that was in operation on or before July 1, 1996.

6333012v1

Minn. Rules § 7030 Noise pollution

7030.0010 Incorporation by reference

For the purpose of chapter 7030, American National Standards Institute, Specification for Sound Level Meters, S1.4-1983 is incorporated by reference. This publication is available from the American National Standards Institute, 25 West 43rd Street 4th Floor, New York, N.Y. 10036 and can be found at: the offices of the MPCA

520 Lafayette Road North, St. Paul, Minnesota 55155; the Government Documents Section, Room 409, Wilson Library, University of Minnesota, 309 19th Avenue South, Minneapolis, Minnesota 55454; and the State of Minnesota Law Library, 25 Constitution Avenue, Saint Paul, Minnesota 55155. This document is not subject to frequent change.

The Federal Highway Administration publication, Sound Procedures for Measuring Highway Noise: Final Report, FHWA-DP-45-1R (August 1981) is incorporated by reference. This publication is available from the United States Department of Transportation, Federal Highway Administration, 1200 New Jersey Avenue S.E., Washington D.C. 20590 and can be found at: the offices of the MPCA, 520 Lafayette Road North, St. Paul, Minnesota 55155; the Government Documents Section, Room 409, Wilson Library, University of Minnesota, 309 19th Avenue South, Minneapolis, Minnesota 55454; and the State of Minnesota Law Library, 25 Constitution Avenue, Saint Paul, Minnesota 55155. This document is not subject to frequent change.

7030.0020 Definitions

Subpart 1. Application
The terms used in chapter 7030 have the meanings given them in this part.

Subp. 2. A-weighted
A-weighted means a specific weighting of the sound pressure level for the purpose of determining the human response to sound. The specific weighting characteristics and tolerances are those given in American National Standards Institute S1.4-1983, section 5.1.

Subp. 3. Daytime
Daytime means those hours from 7:00 a.m. to 10:00 p.m.

Subp. 4. dB(A)
dB(A) means a unit of sound level expressed in decibels (dB) and A-weighted.

Subp. 5. Decibel
Decibel means a unit of sound pressure level, abbreviated as dB.

Subp. 6. Impulsive noise
Impulsive noise means either a single sound pressure peak (with either a rise time less than 200 milliseconds or total duration less than 200 milliseconds) or multiple sound pressure peaks (with either rise times less than 200 milliseconds or total duration less than 200 milliseconds) spaced at least by 200 millisecond pauses.

Subp. 7. L10
L10 means the sound level, expressed in dB (A), which is exceeded 10 percent of the time for a one hour survey, as measured by test procedures approved by the commissioner.

Subp. 8. L50
L50 means the sound level, expressed in dB(A), which is exceeded 50 percent of the time for a one hour survey, as measured by test procedures approved by the commissioner.

Subp. 9. Municipality
Municipality means a county; a city; a town; a regional planning and development commission established under Minnesota Statutes, chapter 473; the metropolitan council; or other governmental subdivision of the state responsible by law for controlling or restricting land use within its jurisdiction.

Subp. 10. Nighttime
Nighttime means those hours from 10:00 p.m. to 7:00 a.m.

Subp. 11. Person

Person means any human being, any municipality or other governmental or political subdivision or other public department or agency, any public or private corporation, any partnership, firm, association, or other organization, any receiver, trustee, assignee, agency, legal entity, other than a court of law, or any legal representative of any of the foregoing, but does not include the agency.

Subp. 12. Sound pressure level
Sound pressure level, in decibels, means 20 times the logarithm to the base 10 of the ratio of the pressure to the reference pressure. The reference pressure shall be 20 micronewtons per square meter.

No person may violate the standards established in part 7030.0040, unless exempted by Minnesota Statutes, section 116.07, subdivision 2a. Any municipality having authority to regulate land use shall take all reasonable measures within its jurisdiction to prevent the establishment of land use activities listed in noise area classification (NAC) 1, 2, or 3 in any location where the standards established in part 7030.0040 will be violated immediately upon establishment of the land use.

7030.0040 Noise standards

Subpart 1. Scope
These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of public health and welfare. These standards are consistent with speech, sleep, annoyance, and hearing conservation requirements for receivers within areas grouped according to land activities by the noise area classification (NAC) system established in part 7030.0050. However, these standards do not, by themselves, identify the limiting levels of impulsive noise needed for the preservation of public health and welfare. Noise standards in subpart 2 apply to all sources.

Subp. 2. Noise standards

Noise Area Classification	Daytime		Nighttime	
	L10	L50	L10	L50
1	65	60	55	50
2	70	65	70	65
3	80	75	80	75

7030.0050 Noise area classification

Subpart 1. Applicability
The noise area classification is based on the land use activity at the location of the receiver and determines the noise standards applicable to that land use activity unless an exception is applied under subpart 3.

Subp. 2. Noise area classifications
The noise area classifications and the activities included in each classification are listed below:

Noise Area Classification	Land Use Activities	
1	Household Units (includes farm houses)	Transient lodging
	Group quarters	Mobile home parks or courts
	Residential hotels	Other residential
	Cultural activities and nature exhibitions	Medical and other health services
	Correctional institutions	Educational services
	Religious activities	Motion picture production
	Entertainment assembly	Resorts and group camps
	Camping and picnicking areas (designated)	Other cultural, entertainment, and recreational activities.

2	Railroad terminals (passenger)	Bus passenger terminals (inter city)
	Railroad terminals (passenger and freight)	Bus passenger terminals (local)
	Rapid rail transit and street railway passenger terminals	Bus passenger terminals (inter city and local)
	Other motor vehicle transportation	Marine terminals (passenger)
	Airport and flying field terminals (passenger)	Marine terminals (passenger and freight)
	Airport and flying field terminals (passenger and freight)	Automobile parking
	Telegraph message centers	Transportation services and arrangements
	Wholesale trade	Retail trade -- apparel and accessories
	Retail trade -- building materials, hardware, and farm equipment	Retail trade -- automotive, marine craft, aircraft, and accessories
	Retail trade -- general merchandise	Retail trade -- furniture, home furnishings, and equipment
	Retail trade -- food	Retail trade -- eating and drinking
	Other retail trade	Finance, insurance, and real estate services
	Personal services	Repair services
	Business services Other professional services	Legal services Contract construction services
	Governmental services (except correctional institutions)	Miscellaneous services (except religious activities)
	Public assembly (except entertainment assembly and race tracks)	Amusements (except fairgrounds and amusement parks)
	Recreational activities (except designated camping and picnicking areas)	Parks.
3	Food and kindred products -- manufacturing	Textile mill products -- manufacturing
	Apparel and other finished products made from fabrics, leather, and similar materials -- manufacturing	Lumber and wood products (except furniture) -- manufacturing
	Furniture and fixtures -- manufacturing	Printing, publishing, and allied industries
	Paper and allied products -- manufacturing	Chemicals and allied products -- manufacturing
	Petroleum refining and related industries	Primary metal industries
	Rubber and miscellaneous plastic products -- manufacturing	Stone, clay, and glass products -- manufacturing
	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks -- manufacturing	Railroad, rapid transit, and street railway transportation (except passenger terminals)
	Miscellaneous manufacturing (except motion picture production)	Fabricated metal products -- manufacturing
	Motor vehicle transportation (except passenger terminals)	Aircraft transportation (except passenger terminals)
	Marine craft transportation (except passenger and freight terminals)	Communication (except telegraph message centers)
	Highway and street right-of-way	Utilities
	Race tracks	Retail trade -- eating and drinking
	Fairgrounds and amusement parks	Agricultural
	Agricultural and related activities	Fishing activities and related services
	Other transportation, communication, and utilities (except transportation services and arrangements)	Forestry activities and related services (including commercial forest land, timber production, and other related activities)
	All other activities not otherwise listed.	

