



Department of Local Services  
Permitting Division

**Residential Site Plan Template**  
11" x 17"

For Permitting Use

Received Date \_\_\_\_\_

Max. Impervious Surface Allowed \_\_\_\_\_

Max. Bldg. Height Allowed \_\_\_\_\_

Min. Bldg. setback from Street \_\_\_\_\_

Min. Garage setback from Street \_\_\_\_\_

Min. Bldg. setback from Interior \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Building Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Engineering / Drainage Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Critical Areas Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Clearing / Grading Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Fire Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

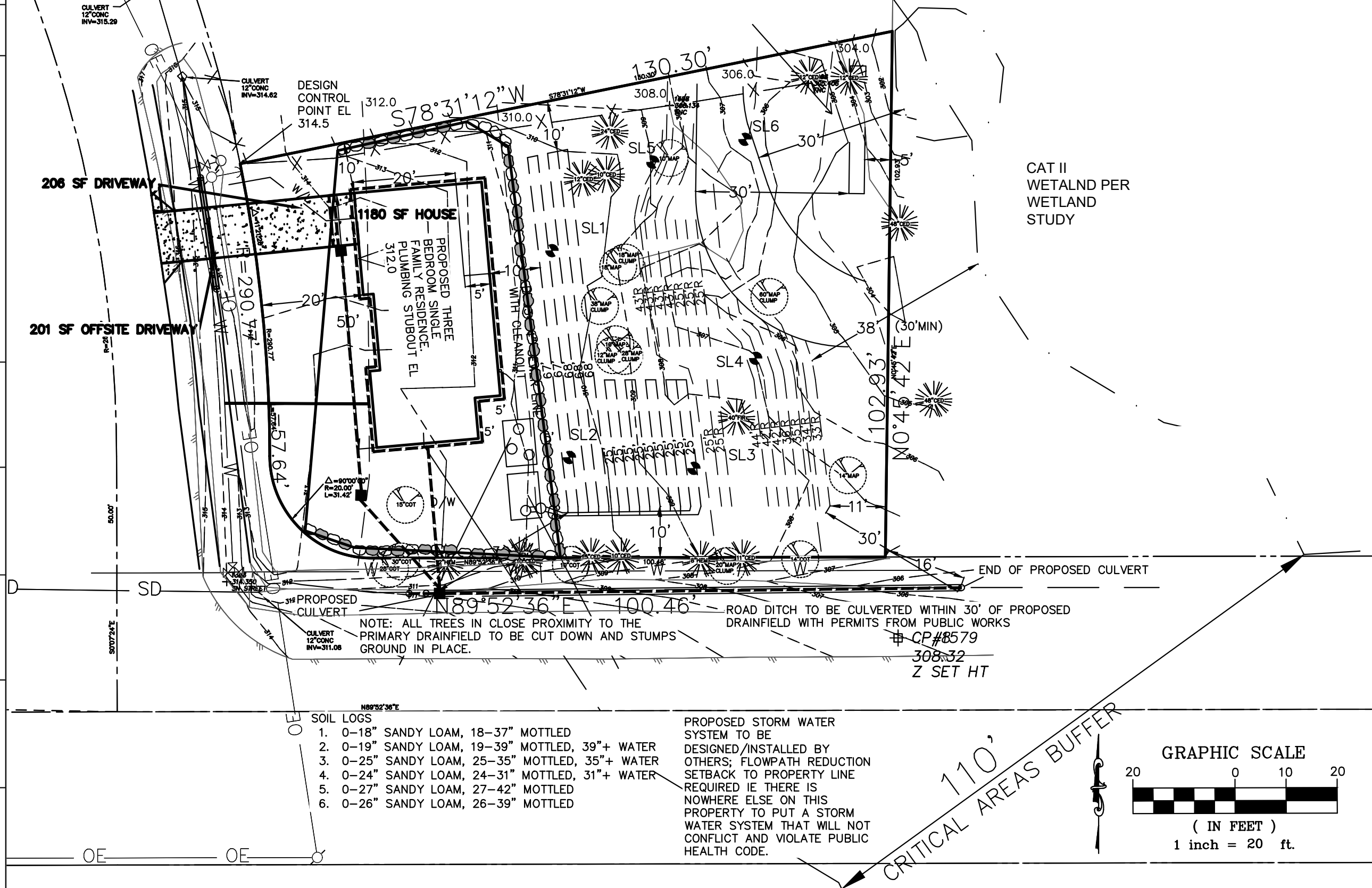
APPLICANT: MAPLE LEAF NORTH, LLC  
1250 NE 104TH STREET  
SEATTLE, WA 98125  
PARCEL NO.: 880781-0720  
PROJECT ADDRESS: 60XX 215TH AVE NE 98053  
SEC/TWN/RNG: SW 9-25-6  
TOTAL SITE ACREAGE: 0.23 ACRES

NEW ONSITE IMPERVIOUS  
HOUSE: 1180 SF  
DRIVEWAY: 206 SF  
TOTAL NEW IMPERVIOUS AREA: 1,386 SF  
CLEARED AREA: 5,909 SF

EXISTING IMPERVIOUS  
0 SF  
TOTAL ONSITE IMPERVIOUS  
1,386 SF

EARTHWORK:  
CUT = 0 C.Y.  
FILL = 121 C.Y.  
NEW OFFSITE IMPERVIOUS  
201

ONSITE IMPERVIOUS PERCENTAGE  
TOTAL IMPERVIOUS AREA = 1,386 SF  
SITE AREA = 10,200 SF  
PROPOSED LOT COVERAGE = 13.59%

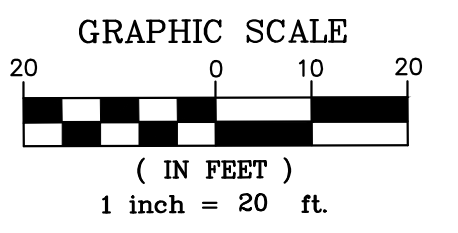


CAT II  
WETLAND PER  
WETLAND  
STUDY

NOTE: ALL TREES IN CLOSE PROXIMITY TO THE  
PRIMARY DRAINFIELD TO BE CUT DOWN AND STUMPS  
GROUND IN PLACE.

- SOIL LOGS
- 0-18" SANDY LOAM, 18-37" MOTTLED
  - 0-19" SANDY LOAM, 19-39" MOTTLED, 39"+ WATER
  - 0-25" SANDY LOAM, 25-35" MOTTLED, 35"+ WATER
  - 0-24" SANDY LOAM, 24-31" MOTTLED, 31"+ WATER
  - 0-27" SANDY LOAM, 27-42" MOTTLED
  - 0-26" SANDY LOAM, 26-39" MOTTLED

PROPOSED STORM WATER  
SYSTEM TO BE  
DESIGNED/INSTALLED BY  
OTHERS; FLOWPATH REDUCTION  
SETBACK TO PROPERTY LINE  
REQUIRED IE THERE IS  
NOWHERE ELSE ON THIS  
PROPERTY TO PUT A STORM  
WATER SYSTEM THAT WILL NOT  
CONFLICT AND VIOLATE PUBLIC  
HEALTH CODE.





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**Building Approval**

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Date \_\_\_\_\_

**Engineering / Drainage Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Critical Areas Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Clearing / Grading Approval**

