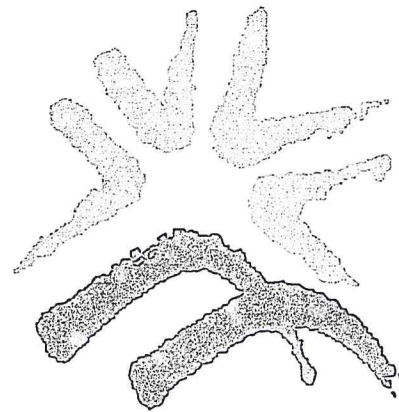


# NEW SUNCADIA, L.L.C.



# SUNCADIA™

RESORT • COMMUNITY • LEGACY

**PROJECT DIRECTORY**

**DEVELOPER**  
 NEW SUNCADIA, LLC  
 770 SUNCADIA TRAIL  
 CLE ELUM, WA 98922  
 PHONE (509) 649-3000  
 FAX (509) 649-3059

**CIVIL ENGINEER / SURVEYOR**  
 ESM CONSULTING ENGINEERS, LLC  
 33400 8TH AVE. S., STE. #205  
 FEDERAL WAY, WA 98003  
 PHONE (253) 838-6113  
 FAX (253) 838-7104  
 LAURA G BARTENHAGEN, PE, LEED AP  
 KEITH COMBS

**GEOTECHNICAL ENGINEER**  
 GOLDER ASSOCIATES INC.  
 18300 NE UNION HILL ROAD, SUITE 200  
 REDMOND, WA 98052-3333  
 PHONE (425) 883-0777  
 FAX (425) 882-5498  
 RICHARD D LUARK, LEG, PE

**AGENCIES**  
 KITTITAS COUNTY DEPARTMENT  
 OF PUBLIC WORKS  
 411 N. RUBY  
 ELLENSBURG, WA 98926

**SURVEY DATA**

**HORIZONTAL DATUM**  
 THE HORIZONTAL DATUM FOR ALL PROJECT MAPPING IS  
 NORTH AMERICAN DATUM OF 1983/1991 (NAD 83/91)  
 (WASHINGTON SOUTH ZONE). THE MAPPING WAS MOVED  
 FROM STATE PLANE COORDINATES TO PROJECT DATUM  
 BASED ON A COMBINED SCALE FACTOR OF 0.999870387.

**VERTICAL DATUM**  
 THE VERTICAL DATUM FOR ALL PROJECT MAPPING IS  
 NGVD 1929, AS PROVIDED BY AMERICAN ENGINEERING  
 CORPORATION.

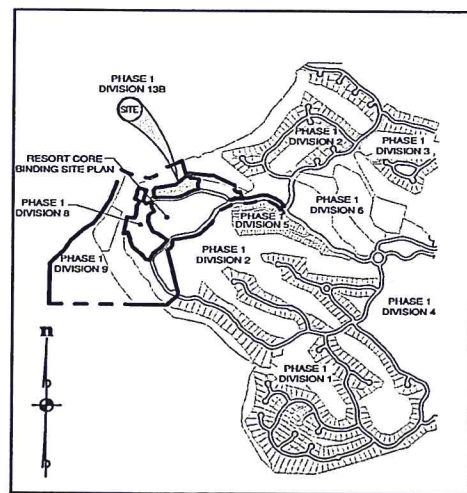
**PROJECT BENCHMARK**  
 BENCH MARK DISK L 525 1982, LOGO MARK - NGS  
 NGVD 29 ELEVATION 2026.05  
 LOCATION: SET IN TOP NORTH END OF WEST CURB  
 OF THE INTERSTATE 90 HIGHWAY OVERPASS ALONG  
 STATE HIGHWAY 903.