	Undeveloped and unused land area (excluding non-commercial forest development)	Non commercial forest development
4	Water areas	Vacant floor area
	Under construction	Other undeveloped land and water areas.

Subp. 3. Exceptions

The noise area classification for a land use may be changed in the following ways if the applicable conditions are met.

A. The daytime standards for noise area classification one shall be applied to noise area classification one during the nighttime if the land use activity does not include overnight lodging.

B. The standards for a building in a noise area classification two shall be applied to a building in a noise area classification one if the following conditions are met:
   1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 30 dB(A);
   2) the building has year-round climate control; and
   3) the building has no areas or accommodations that are intended for outdoor activities.

C. The standards for a building in a noise area classification three shall be applied to a building in a noise area classification one if the following conditions are met:
   1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 40 dB(A);
   2) the building has year-round climate control; and
   3) the building has no areas or accommodations that are intended for outdoor activities.

D. The standards for a building in a noise area classification three shall be applied to a building in a noise area classification two if the following conditions are met:
   1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 30 dB(A);
   2) the building has year-round climate control; and
   3) the building has no areas or accommodations that are intended for outdoor activities.

<u>EXHIBIT E</u> Landscaping and Drainage Plan

(to be attached)

SITE DEVELOPMENT PLAN LANDSCAPING AND DRAINAGE

The Sunrise River Energy Station (SRES, or Facility) will utilize multiple design techniques for landscaping and drainage control. The first resource guiding the landscaping and drainage design for the facility will be Chapter Two (Zoning Ordinance) of the Lent Township Land Use Regulations, Sections 7.01 – 7.18 – Performance Standards. In cases where these Regulations do not specify design standards to be used, other development documents may be consulted for guidance. Examples of documents which may be consulted include:

- ***Minnesota Urban Small Sites BMP Manual – Stormwater Best Management Practices for Cold Climates***; Barr Engineering Company, Metropolitan Council Environmental Services, July 2001
- ***Plants for Stormwater Design – Species Selection for the Upper Midwest***; D. Shaw and R. Schmidt, Minnesota Pollution Control Agency, July 2003
- ***Effects of Rain Gardens on the Quality of Water in the Minneapolis-St. Paul Metropolitan Area of Minnesota, 2002-04***; L. Tornes, U.S. Department of the Interior – U.S. Geological Survey, Scientific Investigations Report 2005-5189, 2005

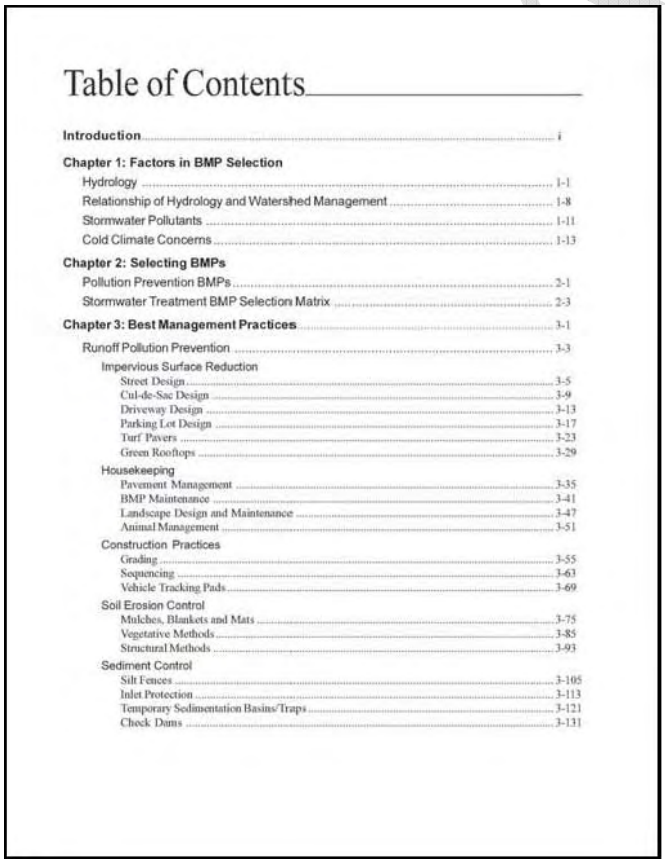
The Facility will be required to comply with the Minnesota Pollution Control Agency Stormwater Program for Industrial Activity. This program is designed to reduce the amount of pollution that enters surface and ground water from industrial facilities. To accomplish this goal, facilities are required to develop an effective Stormwater Pollution Prevention Plan (SWPPP) containing Stormwater Control Measures and Best Management Practices (BMPs). These programs require routine inspections and maintenance to ensure that the BMPs selected by the facility meet the requirements established in the Stormwater Permit. Alternatively, a facility may certify a condition of No Exposure, meaning that no activities are conducted in a manner which may expose stormwater to pollution.

Landscaping will include features to improve aesthetics, provide screening from surrounding streets and neighboring residences, and provide stormwater detention and treatment, while maintaining proper clearances with adjacent easements. Native plant species will be utilized to support stormwater infiltration

and groundwater recharge while minimizing runoff into neighboring water features. Water that is allowed to flow to adjoining streams and wetlands will be subject to sedimentation control, flow stilling and baffling, and removal of floating objects. Areas along the property lines will utilize berms, swales, tree plantings, and water detention areas. Initial land clearing activities required prior to Facility construction will be conducted to minimize the amount of acreage disturbed. The wetland area on the southern boundary of the property will be maintained to the maximum extent possible. A site plan is included in Exhibit B of the Agreement ("Site Plan"). Examples of the types of Best Management Practices which may be implemented along with native species which may be selected are included on the following pages.

Minnesota Urban Small Sites BMP Manual – Stormwater Best Management Practices for Cold Climates; Barr Engineering Company, Metropolitan Council Environmental Services, July 2001

The Urban Small Sites BMP Manual includes over 35 examples of Best Management Practices which are utilized to control stormwater runoff. Not all of the examples would be appropriate for a level piece of property however, several of the practices may be appropriate and would be considered in the design of the Facility. The pictures below are reduced-sized pages from the manual, showing an example of BMP features.