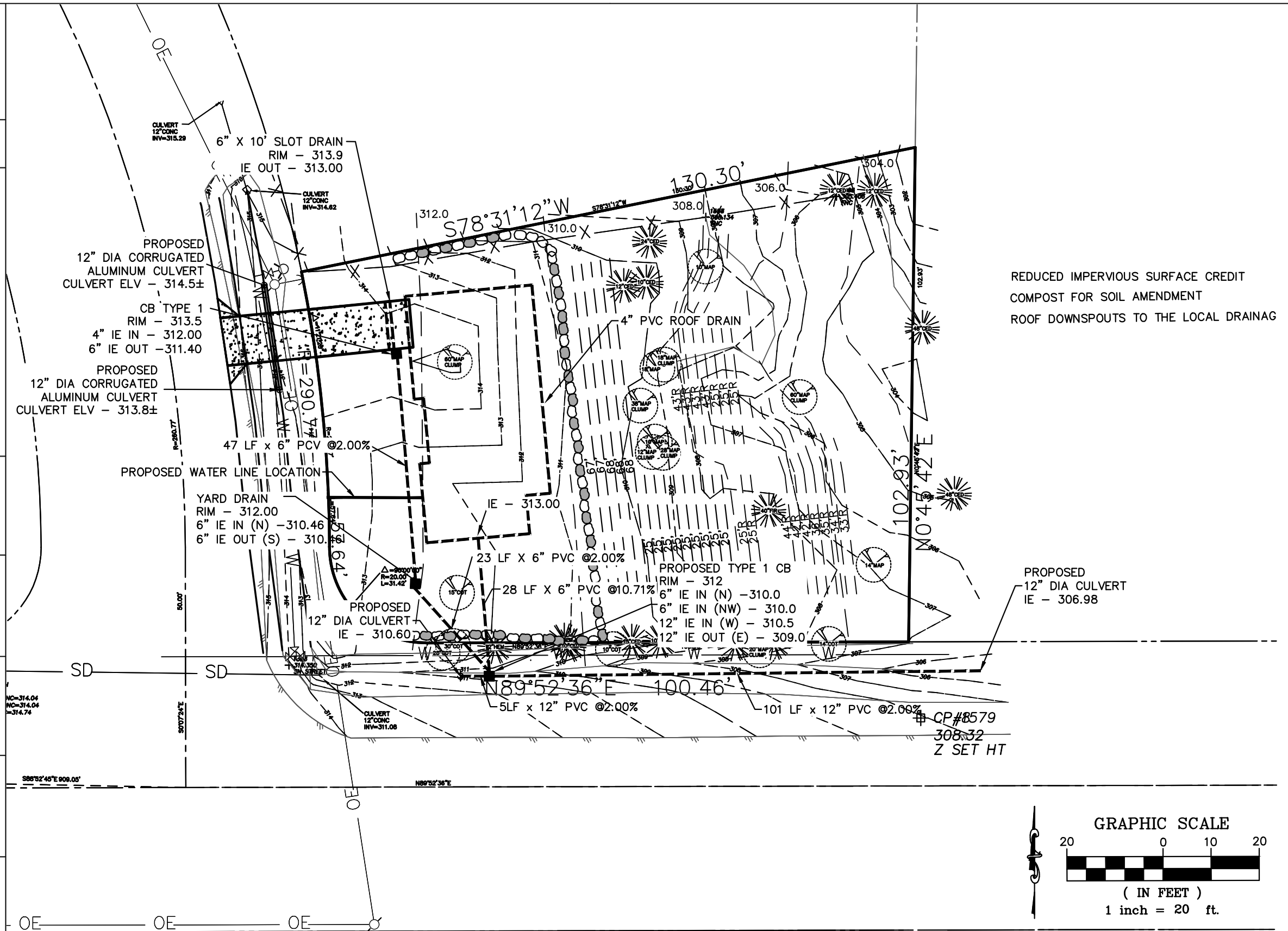
Signature \_\_\_\_\_

Date \_\_\_\_\_

**Fire Approval**

Signature \_\_\_\_\_

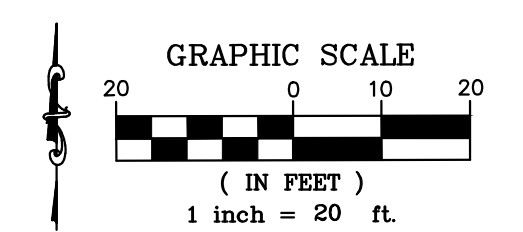
Date \_\_\_\_\_



REDUCED IMPERVIOUS SURFACE CREDIT  
COMPOST FOR SOIL AMENDMENT  
ROOF DOWNSPOUTS TO THE LOCAL DRAINAG

PROPOSED  
12" DIA CULVERT  
IE - 306.98

CP#8579  
308.32  
Z SET HT





Department of Local Services  
Permitting Division

**Residential Site Plan; Temporary Erosion & Sedimentation Control (TESC) Template - 11" x 17"**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of ESC Supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits
4. Install catch basin protection, if required
5. Grade and install construction entrance(s)
6. Install perimeter protection (silt fence, brush barrier, etc.)
7. Construct sediment ponds and traps, if required
8. Grade and stabilize construction roads
9. Construct surface water controls (interceptor kikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development
10. Maintain erosion control measures in accordance with King Count standards and manufacturer's recommendations
11. Relocate erosion control measure, or install new measure so that as site conditions change, the erosion and sediment control is always in accordance with the King County erosion and Sedimentation Control Standards
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber, mulch, compost, plastic sheeting, or equivalent
13. Stabilize all areas within seven days of reaching final grade
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

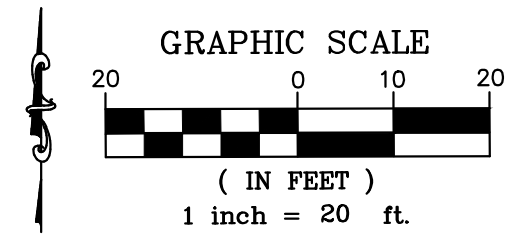
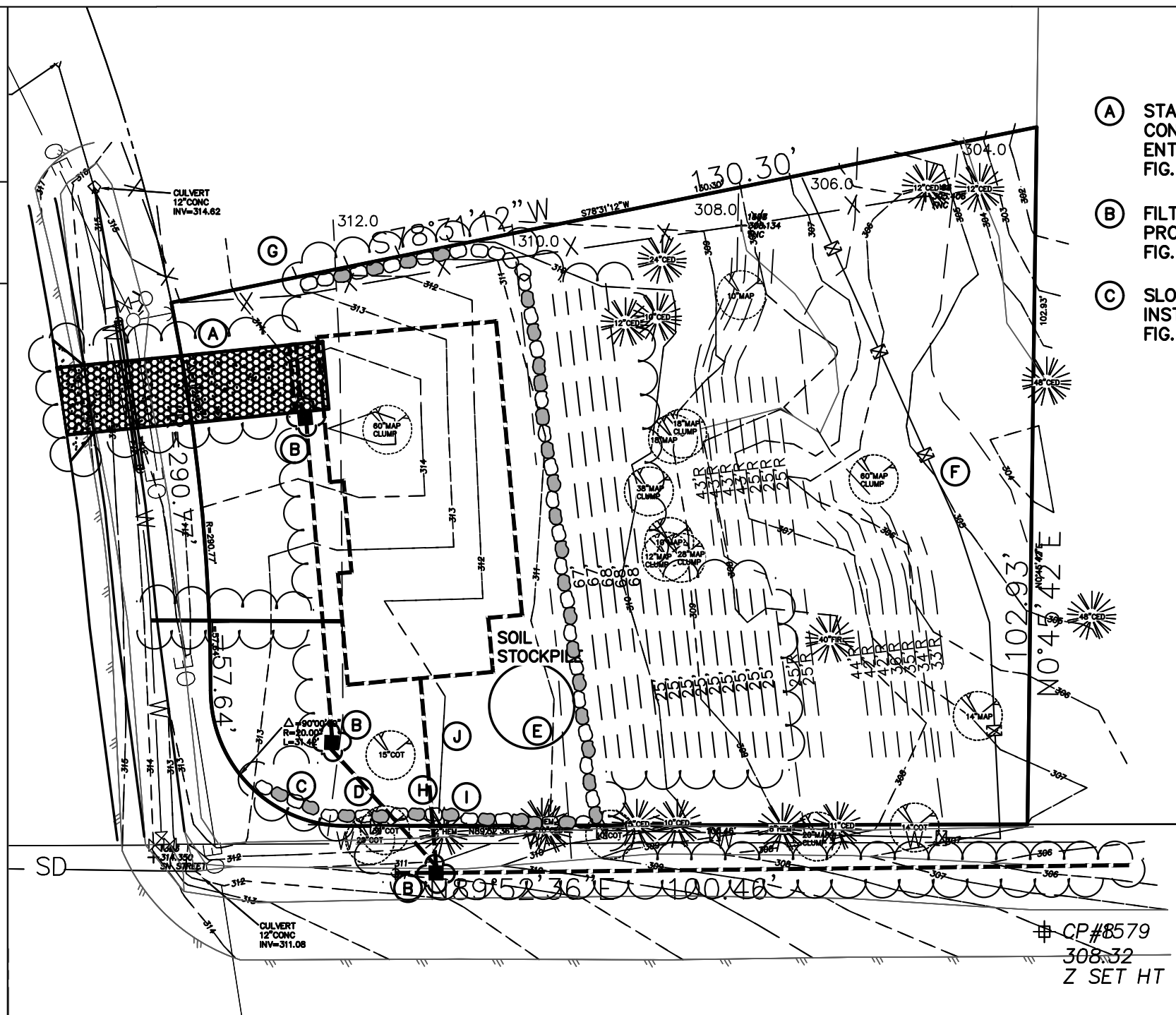
Signature \_\_\_\_\_  
Date \_\_\_\_\_

**Clearing / Grading Approval**

Signature \_\_\_\_\_  
Date \_\_\_\_\_

**CSWPPP CALLOUTS**

- |   |   |   |
|---|---|---|
| (A) STABILIZED CONSTRUCTION ENTRANCE PER FIG. D.2.1.4.A | (D) STRAW WATTLES PER FIG. D.2.1.2.E      | (I) MULCHING PER FIG. D.2.1.2.2 AND TABLE D.2.1.2.A |
| (B) FILTER FABRIC PROTECTION PER FIG. D.2.1.5.E         | (E) PLASTIC COVERING PER FIG. D.2.1.2.E   | (J) COMPOST FOR SOIL AMENDMENT PER REFERENCE 11-C   |
| (C) SLOPE INSTALLATION PER FIG. D.2.1.2.C               | (F) SILT FENCE PER FIG. D.2.1.3.1         |   |
|   | (G) MARK CLEARING LIMITS PER FIG. D.3.4.1 |   |
|   | (H) SURFACE ROUGHENING PER FIG. D.2.1.2.A |   |