## LOT & UTILITY CONSTRUCTION PLANS

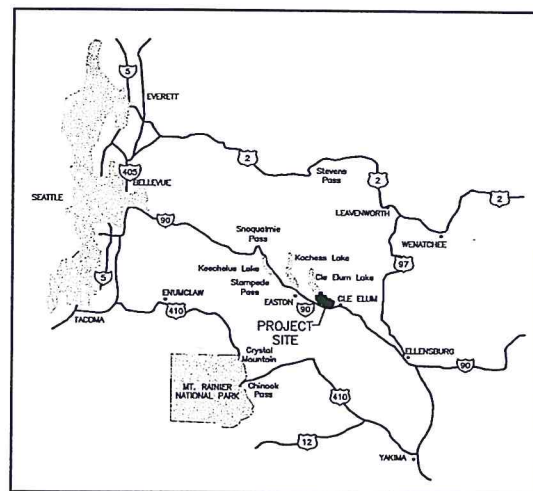
FOR

## OSPREY RIDGE

NOVEMBER 11, 2014



**LOCATION MAP**  
 NOT TO SCALE



**VICINITY MAP**  
 NOT TO SCALE



33400 8th Avenue South., Suite 205  
 Federal Way, Washington 98003  
 Phone: (253) 838-6113  
 ESM JOB NO.: 998-870-014



**SHEET INDEX**

| SHEET NO | DRAWING NAME | DESCRIPTION                              |
|----------|--------------|--|
| 1        | COVER        | COVER SHEET                              |
| 2        | NT-01        | NOTES AND LEGEND                         |
| 3        | SD-01        | STORM DRAINAGE & GRADING PLAN            |
| 4        | SS-01        | L.P.S.S. PLAN & PROFILE & WATER SERVICES |
| 5        | DT-01        | ROAD & STORM DRAINAGE DETAILS            |
| 6        | DT-02        | WATER DETAILS & NOTES                    |
| 7        | DT-03        | L.P.S.S. DETAILS & NOTES                 |
| 8        | ER-01        | T.E.S.C. PLAN                            |
| 9        | ER-02        | T.E.S.C. DETAILS & NOTES                 |

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

File: \\emsd\enr\1282-009\007\_data\PH1\_1282\_V1-01.dwg  
 Plot Date: 11/11/2014 4:54:20 PM  
 Plot Size: 11.0 x 17.0 in

### LEGEND

|                                   | EXISTING | PROPOSED    |
|-----------------------------------|----------|-------------|
| ROADWAY CENTERLINE                | ---      | ---         |
| PROPERTY / LOT LINE               | ---      | ---         |
| RIGHT-OF-WAY                      | ---      | ---         |
| BOUNDARY LINE                     | ---      | ---         |
| EASEMENT LINE                     | ---      | ---         |
| AERIAL CONTOUR                    | ~ ~ ~    | ~ ~ ~       |
| CONTOUR                           | ~ ~ ~    | --- 812 --- |
| WETLAND WITH BUFFER               |          |             |
| STREAM WITH BUFFER                |          |             |
| TOP OF SLOPE                      | -----    | -----       |
| CATCH BASIN TYPE 1 W/GRATE        |          |             |
| CATCH BASIN TYPE 1 W/SOLID LID    |          |             |
| CATCH BASIN TYPE 2 W/GRATE        |          |             |
| CATCH BASIN TYPE 2 W/SOLID LID    |          |             |
| ROOF LEVEL SPREADER               |          |             |
| STORM DRAIN PIPE                  | ---      | ---         |
| DRAINAGE SWALE                    | ---      | ---         |
| SANITARY SEWER MANHOLE            |          |             |
| SANITARY SEWER CLEANOUT           |          |             |
| SANITARY SEWER CAP                | ---      | ---         |
| SANITARY SEWER PIPE               | ---      | ---         |
| SANITARY SEWER FORCE MAIN         | ---      | ---         |
| 6" DIA SINGLE SANITARY SIDE SEWER | ---      | ---         |
| FIRE HYDRANT (3 PORT)             |          |             |
| GATE VALVE                        |          |             |
| BUTTERFLY VALVE                   |          |             |
| CONCRETE BLOCKING                 |          |             |
| WATER CAP                         |          |             |
| DOMESTIC / IRRIGATION METER       |          |             |
| BLOWOFF ASSEMBLY                  |          |             |
| AIR-VAC ASSEMBLY                  |          |             |
| CROSS                             |          |             |
| TEE                               |          |             |
| 90° BEND                          |          |             |
| WATER PIPE                        | ---      | ---         |
| GUARD POST (BOLLARD)              |          |             |