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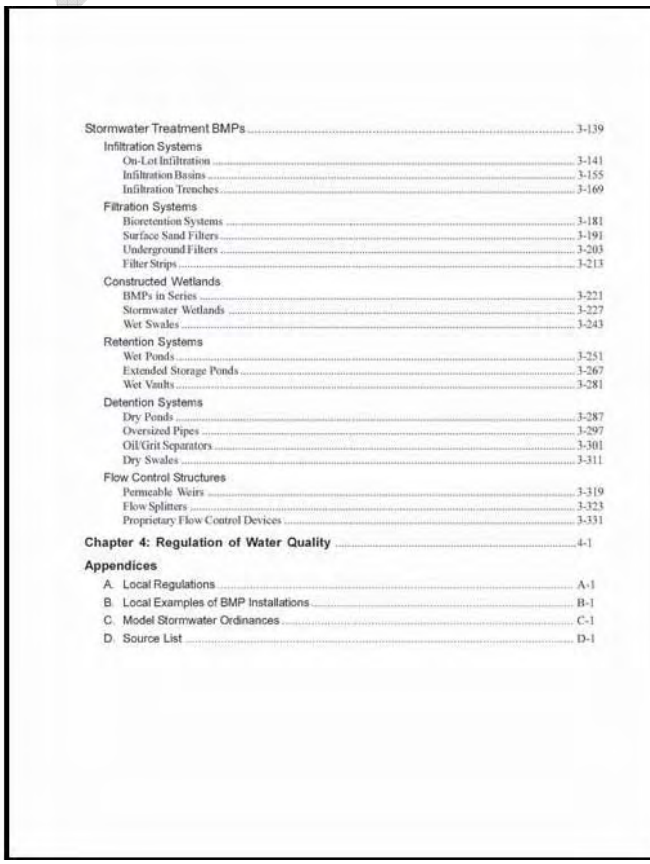
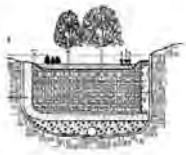


Bioretention Systems



The Bioretention Concept

For the purposes of this manual, Bioretention Systems are presented as a general concept, rather than a specific type of BMP. The Bioretention concept uses biologic activity (plants and microbes) to filter/clean stormwater.

This concept can be incorporated into many different kinds of infiltration or filtration BMP designs, such as:

- Infiltration Basins
- Rainwater Gardens (an On-Lot Infiltration system)
- Surface Sand Filters

In general, Bioretention Systems can be described as shallow, landscaped depressions commonly located in parking lot islands or within small pockets in residential areas that receive stormwater runoff. Stormwater flows into the bioretention area, pools on the surface, and gradually infiltrates into the soil bed. Pollutants are removed by a number of processes including adsorption, filtration, volatilization, ion exchange and decomposition (Prince George's County, MD, 1993). Filtered runoff can either be allowed to infiltrate into the surrounding soil (functioning as an infiltration basin or rainwater garden), or collected by an under-drain system and discharged to the storm sewer system or directly to receiving waters (functioning like a surface sand filter). Runoff from larger storms is generally diverted past the area to the storm drain system.

Some examples of bioretention areas are shown in Figures 1 through 4. In Figure 1, the bioretention system resembles an infiltration basin enhanced with planting soil and sand media. The bioretention system shown in Figure 2 could be considered a rainwater garden in a parking lot. The bioretention example in Figure 3 is essentially a surface sand filter design with planting soil comprising most of the filter's cross section.

Purpose

Water Quantity	
Flow attenuation	◧
Runoff volume reduction (for infiltration systems only)	◧
Water Quality	
Pollution prevention	
Soil erosion	N/A
Sediment control	N/A
Nutrient loading	N/A
Pollutant removal	
Total suspended sediment (TSS)	■
Total phosphorus (P)	■
Nitrogen (N)	■
Heavy metals	■
Hydrocarbons	◧
Oil and grease	■
Other	
Fecal coliform	◧
Biochemical oxygen demand (BOD)	◧

■ Primary design benefit
◧ Secondary design benefit
□ Little or no design benefit

Bioretention Systems

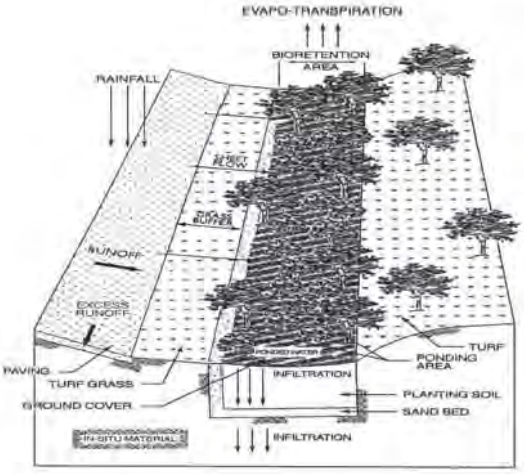


Figure 1: Bioretention Area Conceptual Layout (Functioning like an Infiltration Basin)

Source: Prince George's County Department of Environmental Protection, 1993.

Bioretention Systems

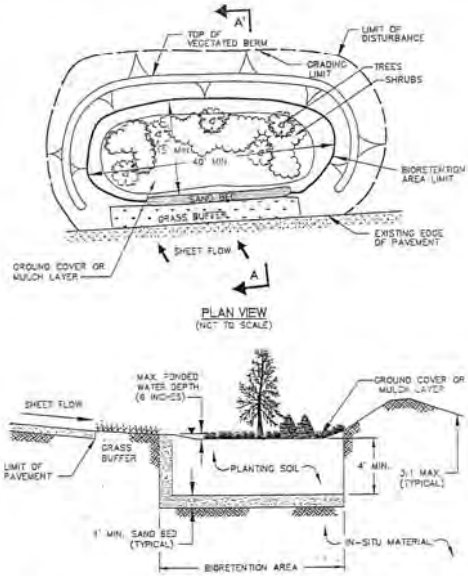


Figure 2: Bioretention Area: Parking Edge and Perimeter Without Curb
(Functioning Like a Rainwater Garden)

Source: Prince George's County Department of Environmental Protection, 1993

Bioretention Systems

Design

- Available area for the bioretention system: The surface area of the bioretention system should be between 5% and 10% of the impervious area draining to it.
- Slope: Bioretention areas are best applied to areas with relatively shallow slopes (usually about 5%).
- Soils: Bioretention areas can be applied in almost any soils, since in some designs, runoff percolates through a made soil bed, and is returned to the stormwater system. However, it is also possible to design a bioretention system to function like an infiltration system, where runoff percolates through into the native soil below the system. The infiltration option can be applied only when the soils and other site characteristics are appropriate for infiltration (for more information see the Infiltration Trench and Infiltration Basin BMP Sections).

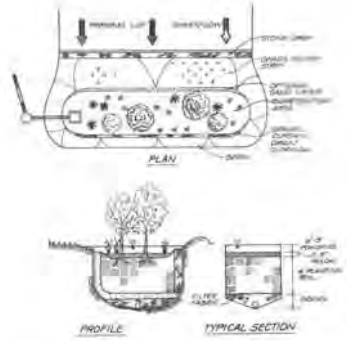


Figure 3: Bioretention Area: Parking Edge and Perimeter Without Curb
(Functioning like a Surface Sand Filter)

Source: Center for Watershed Protection, 1996

Plants for Stormwater Design – Species Selection for the Upper Midwest; D. Shaw and R. Schmidt, Minnesota Pollution Control Agency, July 2003

Native grasses and plants have documented benefits other than providing plantings suitable for the local climate. Native species have more established root structures which provide paths for stormwater infiltration and groundwater recharge. The pictures below demonstrate the advantages of native species and provide examples of some of the varieties of plants which may be selected for landscaping at the Facility.