Department of Local Services  
Permitting Division

**Residential Site Plan Template**  
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*For Permitting Use*

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Signature \_\_\_\_\_

Date \_\_\_\_\_

**Building Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Engineering / Drainage Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Critical Areas Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Clearing / Grading Approval**

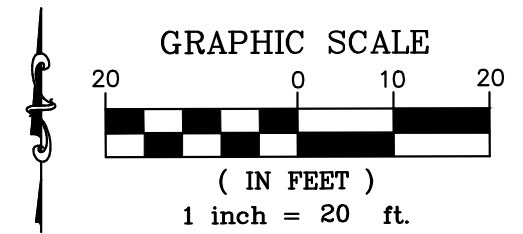
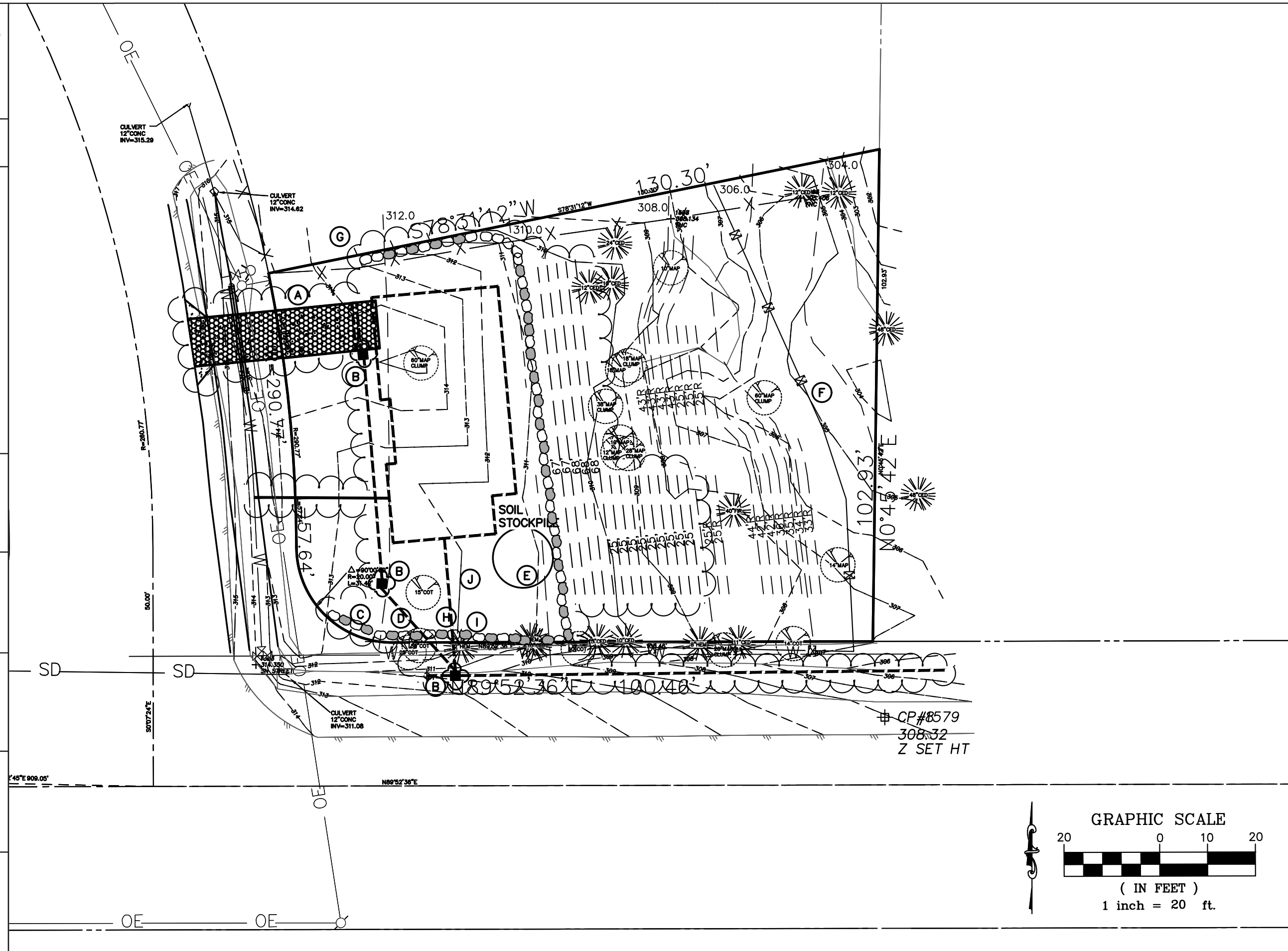
Signature \_\_\_\_\_

Date \_\_\_\_\_

**Fire Approval**

Signature \_\_\_\_\_

Date \_\_\_\_\_





**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits.
4. Install catch basin protection, if required.
5. Grade and install construction entrance(s)
6. Install perimeter protection (silt fence, brush barrier, etc.).
7. Construct sediment pond and traps, if required.
8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Maintain erosion control measures in accordance with King County standards and manufacture's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

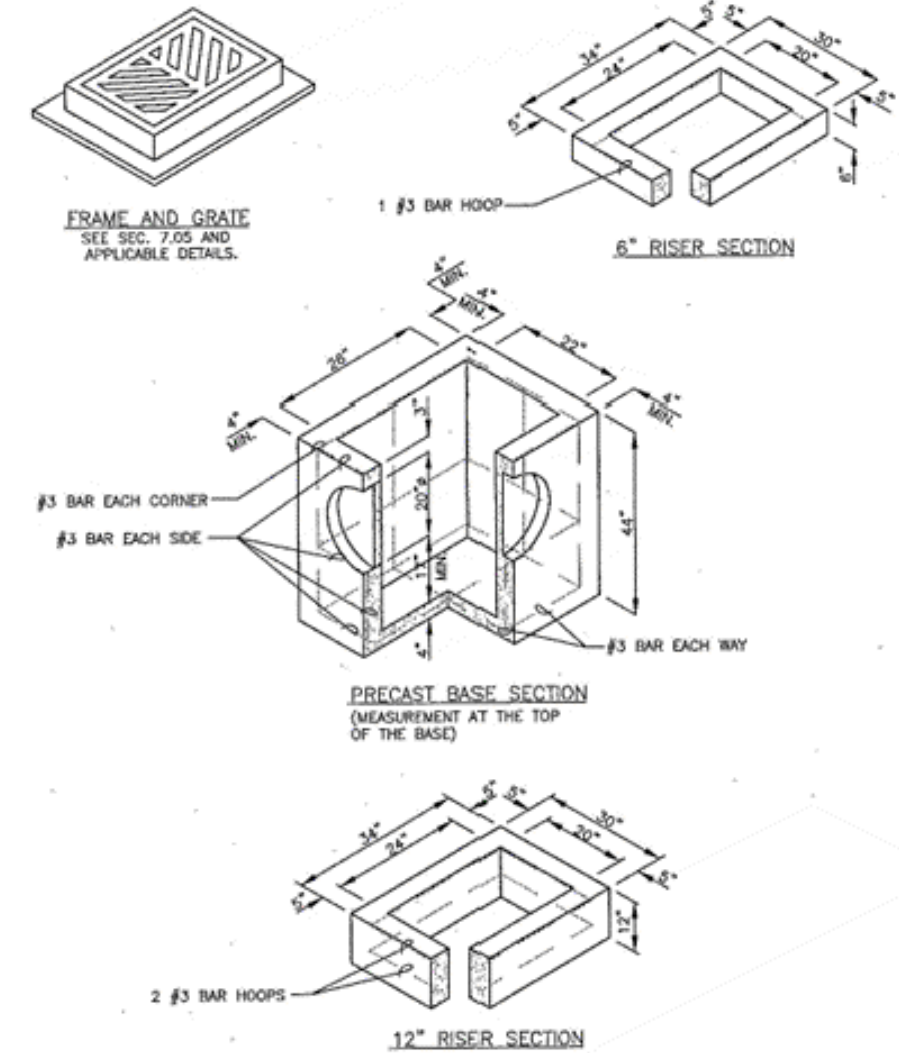
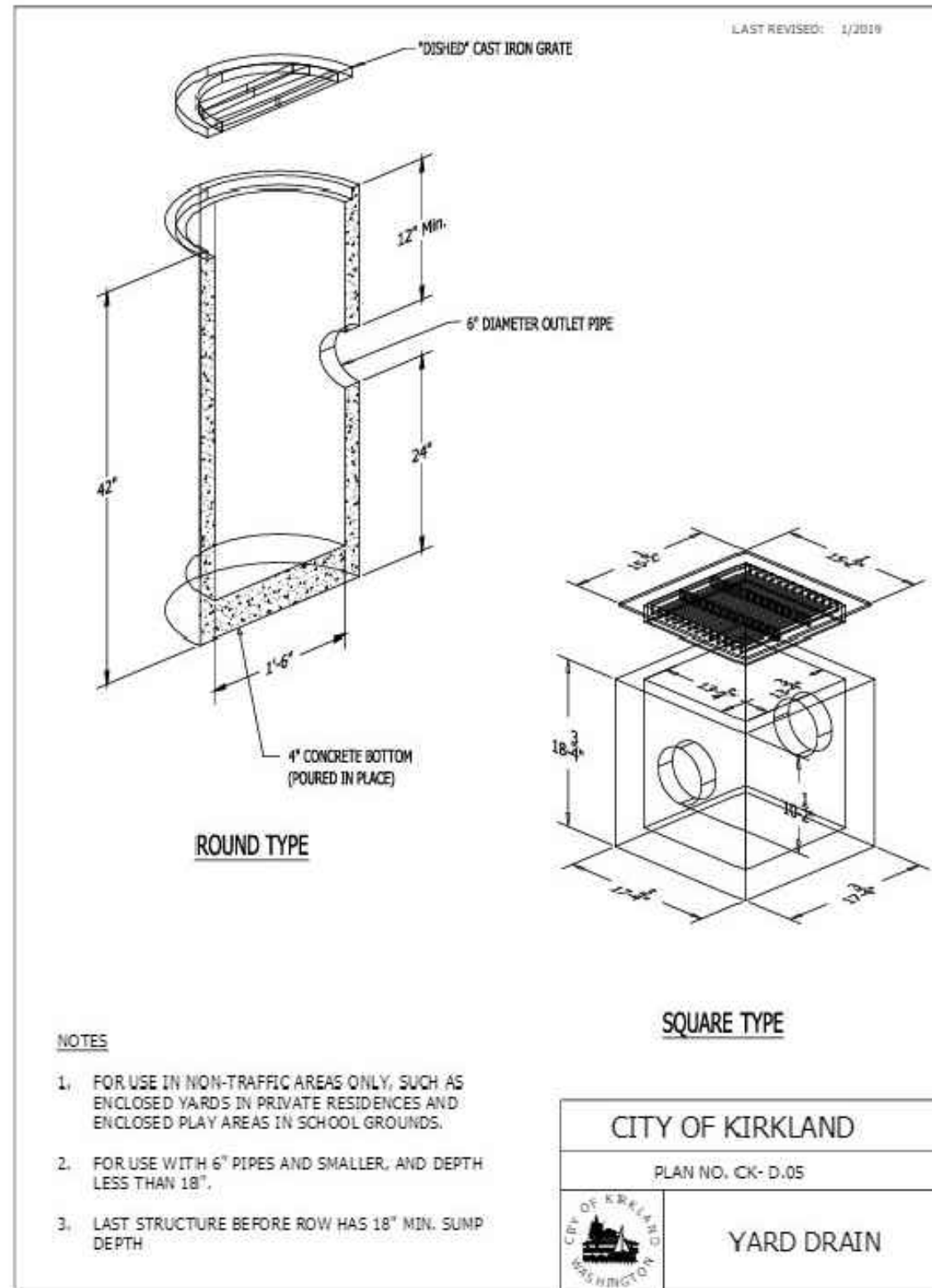
Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**NOTES:**