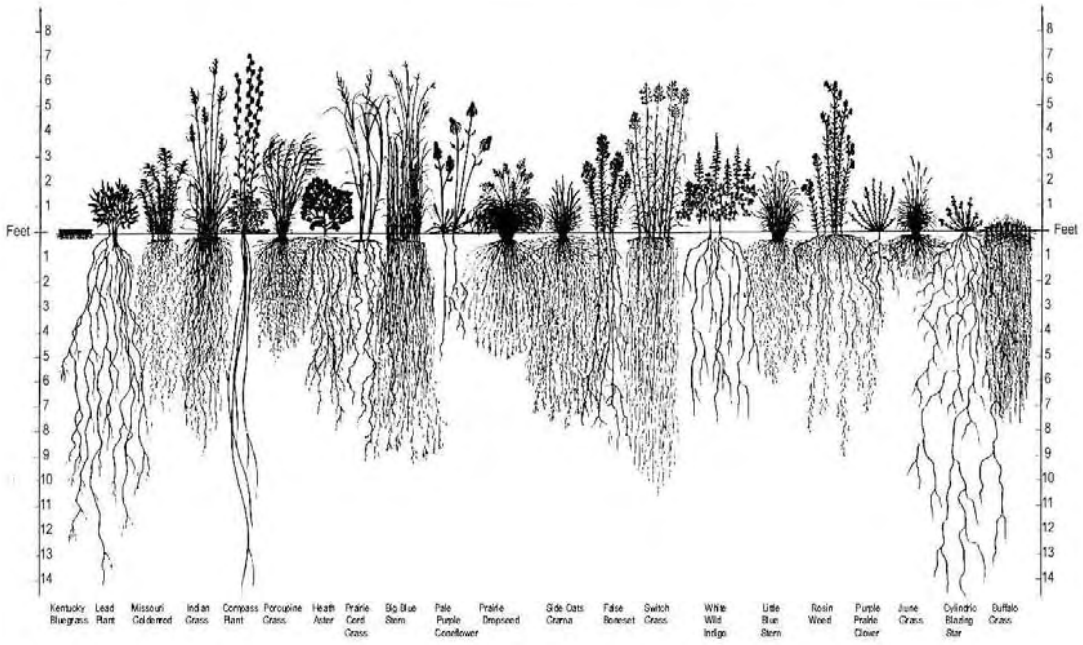
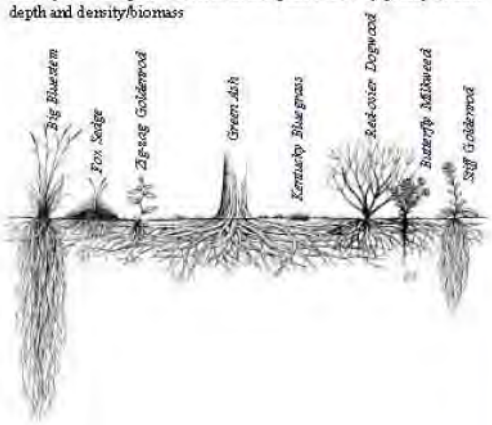


Figure 2
Source. Conservation Research Institute, 1995.

Plant Considerations and Species for Stormwater Management Practices

Root systems of species covered in this guidebook vary greatly in their depth and density/biomass

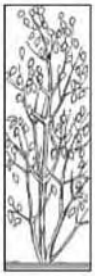


Vegetation is often grouped into the categories of trees and shrubs, grasses/sedges/rushes and forbs/ferns. Each of these categories of vegetation has its own benefits and limitations for stormwater projects.

Trees and Shrubs

Benefits

- Trees and shrubs, particularly willow species, have a significant influence on evapotranspiration and a capacity for nutrient uptake.
- Roots aid infiltration by acting as pathways for water flow.
- Fibrous roots absorb large amounts of water.
- Trees and shrubs are useful for bank stabilization and can often be planted as cuttings. Deep-rooted species are particularly useful for anchoring soil to steep slopes.
- Trees provide vertical structure in the landscape.
- Trees provide important habitat for many wildlife species.
- Trees provide important habitat for many wildlife species.



Limitations

- Debris from trees may block outlets.
- Trees cannot be used in stormwater MPs where sediment will be excavated.
- Trees can inhibit the growth of prairie species.

Grasses, Sedges and Rushes

Benefits

- Roots of prairie grasses can extend deep into the ground and aid in infiltration and evapotranspiration.
- Dense root networks stabilize soil and minimize erosion.
- Wetland species, particularly broad-leaved sedges and bulrushes, generally have shallow roots but aid in evapotranspiration.
- Grasses generally have many stems and produce thatch that slows water flow and facilitates filtration, making them well suited for filter strips.
- Many grasses, sedges and rushes are efficient at nutrient uptake.
- Native grasses, sedges and rushes add winter interest to the landscape and have high wildlife value.

Limitations

- In projects with high flow rates, grasses must be mowed often to most efficiently decrease stormwater velocity. Mown clump grasses will not produce seed.