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQ. IN. PER FT. MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2 IN. MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20 IN. KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5 FT.
8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FT.
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-62IE. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B-5.60-01.
12. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2 IN. FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.



**King County**  
Department of Permitting  
and Environmental Review

**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
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**Engineering / Drainage Approval**

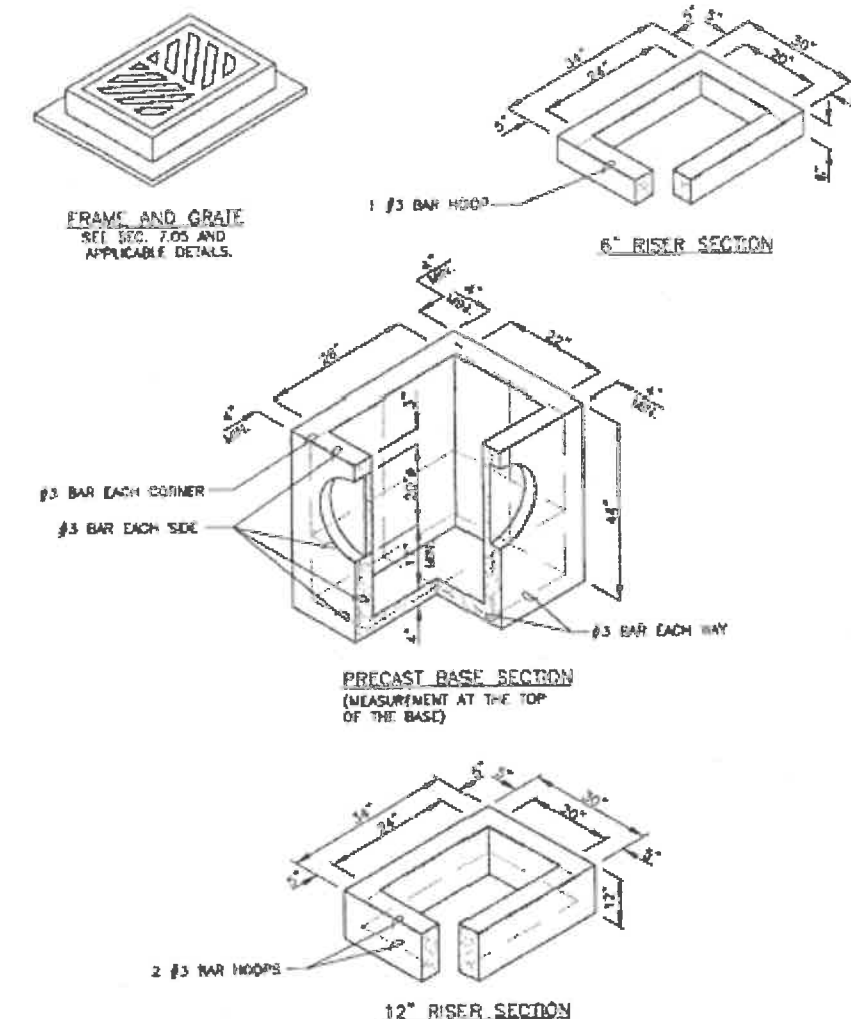
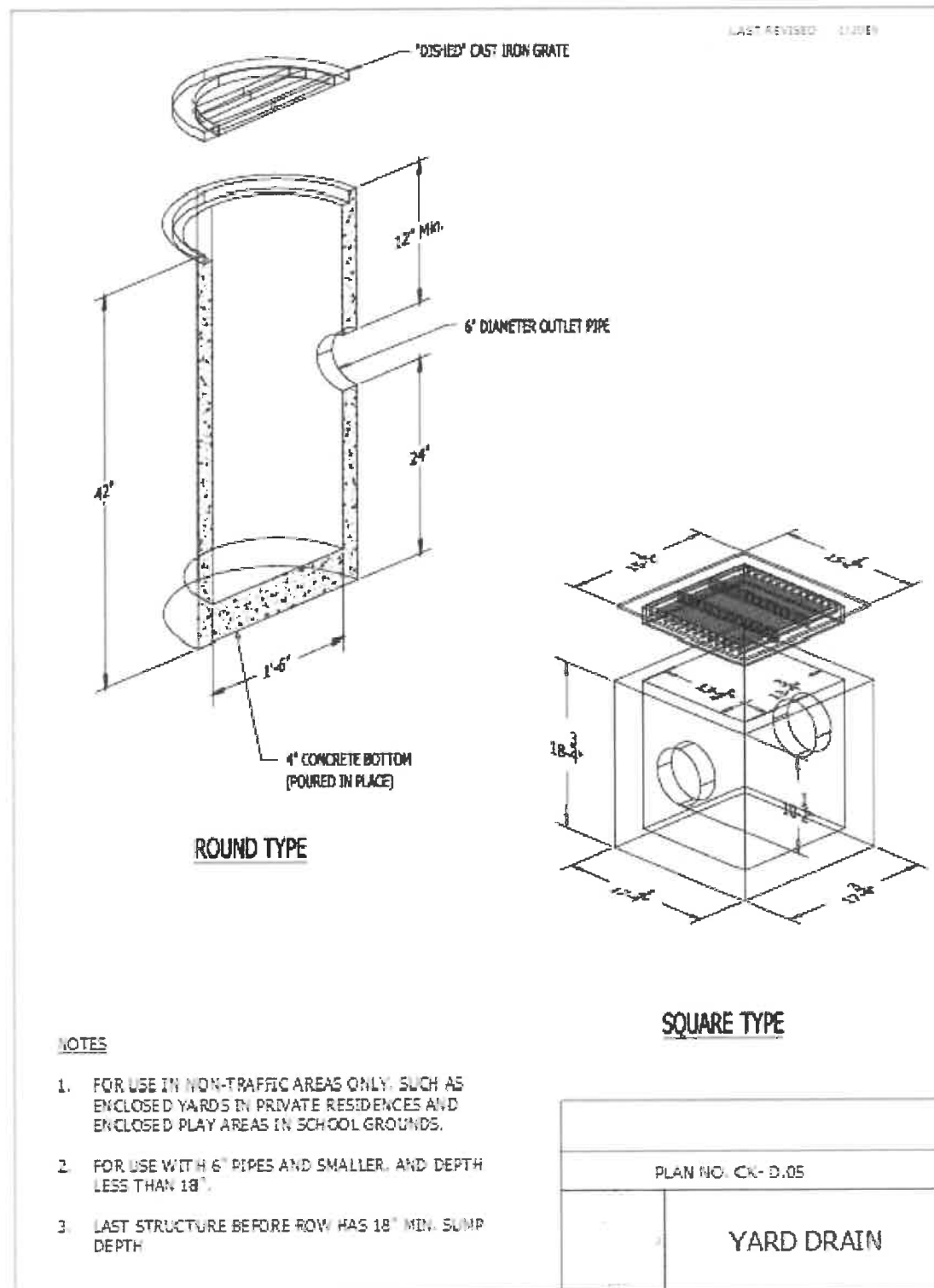
Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**NOTES:**

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
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10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR EAST INTO RUSCR.
11. FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B-5.10-01.
12. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2 IN. FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

Department of Transportation  
Road Services Division  
2016 Design and  
Construction Standards

**CATCH BASIN TYPE 1**

**FIG. 7-003**

7.2



**King County**  
 Department of Permitting  
 and Environmental Review

**Residential TESC Template**

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12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
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14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**D.2.1.2.6 TEMPORARY AND PERMANENT SEEDING**

Code: SE

Symbol:



**Purpose**

Seeding is intended to reduce erosion by stabilizing exposed soils. A well-established vegetative cover is one of the most effective methods of reducing erosion.

**Conditions of Use**

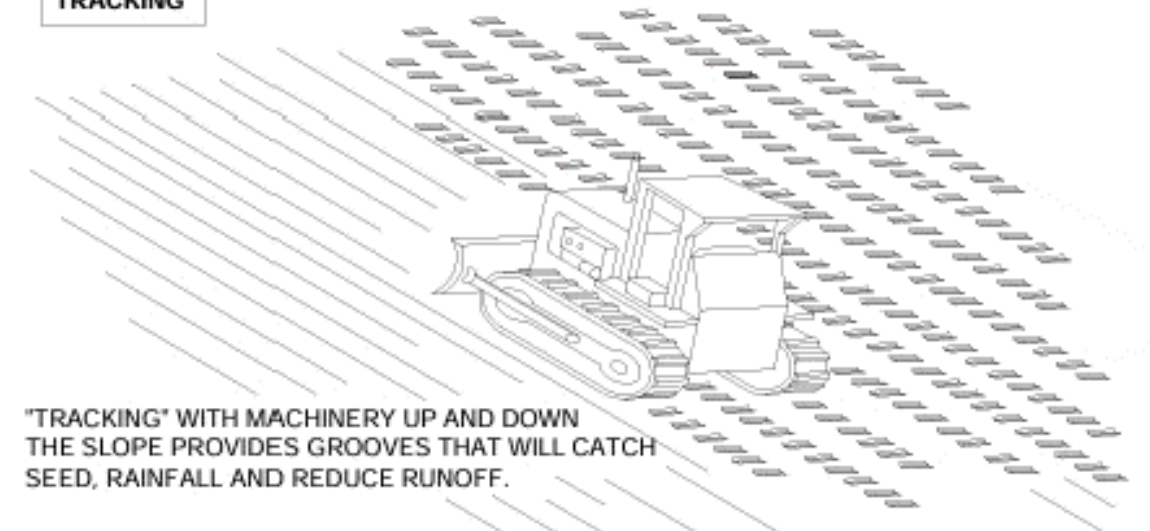
1. Seeding shall be used throughout the project on **disturbed areas** that have reached final grade or that will remain unworked for more than 30 days.
2. **Vegetation-lined channels** shall be seeded. Channels that will be vegetated should be installed before major earthwork and hydroseeded or covered with a Bonded Fiber Matrix (BFM).
3. **Retention/detention ponds** shall be seeded as required.
4. At the County's discretion, seeding without mulch during the **dry season** is allowed even though it will take more than seven days to develop an effective cover. Mulch is, however, recommended at all times because it protects seeds from heat, moisture loss, and transport due to runoff.
5. At the beginning of the **wet season**, all disturbed areas shall be reviewed to identify which ones can be seeded in preparation for the winter rains (see Section D.2.4.2). Disturbed areas shall be seeded within one week of the beginning of the wet season. A sketch map of those areas to be seeded and those areas to remain uncovered shall be submitted to the **DPERDLS-Permitting** inspector. The **DPERDLS-Permitting** inspector may require seeding of additional areas in order to protect surface waters, adjacent properties, or drainage facilities.
6. At final site stabilization, all disturbed areas not otherwise vegetated or stabilized shall be seeded and mulched (see Section D.2.4.5).

**Design and Installation Specifications**

1. The best **time to seed** is April 1 through June 30, and September 1 through October 15. Areas may be seeded between July 1 and August 31, but irrigation may be required in order to grow adequate cover. Areas may also be seeded during the winter months, but it may take several months to develop a dense groundcover due to cold temperatures. The application and maintenance of mulch is critical for winter seeding.
2. To prevent seed from being washed away, confirm that **all required surface water control measures** have been installed.
3. The **seedbed** should be firm but not compacted because soils that are well compacted will not vegetate as quickly or thoroughly. Slopes steeper than 3H:1V shall be surface roughened. Roughening can be accomplished in a variety of ways, but the typical method is track walking, or driving a crawling tractor up and down the slope, leaving cleat imprints parallel to the slope contours.
4. In general, 10-20-20 N-P-K (nitrogen-phosphorus-potassium) **fertilizer** may be used at a rate of 90 pounds per acre. Slow-release fertilizers are preferred because they are more efficient and have fewer environmental impacts. It is recommended that areas being seeded for final landscaping conduct soil tests to determine the exact type and quantity of fertilizer needed. This will prevent the over-application of fertilizer. Disturbed areas within 200 feet of water bodies and wetlands must use slow-release low-phosphorus fertilizer (typical proportions 3-1-2 N-P-K).
5. The following requirements apply to **mulching**:
  - a) Mulch is always required for seeding slopes greater than 3H:1V (see Section D.2.1.2.2).

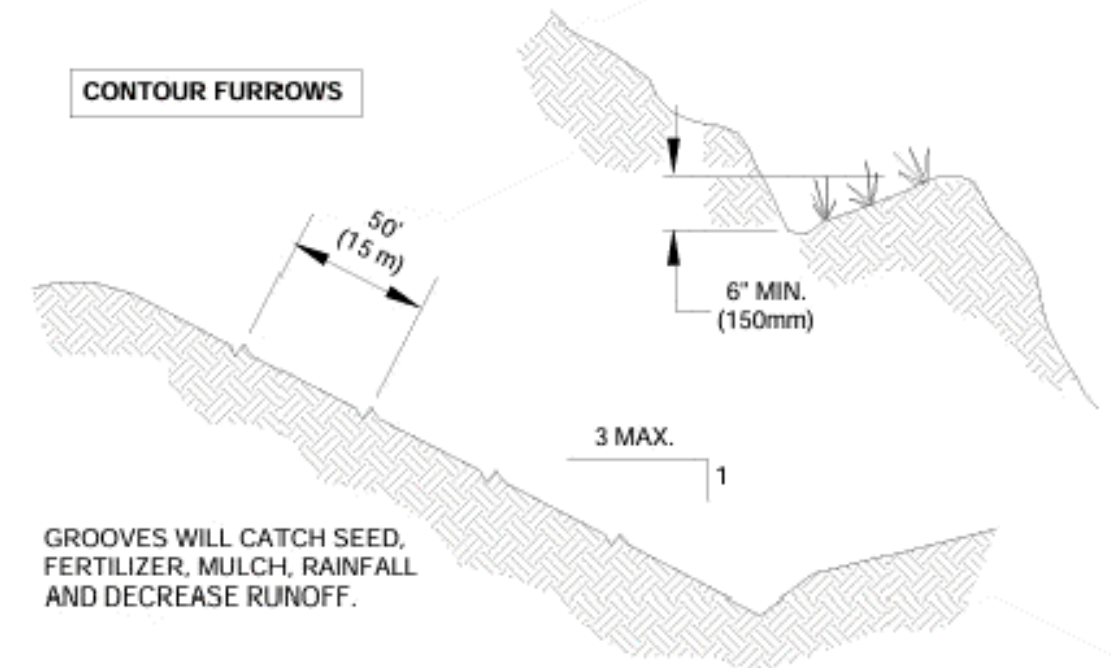
**FIGURE D.2.1.2.A SURFACE ROUGHENING**

**TRACKING**



"TRACKING" WITH MACHINERY UP AND DOWN THE SLOPE PROVIDES GROOVES THAT WILL CATCH SEED, RAINFALL AND REDUCE RUNOFF.