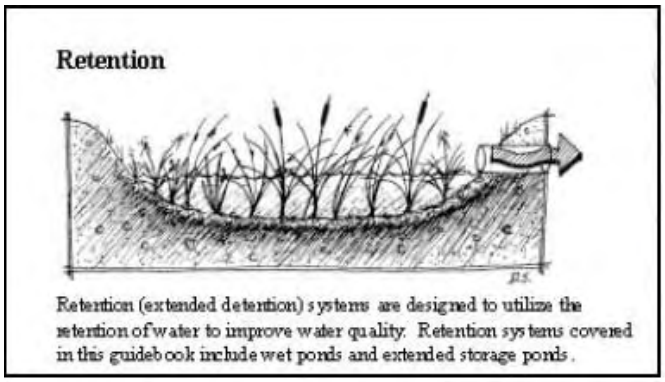
Forbs and Ferns

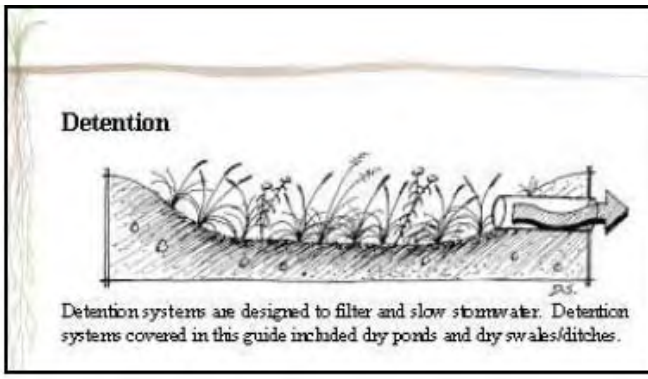
Benefits

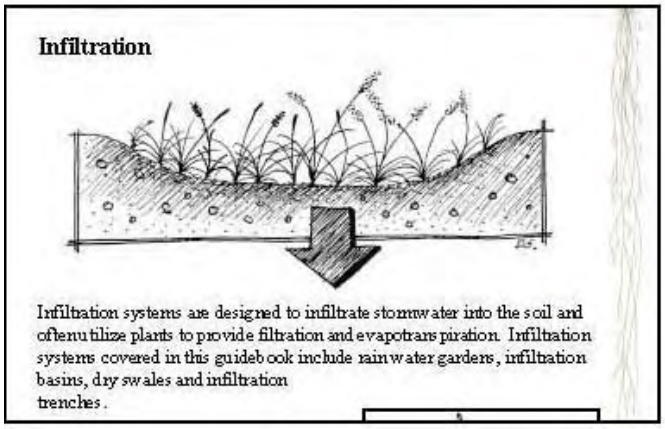
- Roots of prairie forbs can extend deep into the ground and aid in infiltration and evapotranspiration.
- Wetland forbs, particularly broad-leaved species, generally have shallow roots but aid in evapo transpiration.
- Native forbs add aesthetic appeal to the land scape and have high wildlife value.

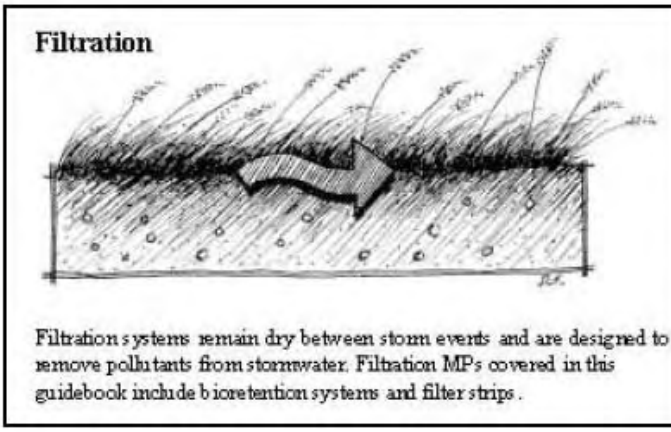
Limitations

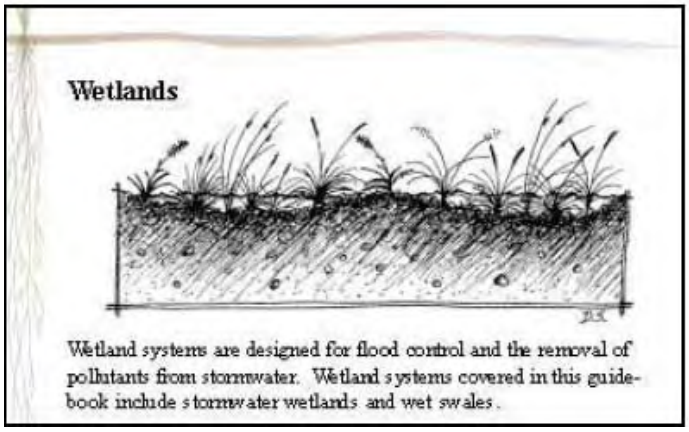
- Forbs generally have fewer basal stems than grasses and may not filter stormwater as efficiently.





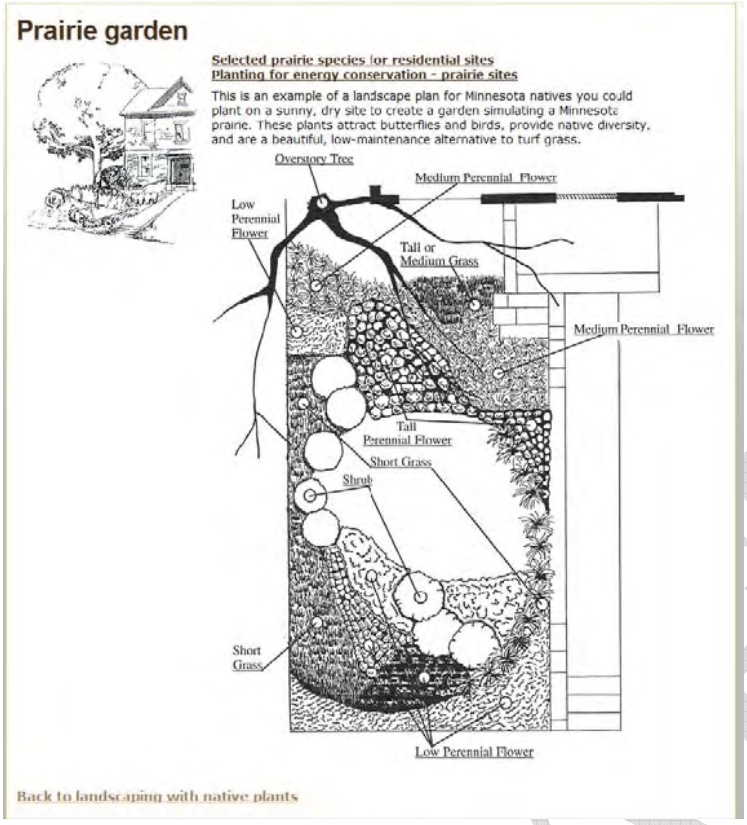






Several examples of gardens and prairie plantings are available from the Minnesota Department of Natural Resources. The following example is taken from the MDNR website:

Minnesota Department of Natural Resources. 2009. The Minnesota Department of Natural Resources Web Site (online). Accessed 2009-9-10 at http://www.dnr.state.mn.us/gardens/nativeplants/prairie.html



The following images of typical plants that may be utilized in native landscaping and naturalization are taken from the Smithsonian National Museum of Natural History website. The respective photographers are credited with each picture.

Smithsonian National Museum of Natural History, Department of Botany. NMNH. 2009. Plant Image Collection (http://boany.si.edu/PlantImages/, 15 September 2009).

Pinus ponderosa (Pinaceae)

Ponderosa Pine
Ripley, J.D. on Smithsonian National Museum of Natural History website:
http://botany.si.edu/PlantImages

Pinus sylvestris (Pinaceae)
Scotch Pine
Howard, R.A.

Pinus strobus (Pinaceae)
White Pine
Howard, R.A.

Rhus glabra (Anacardiaceae)
Smooth Sumac
Haug, E.

Rhus hirta (Anacardiaceae)
Staghorn Sumac
Cooper, G.A.

Amelanchier Canadensis (Rosaceae)
Serviceberry
Howard, R. A.

Quercus rubra (Fagaceae)
Northern Red Oak
Seelig, R.A.

Juniperus virginiana (Cupressaceae)
Eastern Red Cedar
Dorr, L.J.

Picea mariana (Pinaceae)
Black Spruce
Niehaus, T.F.

Poa pratensis (Poaceae) Kentucky Bluegrass Soreng, R.J.