**CONTOUR FURROWS**



GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

**SURFACE ROUGHENING BY TRACKING AND CONTOUR FURROWS**  
 NTS



**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits.
4. Install catch basin protection, if required.
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14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

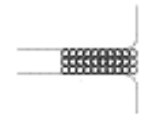
Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**D.2.1.4.1 STABILIZED CONSTRUCTION ENTRANCE**

Code: CE

Symbol:



**Purpose**

Construction entrances are stabilized to reduce the amount of sediment transported onto paved roads by motor vehicles or runoff by constructing a stabilized pad of quarry spalls at entrances to construction sites.

**Conditions of Use**

Construction entrances shall be stabilized wherever traffic will be leaving a construction site and traveling on paved roads or other paved areas within 1,000 feet of the site. Access and exits shall be limited to one route if possible, or two for linear projects such as roadway where more than one access/exit is necessary for maneuvering large equipment.

For residential construction provide stabilized construction entrances for each residence in addition to the main subdivision entrance. Stabilized surfaces shall be of sufficient length/width to provide vehicle access/parking, based on lot size/configuration.

**Design and Installation Specifications**

1. See Figure D.2.1.4.A for details.
2. A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the following standards:

Grab Tensile Strength (ASTM D4632)	200 lbs min.
Grab Tensile Elongation (ASTM D4632)	30% max.(woven)
Puncture Strength (ASTM D6241)	495 lbs min.
AOS (ASTM D4751)	20-45 (U.S. standard sieve size)

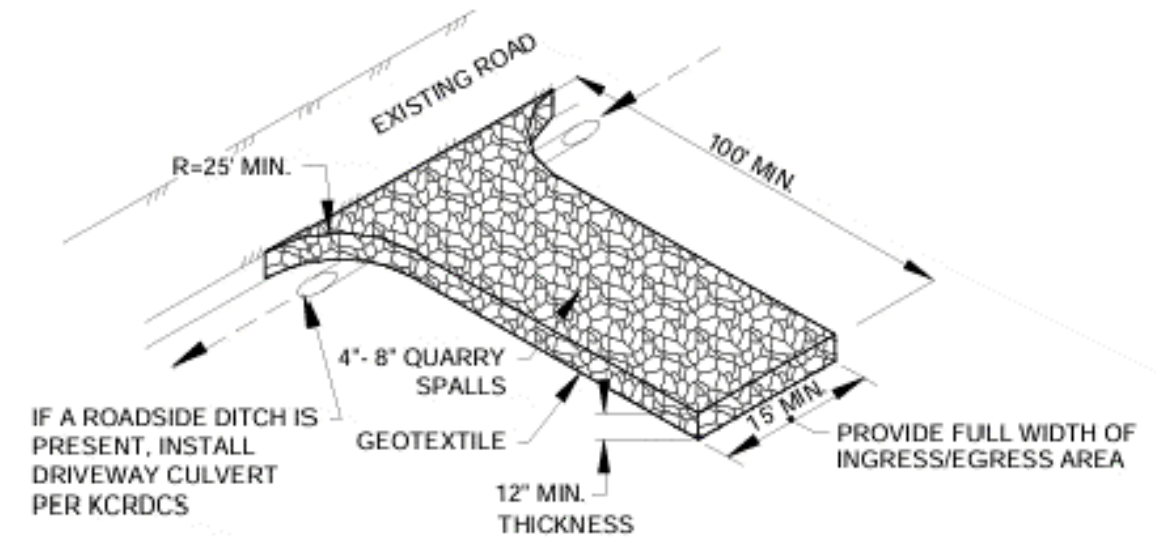
3. Do not use crushed concrete, cement, or calcium chloride for construction entrance stabilization because these products raise pH levels in stormwater and concrete discharge to surface waters of the State is prohibited.
4. Hog fuel (wood based mulch) may be substituted for or combined with quarry spalls in areas that will not be used for permanent roads. The effectiveness of hog fuel is highly variable, but it has been used successfully on many sites. It generally requires more maintenance than quarry spalls. Hog fuel is not recommended for entrance stabilization in urban areas. The inspector may at any time require the use of quarry spalls if the hog fuel is not preventing sediment from being tracked onto pavement or if the hog fuel is being carried onto pavement. Hog fuel is prohibited in permanent roadbeds because organics in the subgrade soils cause difficulties with compaction.
5. Fencing (see Section D.2.1.1) shall be installed as necessary to restrict traffic to the construction entrance.
6. Whenever possible, the entrance shall be constructed on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance.

**Maintenance Standards**

1. Quarry spalls (or hog fuel) shall be added if the pad is no longer in accordance with the specifications.

2. If the entrance is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include street sweeping, an increase in the dimensions of the entrance, or the installation of a wheel wash. If washing is used, it shall be done on an area covered with crushed rock, and wash water shall drain to a sediment trap or pond.
3. Any sediment that is tracked onto pavement shall be removed immediately by sweeping. The sediment collected by sweeping shall be removed or stabilized on site. The pavement shall not be cleaned by washing down the street, except when sweeping is ineffective and there is a threat to public safety. If it is necessary to wash the streets, a small sump must be constructed. The sediment would then be washed into the sump where it can be controlled. Wash water must be pumped back onto the site and cannot discharge to systems tributary to surface waters.
4. Any quarry spalls that are loosened from the pad and end up on the roadway shall be removed immediately.
5. If vehicles are entering or exiting the site at points other than the construction entrance(s), fencing (see Section D.2.1.1) shall be installed to control traffic.

**FIGURE D.2.1.4.A STABILIZED CONSTRUCTION ENTRANCE**



**NOTES:**

- PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
- IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.





**King County**  
Department of Permitting  
and Environmental Review

**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits.
4. Install catch basin protection, if required.
5. Grade and install construction entrance(s)
6. Install perimeter protection (silt fence, brush barrier, etc.).
7. Construct sediment pond and traps, if required.
8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Maintain erosion control measures in accordance with King County standards and manufacturer's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

TABLE D.2.1.2.A MULCH STANDARDS AND GUIDELINES			
Mulch Material	Quality Standards	Application Rates	Remarks
Straw	Air-dried; free from undesirable seed and coarse material	2"-3" thick; 5 bales per 1000 sf or 2-3 tons per acre	Cost-effective protection when applied with adequate thickness. Hand-application generally requires greater thickness than blown straw. Straw should be crimped to avoid wind blow. The thickness of straw may be reduced by half when used in conjunction with seeding.
Wood Fiber Cellulose	No growth inhibiting factors	Approx. 25-30 lbs per 1000 sf or 1500-2000 lbs per acre	Shall be applied with hydromulcher. Shall not be used without seed and tackifier unless the application rate is at least doubled. Some wood fiber with very long fibers can be effective at lower application rates and without seed or tackifier.
Compost	No visible water or dust during handling. Must be purchased from supplier with Solid Waste Handling Permit.	2" thick min.; approx. 100 tons per acre (approx. 1.5 cubic feet per square yard)	More effective control can be obtained by increasing thickness to 3" (2.25 cubic feet per square yard). Excellent mulch for protecting final grades until landscaping because it can be directly seeded or tilled into soil as an amendment. Compost may not be used in Sensitive Lake <sup>7</sup> basins unless analysis of the compost shows no phosphorous release.
Hydraulic Matrices (Bonded Fiber Matrix)	This mulch category includes hydraulic slurries composed of wood fiber, paper fiber or a combination of the two held together by a binding system. The BFM shall be a mixture of long wood fibers and various bonding agents.	Apply at rates from 3,000 lbs per acre to 4,000 lbs per acre and based on manufacturers recommendations	The BFM shall not be applied immediately before, during or immediately after rainfall so that the matrix will have an opportunity to dry for 24 hours after installation. Application rates beyond 2,500 pounds may interfere with germination and are not usually recommended for turf establishment. BFM is generally a matrix where all fiber and binders are in one bag, rather than having to mix components from various manufacturers to create a matrix. BFMs can be installed via helicopter in remote areas. They are approximately \$1,000 per acre cheaper to install.
Chipped Site Vegetation	Average size shall be several inches.	2" minimum thickness	This is a cost-effective way to dispose of debris from clearing and grubbing, and it eliminates the problems associated with burning. Generally, it should not be used on slopes above approx. 10% because of its tendency to be transported by runoff. It is not recommended within 200 feet of surface waters. If seeding is expected shortly after mulch, the decomposition of the chipped vegetation may tie up nutrients important to grass establishment.

<sup>7</sup> Sensitive lake means a lake that has proved to be particularly prone to eutrophication; the County gives this designation when an active input plan has been adopted to limit the amount of phosphorous entering the lake.

**D.2.1.2.4 PLASTIC COVERING**

Code: PC

Symbol:



**Purpose**

Plastic covering provides immediate, short-term erosion protection to slopes and disturbed areas.