Solidago missouriensis (Asteraceae)
Missouri goldenrod
Cooper, G.A.

Sorghastrum nutans (Poaceae)
Indiangrass
Soreng, R.J.

Echinacea pallida (Asteraceae) Pale Purple Coneflower Wagner, W.L.

Dalea purpurea (Fabaceae) Purple Prairie Clover Wagner, W.L.

Panicum virgatum (Poaceae)
Switchgrass
Soreng, R.J.

Sporobolus heterolepsis (Poaceae)
Prairie Dropseed
Pittillo, J.D.

Baptisia alba (Fabaceae) White Wild Indigo Justice, W.S.

Bibliography

Minnesota Department of Natural Resources. 2009. The Minnesota Department of Natural Resources Web Site (online). Accessed 2009-9-10 at http://www.dnr.state.mn.us/gardens/nativeplants/prairie.html

Barr Engineering Company. 2001. *Minnesota Urban Small Sites BMP Manual – Stormwater Best Management Practices for Cold Climates.* Metropolitan Council Environmental Services.

Minnesota Pollution Control Agency. 2003. ***Plants for Stormwater Design – Species Selection for the Upper Midwest***; D. Shaw and R. Schmidt,

Smithsonian National Museum of Natural History, Department of Botany. NMNH. 2009. Plant Image Collection (http://boany.si.edu/PlantImages/, 15 September 2009).

EXHIBIT F Lighting Plan

(to be attached)

SITE DEVELOPMENT PLAN LIGHTING DESIGN

The Sunrise River Energy Station (SRES, or Facility) lighting will be designed to ensure the safety and security of the Facility. Lighting levels will vary depending on the function and the overall design will be consistent with local state and federal regulations including the Lent Township Zoning Ordinance, the Minnesota Department of Health rules Chapter 4630, the State Electrical Code and OSHA regulations.

Lighting will be arranged as much as is practical to 'throw' the light to the interior of the site to minimize light trespass to adjoining properties. Lighting used to illuminate an off-street parking area, sign, or other structure will be arranged as to deflect the light away from any adjoining residential zone or public streets. Direct or reflected glare from floodlights will not be directed onto any adjoining property. Full cut-off luminaries will be used when possible to minimize light pollution.

Site and roadway lighting shall be established with lighting patterns which distribute the light output primarily on the surfaces, requiring lighting with minimum levels to perform functions and maintain a secure and safe environment. This lighting shall be mounted from 20 feet to 30 feet above grade except in areas where there is potential for light trespass into adjoining residential areas and public streets. Lighting areas from buildings shall be avoided when possible as it is more intrusive to the adjoining properties.

Building exterior lighting shall be established with minimum levels to perform operations and maintenance functions and maintain a secure and safe environment. Security lighting around building perimeters shall be provided by wall grazing type luminaries which will highlight the building. General security lighting shall be installed at a range of 12 to 15 feet above grade when possible.

The pages that follow include definitions of lighting terminology, explanation of different lighting types and pictures of lighting fixtures typical used at this type of facility. Pictures which show the use of shields, blocking and careful light placement to minimize lighting impact on neighboring properties are also included.

Definitions

The following presents the definition of some terms and acronyms used in the text and supporting literature.

Light Trespass

This is generally considered the light that spills on to adjoining property and many municipalities have limitations on the amount of light permitted to spill past an Owner's property line. However light trespass is also considered the perception of excessive brightness in the normal field of view, commonly known as glare or nuisance glare.

Light Pollution/Nightsky Impact

This is the impact of light directed or reflected into the sky. This is atmospheric and astronomic light pollution that is perceived as a general brightening of the sky.

Luminaire Cut-off

A cut-off luminaire is a fixture that projects 97.5% or greater of its light output below 90˚ (Horizontal). Full cutoff has no light project at or above 90˚ (Horizontal). Both full cut-off and cut-off luminaries have no more than 10% or of their light output at or above 80˚ above horizontal. Semi Cut-off allows for 5% of the light output to be above 90˚ from horizontal and 20% of the light output to be above 80˚ from horizontal. Noncut-off luminaries are not limited in their light distribution.

HID

HID is an acronym standing for "high intensity discharge" lighting sources which include low pressure sodium (very orange light, LPS acronym, used mostly in Europe), high pressure sodium (orangeish light, HPS for acronym), Metal Halide (white light, MH is acronym and PsMH is acronym for electronic pulse-start metal halide), and Mercury Vapor, which is an obsolete source.

LED

LED is an acronym for light emitting diode lighting and is the newest player in the exterior lighting market. This is a system, not a lamp and ballast assembly as in the HID lighting. The LED's and their associated drivers are matched and should not be interchanged between manufacturers. This system is generally a blueish white light, but offers a variety of other tones.

MH

MH is an acronym for metal halide, a member of the HID family of lighting. MH lighting produces high light output for its size making it a compact, powerful and efficient light source.

HPS

HPS is an acronym for high pressure sodium, a member of the HID family of lighting. It uses sodium under high pressure as the primary light-producing element. These high efficient lights produce a golden white hue.

6333020v1

This brochure shows an example of a typical outdoor fixture that could be used on a building or in a parking lot. It can be fitted with metal halide or high pressure sodium lamps.

Pole | Canopy | Wall Module 600

Module® 600

The Module 600 luminaire plays a dual role as a pole or surface mounted luminaire. Small parking lots can be illuminated from building walls, avoiding pole and trenching costs. Alternatively, pole mounting on the perimeter to light lots with no back spill light in mixed use neighborhoods is an option. Thru-wiring and modular design allow installation of large numbers of Module 600 fixtures in a small space for superior tunnel and underpass lighting as well. The borosilicate glass refractor provides precise light control through a main beam panel for near cutoff performance, minimizes glare and resists thermal shock from rain or snow. Die cast aluminum housings and a seven stage polyester powder finish provide exceptional corrosion resistance. UL listed "Suitable for Wet Location", CSA certified.

Module 600 luminaires provide an attractive appearance with a non-yellowing prismatic glass lens. The borosilicate glass lens also enables precise light control for various applications.