**Conditions of Use**

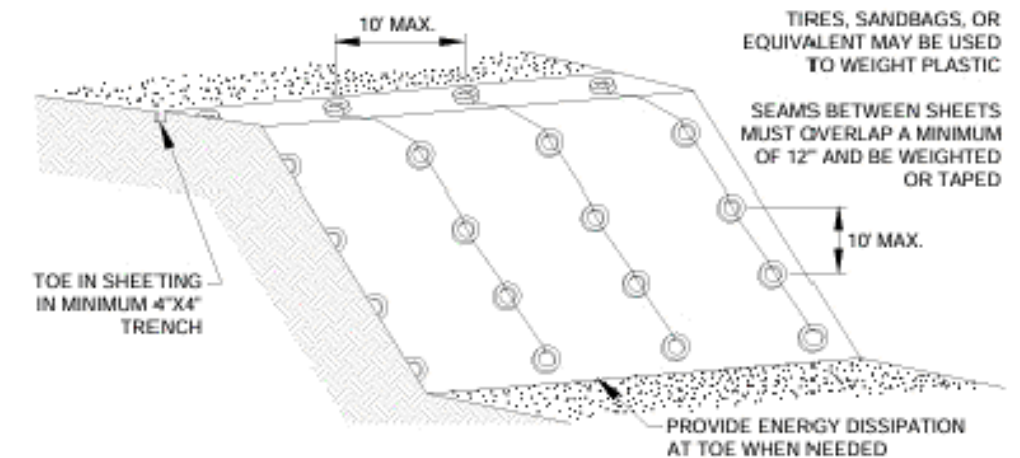
1. Plastic covering may be used on disturbed areas that require cover measures for less than 30 days.
2. Plastic is particularly useful for protecting cut and fill slopes and stockpiles. *Note: The relatively rapid breakdown of most polyethylene sheeting makes it unsuitable for long-term applications.*
3. Clear plastic sheeting may be used over newly-seeded areas to create a greenhouse effect and encourage grass growth. Clear plastic should not be used for this purpose during the summer months because the resulting high temperatures can kill the grass.
4. Due to rapid runoff caused by plastic sheeting, this method shall not be used upslope of areas that might be adversely impacted by concentrated runoff. Such areas include steep and/or unstable slopes.

*Note: There have been many problems with plastic, usually attributable to poor installation and maintenance. However, the material itself can cause problems, even when correctly installed and maintained, because it generates high-velocity runoff and breaks down quickly due to ultraviolet radiation. In addition, if the plastic is not completely removed, it can clog drainage system inlets and outlets. It is highly recommended that alternatives to plastic sheeting be used whenever possible and that its use be limited.*

**Design and Installation Specifications**

1. See Figure D.2.1.2.D for details.
2. Plastic sheeting shall have a minimum thickness of 0.06 millimeters.
3. If erosion at the toe of a slope is likely, a gravel berm, riprap, or other suitable protection shall be installed at the toe of the slope in order to reduce the velocity of runoff.

**FIGURE D.2.1.2.D PLASTIC COVERING**





**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits.
4. Install catch basin protection, if required.
5. Grade and install construction entrance(s)
6. Install perimeter protection (silt fence, brush barrier, etc.).
7. Construct sediment pond and traps, if required.
8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Maintain erosion control measures in accordance with King County standards and manufacturer's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**D.3.4.1 MARK CLEARING LIMITS / MINIMIZE CLEARING**

**Purpose**

Minimizing clearing is the most effective method of erosion control. Undisturbed vegetation intercepts and slows rainwater. Plant roots hold soil in place, and dead vegetation on the ground acts as a mulch. Marking clearing limits around existing or proposed flow control BMP areas helps protect their infiltrative soil characteristics from construction activity.

**Applications**

Clearing limits shall be marked and clearing minimized on any *site* where significant areas of undisturbed vegetation will be retained, or where existing or proposed flow control BMP areas require protection from construction activities.

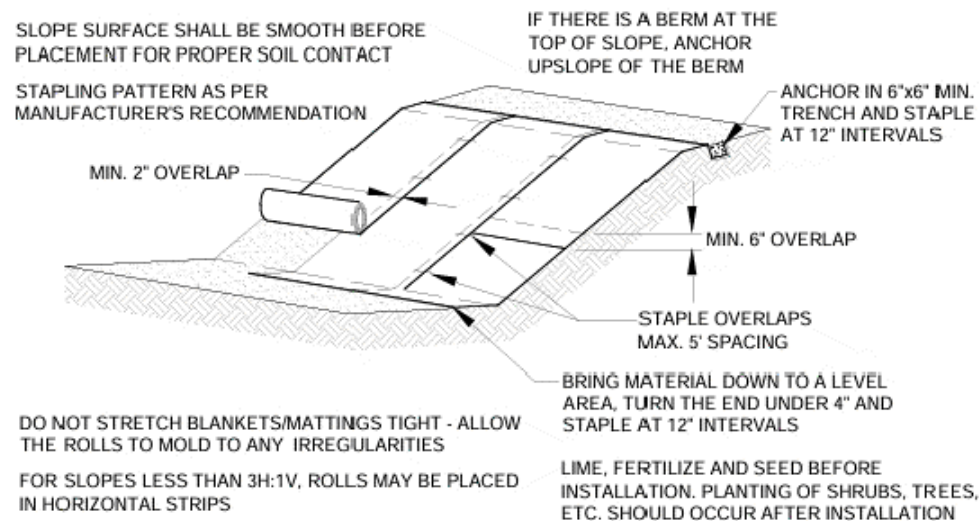
**Design Specifications**

1. Minimizing clearing should be incorporated into the *site* design. Clearing limits must be marked on the small site ESC plan.
2. On the ground, clearing limits must be clearly marked with brightly colored tape or plastic or metal safety fencing. If tape is used, it should be supported by vegetation or stakes, and should be about 3 to 6 feet high and highly visible. Flow control BMP areas to be protected should be marked with brightly colored silt fence to add sedimentation protection. Equipment operators should be informed of areas of vegetation that are to be left undisturbed and flow control BMP areas that are to be protected.
3. The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum extent practicable. If it is not practicable to retain the duff layer in place, it should be stockpiled on-site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities.

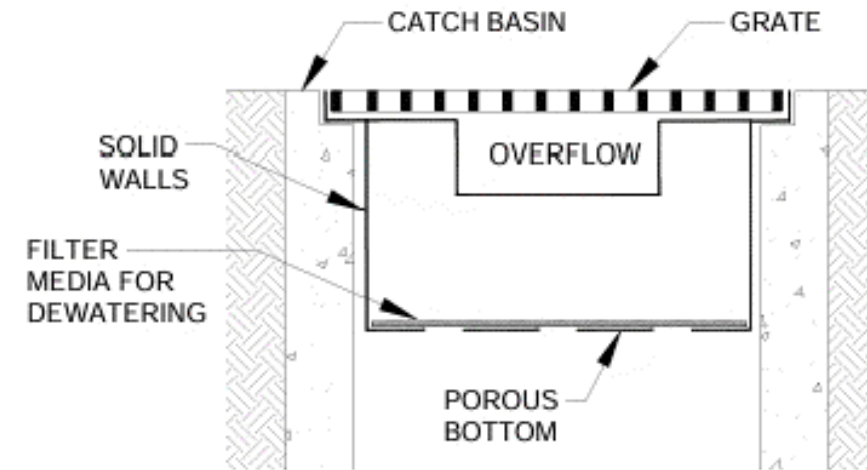
**Maintenance**

Fencing shall be inspected regularly and repaired or replaced as needed.

**FIGURE D.2.1.2.C SLOPE INSTALLATION**



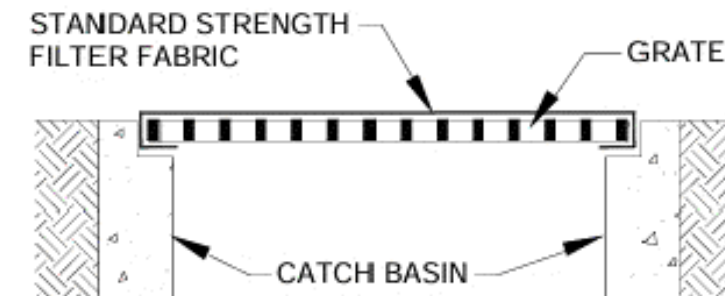
**FIGURE D.2.1.5.F CATCH BASIN INSERT**



**NOTE: THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS:**

- A MIN. 0.5 C.F. OF STORAGE,
- THE MEANS TO DEWATER THE STORED SEDIMENT,
- AN OVERFLOW, AND
- CAN BE EASILY MAINTAINED.

**FIGURE D.2.1.5.E FILTER FABRIC PROTECTION**



**NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.**



**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
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8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Maintain erosion control measures in accordance with King County standards and manufacturer's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

2. The geotextile used must meet the standards listed below. A copy of the manufacturer's fabric specifications must be available on site.