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Ordering Information

HOLOPHANE outdoor lighting

INFRASTRUCTURE
Product Catalog

How to Construct a Catalog Number

Example:

MW	100HP	12	G	F1	MWPA
1	2	3	4	5	6
Luminaire	Wattage	Voltage	Color	Options	Accessories
MW	100HP 100MV 15AHP 175MH 175MV 200HP 250HP 250MH 250MV 400HP 400MH 400MV	08 12 20 24 27 34 40 48 MT VT	G Z K W	F1 F2 PS AD QD PR	LAMP MWSD MWSB MWPA

Distributions

Mounting height: 15'
Type IV, short, semicutoff

Typical Applications

- Underpasses
- Building Perimeters
- Parking Areas
- Tunnels
- Loading Docks

Features

- Attractive appearance
- Prismatic glass optics
- Precise light control

Lamp Types

- 175 - 400 watt metal halide
- 100 - 400 watt high pressure sodium
- 250 - 400 watt mercury vapor

Approvals

- UL/CUL wet locations

Catalog Number Information

STEP 1: Luminaire

MW Module 600

STEP 2: Source and Wattage

100HP	100W HPS
15AHP	150W HPS, SSV
200HP	200W HPS
250HP	250W HPS
400HP	400W HPS
175MH	175W MH
250MH	250W MH
400MH	400W MH
100MV	100W MV
175MV	175W MV
250MV[1]	250W MV
400MV[1]	400W MV

1 Not available with "MT"

STEP 3: Voltage

08[1]	208V
12	120V
20	208V
24	240V
27	277V
34	347V
40[1]	240V
48	480V
MT[1]	Multi-voltage
VT[1]	Vari-tap

1 Isolated Secondary C/UL
2 120, 208, 240 or 277V
3 120, 277 or 347V; only available with 250HP, 400HP, 250MH and 400MH

STEP 4: Color

G	Gray
Z	Bronze
K	Black
W	White

STEP 5: Options

F1	Single Fuse Assembly for 120, 240, 277 and 347V
F2	Double Fuse Assembly for 208, 240 and 480V
PS	Protected Starter for HPS
AD[1]	Conduit Adapter
QD[2]	Quick Disconnect
PR[3]	Photocontrol for 120-347V

1 Not available with "QD"
2 Not available WITH "AD"
3 Not available with "MT" or "VT"

PR

STEP 6: Accessories

Lamp	Appropriate Lamp Shipped
MWSD	Internal Light Shield
MWSB	Suspension Bracket for Mounting Unit Vertically from a Horizontal Surface
MWPA	Polycarbonate Vandal Shield

MWPA

Specifications

The unit shall be Module 600 catalog number _____. The luminaire shall consist of a die cast aluminum housing which encloses the ballast, lamp socket and reflector; and a refractor door assembly. The housing assembly shall mount against the wall (or pole) and the refractor housing assembly shall fasten to it by means of concealed hinges and a single point, positive acting latch. There shall be two stainless steel retaining cables attached between the main housing and refractor frame. Overall dimensions shall be 16" square x 11 5/8" deep.

Units shall be prewired and equipped to be wall-mounted for surface wiring, or to a recessed outlet box, and shall require no tools for lamp replacement.

The optical train shall consist of the lamp, fluted specular aluminum reflector and molded prismatic borosilicate thermal shock-resistant glass refractor. The dimensions of the refractor shall be 16" square x 4" deep and shall have internal splitting prisms and external dispersing prisms. The refractor frame color shall be _____.

The integral ballast shall operate a _____ lamp and provide reliable starting at temperatures as low as -20°F. Starting line current shall be ___ amps and operating current ___ amps; power factor over 90% and lamp wattage regulation of ± ___% at ± ___% line voltage fluctuation.

Ballast shall be UL listed Class H; core, coil and capacitors shall be positioned for maximum heat dissipation. Supply wires to the unit are to be of proper temperature rating for the type of entry used. The housing shall be finished with a black polyester powder paint coating. The complete unit shall be CSA certified and UL listed as "Suitable for Wet Locations 40°C Ambient."

6333020v1

This brochure shows an example of a typical outdoor LED fixture that could be used on a building or in a parking lot.

X-DRIVE™
LED Roadway Light

XUS LED LIGHTING

For roadways, residential streets, and other traffic & outdoor areas.

PATENT-PENDING XUS INNOVATIONS

- Exclusive heat management technology provides a new standard in lowered Junction Temperature (Tj). Delivers **unprecedented life-time expectancy** and **virtually maintenance-free** operation.
- FOCUSED™ lens has multiple elements for **optimum light distribution** of individual LEDs.
- LUMISTAT™ is a self-contained, multi-function controller that **varies light output** of each fixture to match ambient demand and to reduce current consumption.

X-DRIVE ROADWAY LIGHT

- **Fits existing supports:** 1⅝" (41.3mm) or 2" to 2½" (51 to 64mm) pole installation.
- Designed to **fit existing power and attachment points.**
- Only 13.3 lbs. / 5.99 kg: **less weight means easier installation and freight savings.**
- Available with Powerline or ELMS **"Robust Communications."**

Assured performance

Meets or exceeds all these standards for testing:

- ANSI/IES RP-8-00
- IESNA LM-79
- UL approved components. ETL, CAS & NOM (pending).

ECO-friendly

- **"Dark Sky Friendly."**
- Amber LEDs available for **"Marine Turtle Protection"** mandates.
- **Tilt-adjustment** (+/- 4° in 2° increments) avoids "light trespass".
- **RoHS compliant** for international applications
- **100% recyclable.**
- **5 year limited warranty.**

PH 231.946.7987 info@xusledlighting.com
FX 231.946.5987 sales@xusledlighting.com
816 Maple Avenue Holland, MI 49423
WWW.XUSLEDLIGHTING.COM

TOTAL SYSTEM SAVINGS

Typical outdoor commercial light fixtures operate at high temperatures. LED (solid state) lights also produce heat which *reduces* the efficiency and longevity of ordinary luminaires.

XUS LED LIGHTING far outshines the ordinary. We have designed and manufactured ***superior heat management*** in the X-DRIVE LED Roadway Light. Internal components work together to control heat — we use redundant cooling for power supply and LEDs; active and passive air circulation; and proprietary heat dissipation on the LED board itself. The result: the X-DRIVE luminaire exceeds LED lighting industry standards for Junction Temperature (T_j). This delivers maximum lifetime expectancy, light output, and energy savings.

XUS X-DRIVE is clearly the best choice for your roadway lighting application.

ORDERING NUMBER LOGIC for X-DRIVE Models X20, X30, X50

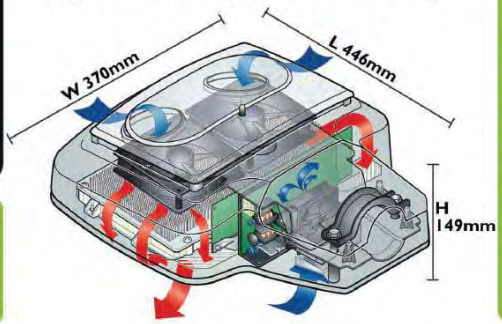
Ex. = X30-A-1-C-1-LG-2-Z

Specifications	Standard	Options	
Lens Material	A= Acrylic	P=Polycarbonate	
FOCUSED Lens	1= IES Type I Pattern	2= Type II 4= Type IV	3= Type III 5= Type V
LED Color	C= Cool White (avg. 6500K)	A= Amber	S= Specify
Voltage	1= 85V-264V	2= 277V-500V	
Housing Color	LG=Light Gray	DG= Dark Gray WH= White LB= Lt. Bronze	BK= Black GR= Green DB= Dk. Bronze
Mounting	2= 2" to 2½"	1= 1⅝"	
Optional Controls & Functions	Z= No Options	A= Audio/Visual M=Motion Detection S=Surge Protection	L=LUMISTAT P= Photocell T= Telemetry

DATA TABLE

X-DRIVE LED Roadway Light	X20	X30	X50
Total System (watts)	62	92	155
Lamp Output (lumens)	3400	5100	8500
Luminaire Efficacy – Total System (lm / W)	45.9	45.0	43.2
Luminous Efficacy – Lamp Only (lm / W)	71.4	71.4	71.4
Average Color Temperature (k)	6500	6500	6500
Color Rendering Index (CRI)	75	75	75

X-DRIVE LED Roadway Light— Patents Pending



THE XUS "DIFFERENCE"

XUS LED Lighting is determined to encourage "greening." After each order, **XUS offers a credit** for every X-DRIVE container returned for recycling.

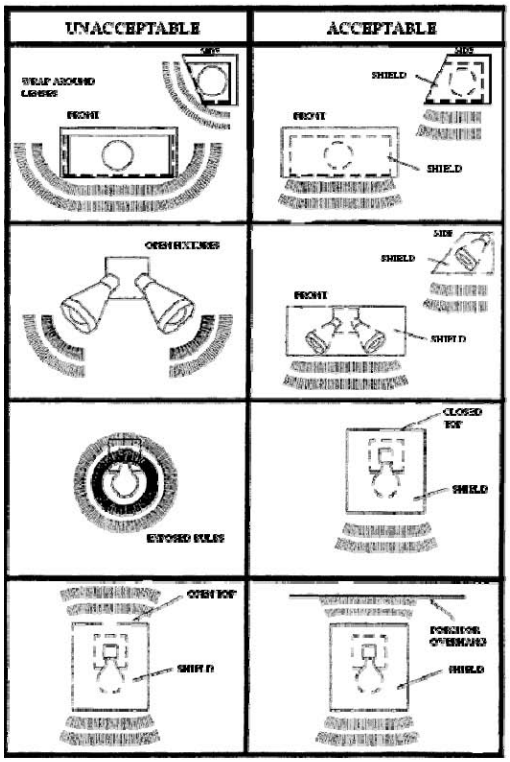
Receive a credit for every conventional "cobra" light fixture returned to XUS. See xusledlighting.com for Trade-In Program details.

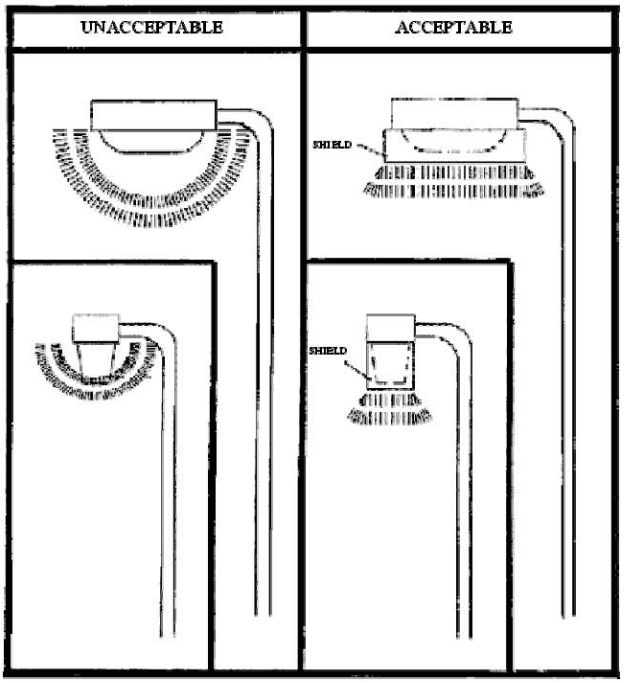
Proudly made in the USA

FOR A BRIGHTER FUTURE.

6333020v1

The drawings below are examples of how shielding, blocking and light placement can reduce light trespass and minimize impact on neighboring properties. The figures below are from the City of Bainbridge Island's Municipal Code, Title 15 Buildings and Construction.





Guidelines for Freestanding Outdoor Lighting Fixtures

Guidelines for Wall Mounted Fixtures

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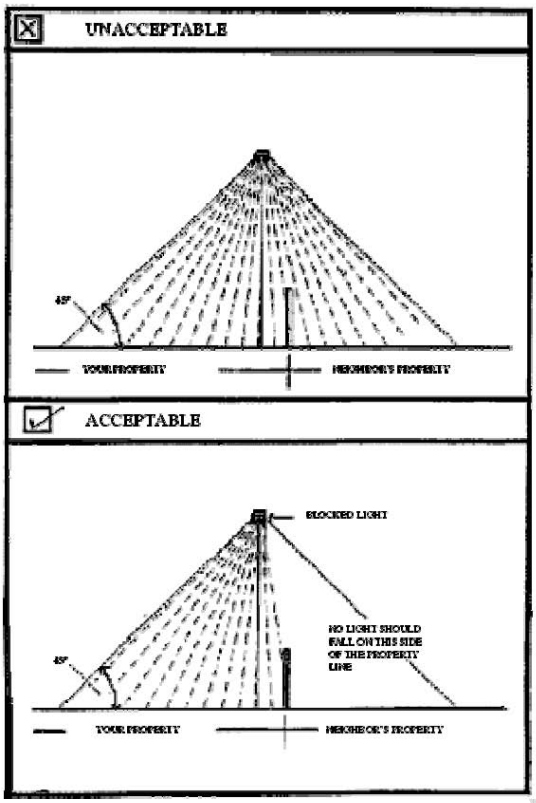

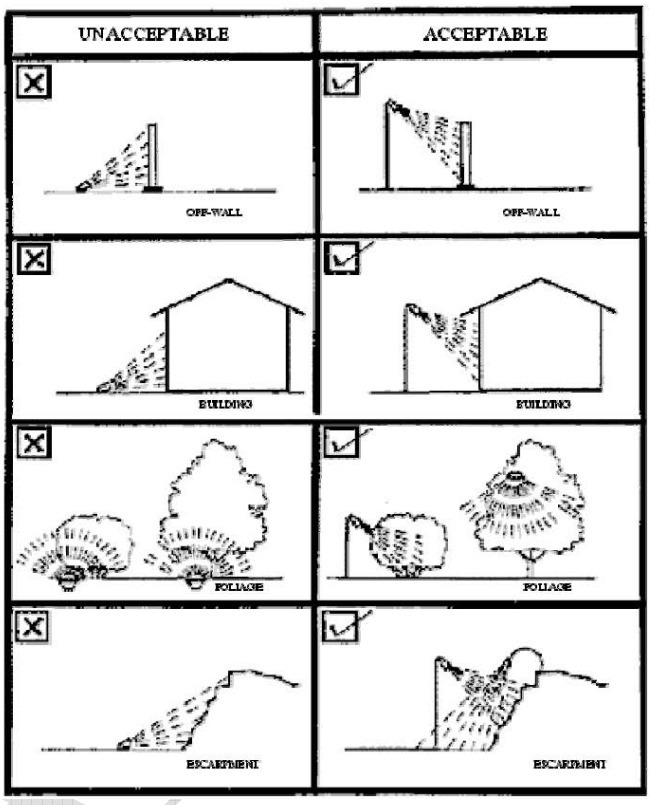

Guidelines for Outdoor Lighting Guidelines for Accent Lighting Fixtures – Light Cut-Off at Property Line

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