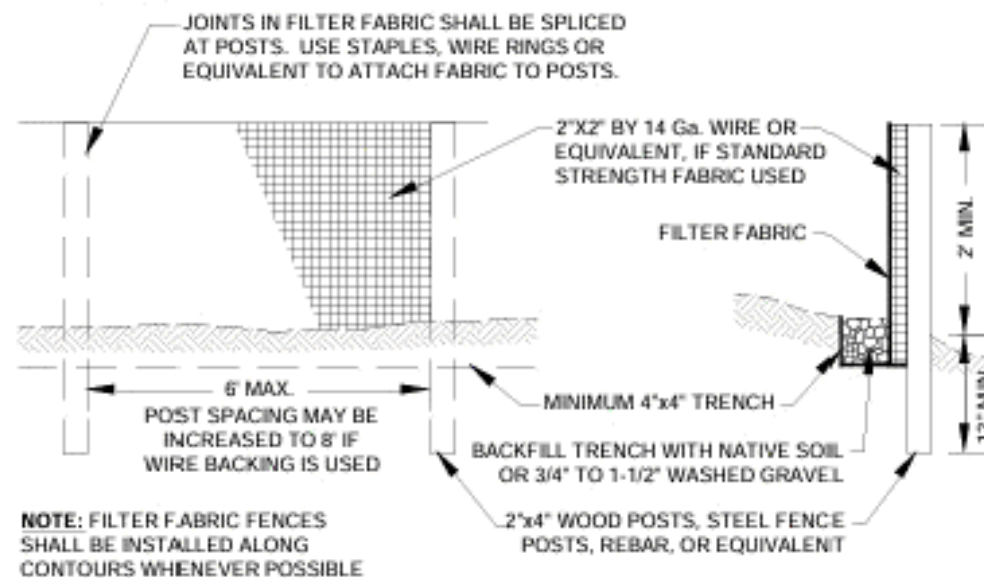
AOS (ASTM D4751)	30-100 sieve size (0.60-0.15 mm) for slit film 50-100 sieve size (0.30-0.15 mm) for other fabrics
Water Permittivity (ASTM D4491)	0.02 sec <sup>-1</sup> minimum
Grab Tensile Strength (ASTM D4632) (see Specification Note 3)	180 lbs. min. for extra strength fabric 100 lbs. min. for standard strength fabric
Grab Tensile Elongation (ASTM D4632)	30% max. (woven)
Ultraviolet Resistance (ASTM D4355)	70% min.

3. Standard strength fabric requires wire backing to increase the strength of the fence. Wire backing or closer post spacing may be required for extra strength fabric if field performance warrants a stronger fence.
4. Where the fence is installed, the slope shall be no steeper than 2H:1V.
5. If a typical silt fence (per Figure D.2.1.3.A) is used, the standard 4 x 4 trench may not be reduced as long as the bottom 8 inches of the silt fence is well buried and secured in a trench that stabilizes the fence and does not allow water to bypass or undermine the silt fence.

**Maintenance Standards**

1. Any damage shall be repaired immediately.
2. If concentrated flows are evident uphill of the fence, they must be intercepted and conveyed to a sediment trap or pond.
3. It is important to check the uphill side of the fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence or remove the trapped sediment.
4. Sediment must be removed when the sediment is 6 inches high.
5. If the filter fabric (geotextile) has deteriorated due to ultraviolet breakdown, it shall be replaced.

**FIGURE D.2.1.3.A SILT FENCE**



**D.2.1.3.1 SILT FENCE**

Code: SF

Symbol: X-X-X-X-X

**Purpose**

Use of a silt fence reduces the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow.

**Conditions of Use**

1. Silt fence may be used downslope of all disturbed areas.
2. Silt fence is not intended to treat concentrated flows, nor is it intended to treat substantial amounts of overland flow. Any concentrated flows must be conveyed through the drainage system to a sediment trap or pond. The only circumstance in which overland flow may be treated solely by a silt fence, rather than by a sediment trap or pond, is when the area draining to the fence is small (see "Criteria for Use as Primary Treatment" in Section D.2.1.3 above).

**Design and Installation Specifications**

1. See Figure D.2.1.3.A and Figure D.2.1.3.B for details.

**D.2.1.1.1 PLASTIC OR METAL FENCE**

Code: FE

Symbol: [Symbol]

**Purpose**

Fencing is intended to (1) restrict clearing to approved limits; (2) prevent disturbance of critical areas, their buffers, and other areas required to be left undisturbed; (3) limit construction traffic to designated construction entrances or roads; and (4) protect areas where marking with survey tape may not provide adequate protection.

**Conditions of Use**

To establish clearing limits, plastic or metal fence may be used:

1. At the boundary of critical areas, their buffers, and other areas required to be left uncleared.
2. As necessary to control vehicle access to and on the site (see Sections D.2.1.4.1 and D.2.1.4.2).

**Design and Installation Specifications**

1. The fence shall be designed and installed according to the manufacturer's specifications.
2. The fence shall be at least 3 feet high and must be highly visible.
3. The fence shall not be wired or stapled to trees.

**Maintenance Requirements**

1. If the fence has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.
2. Disturbance of a critical area, critical area buffer, native growth retention area, or any other area required to be left undisturbed shall be reported to the County for resolution.



**Residential TESC Template**

**RECOMMENDED CONSTRUCTION SEQUENCE**

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7. Construct sediment pond and traps, if required.
8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Maintain erosion control measures in accordance with King County standards and manufacturer's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if appropriate.

**Engineering / Drainage Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Clearing / Grading Approval**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

SECTION C.2 FLOW CONTROL BMPs

TABLE C.2.1.B SELECTED NATIVE VEGETATION, SIZE, AND SPACING REQUIREMENTS				
Species	Type	Sun and Moisture Preferences	Planted Size	Spacing
Tall Oregon grape ( <i>Berberis aquifolium</i> )	shrub	Sun to shade, dry to moist soil	1 gallon	4' o.c.
Snowberry ( <i>Symphoricarpos albus</i> )	shrub	Sun to shade, dry to wet soil	1 gallon, 30-36"	4' o.c.
Service berry ( <i>Amelanchier alnifolia</i> )	shrub	Sun to shade, dry to wet soil	1 gallon	6' o.c.
Indian plum ( <i>Oemleria cerasiformis</i> )	shrub	Sun to shade, moist soil	1 gallon	4' o.c.
Twinberry ( <i>Lonicera involucrata</i> )	shrub	Sun to partial shade, moist soil	1 gallon	4' o.c.
<b>GROUND COVER</b>				
Evergreen huckleberry ( <i>Vaccinium ovatum</i> )	groundcover	Sun to partial shade, moist soil	1 gallon	2' o.c.
Kinnikinnick ( <i>Arctostaphylos uva-ursa</i> )	groundcover	Sun to partial shade, dry soil	1 gallon	2' o.c.
Salal ( <i>Gaultheria shallon</i> )	groundcover	Sun to shade, dry to moist soil	1 gallon	18" o.c.
Low Oregon grape ( <i>Mahonia repens</i> )	groundcover	Sun to partial shade, dry to moist soil	9-12'	18" o.c.
Sword fern ( <i>Polystichum munitum</i> )	groundcover	Sun to deep shade, dry to moist soil	2 gallon	3' o.c.

**C.2.1.9 MAINTENANCE INSTRUCTIONS FOR FULL DISPERSION**

If the full dispersion flow control BMP is proposed for a project, the following maintenance and operation instructions must be recorded as an attachment to the required **declaration of covenant and grant of easement** per Requirement 3 of Section C.1.3.4 (p. C-23). The intent of these instructions is to explain to future property owners, the purpose of the BMP and how it must be maintained and operated. These instructions are intended to be a minimum; DLS-Permitting may require additional instructions based on site-specific conditions. Also, as the County gains more experience with the maintenance and operation of these BMPs, future updates to the instructions will be posted on King County's *Surface Water Design Manual* website.

A reproducible copy of the instructions, prepared for inclusion with the declaration of covenant, is located in Reference M.

**TEXT OF INSTRUCTIONS**

Your property contains a stormwater management flow control BMP (best management practice) called "full dispersion." Full dispersion is a strategy for minimizing the area disturbed by development (i.e., impervious or non-native pervious surfaces, such as concrete areas, roofs, and lawns) relative to native vegetated areas (e.g., forested surface) together with the application of dispersion techniques that utilize the natural capacity of the native vegetated areas to mitigate the stormwater runoff quantity and quality impacts of the developed surfaces. This flow control BMP has two primary components that must be maintained: (1) the devices that disperse runoff from the developed surfaces and (2) the native vegetated area.

**Dispersion Devices**

The dispersion devices used on your property include the following as indicated on the flow control BMP site plan:  splash blocks,  rock pads,  gravel filled trenches,  sheet flow. The size, placement, composition, and downstream flowpaths of these devices as depicted by the flow control BMP site plan and design details must be maintained and may not be changed without written approval either from the King County Water and Land Resources Division or through a future development permit from King County.

Dispersion devices must be inspected annually and after major storm events to identify and repair any physical defects. When native soil is exposed or erosion channels are present, the sources of the erosion or concentrated flow need to be identified and mitigated. Bare spots should be re-vegetated with native