| T.E.S.C.         | EXISTING | PROPOSED |
|------------------|----------|----------|
| SEDIMENT BARRIER |          |          |
| CLEARING LIMIT   |          |          |

|                      | EXISTING | PROPOSED |
|----------------------|----------|----------|
| ANCHOR               |          |          |
| POWER POLE           |          |          |
| STREET LIGHT         |          |          |
| POWER VAULT          |          |          |
| TELE. VAULT          |          |          |
| FENCE                |          |          |
| SIGN                 |          |          |
| MAILBOX              |          |          |
| BARRICADE            |          |          |
| TELE. MANHOLE        |          |          |
| GAS VALVE            |          |          |
| GAS METER            |          |          |
| JOINT UTILITY TRENCH |          |          |

| SURVEY |                           |   |
|--------|---------------------------|---|
|        | SET HUB AND TACK          | ALDER   |
|        | FOUND HUB AND TACK        | CEDAR   |
|        | SET REBAR AND CAP         | COTTONWOOD                                    |
|        | FOUND REBAR AND CAP       | POPLAR  |
|        | SET PK-DRILL HOLE         | APPLE   |
|        | FOUND PK-DRILL HOLE       | FIR   |
|        | CALC CLOSING CORNER       | WILLOW  |
|        | FOUND CLOSING CORNER      | SPRUCE  |
|        | FOUND MEANDER CORNER      | MADRONA                                       |
|        | CALC MEANDER CORNER       | OAK   |
|        | PROPOSED MONUMENT IN CASE | HEMLOCK                                       |
|        | FOUND MONUMENT IN CASE    | MAPLE   |
|        | PROPOSED SURFACE MONUMENT | PINE  |
|        | FOUND SURFACE MONUMENT    |   |
|        | CALC SECTION CORNER       | L ARC LENGTH                                  |
|        | FOUND SECTION CORNER      | △ DELTA                                       |
|        | FOUND QUARTER CORNER      | (R) RADIAL BEARING < >                        |
|        | CALC QUARTER CORNER       | (NR) NON-RADIAL BEARING                       |
|        | CENTER SECTION            | S.S.E. SANITARY SEWER EASEMENT                |
|        | TAX LOT                   | P.S.D.E. PRIVATE STORM DRAINAGE EASEMENT      |
|        | FOUND WITNESS CORNER      | FF ELEVATION OF MINIMUM BASEMENT FINISH FLOOR |
|        | CALC WITNESS CORNER       | S.D.E. STORM DRAINAGE EASEMENT                |

### EARTHWORK QUANTITIES

|          |          |
|----------|----------|
| CUT      | 6,065 CY |
| FILL     | 8,100 CY |
| NET FILL | 2,035 CY |

NOTE: EARTHWORK QUANTITIES ARE "NEAT LINE" ONLY AND DO NOT ACCOUNT FOR SHRINK OR SWELL FACTORS. FURTHERMORE, EXISTING TOPOGRAPHY IS A COMBINATION OF FIELD AND AERIAL INFORMATION. AERIAL TOPOGRAPHY MAY VARY FROM FIELD CONDITIONS. CONTRACTOR SHALL CALCULATE EARTHWORK VOLUMES FOR BID PURPOSES AND VERIFY EXISTING GRADES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

### SOIL CONDITION AND GRADING NOTES

- EXCAVATION, TRENCHING, SUBGRADE PREPARATION, FILL PLACEMENT AND COMPACTION AND ALL SOIL WORK IN GENERAL SHALL BE CONDUCTED IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT COMPLETED BY GOLDER ASSOCIATES INC. AND DATED FEBRUARY 11, 2008.
- FILL SHALL BE BENCHED ONTO SLOPES THAT EXCEED 4H:1V.
- ALL UTILITY TRENCHES AND BORROW PITS SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST METHOD.
- GROUNDWATER CONDITIONS VARY SEASONALLY. THE CONTRACTOR IS REQUIRED TO REVIEW THE PROJECT GEOTECHNICAL ENGINEERING REPORT, PERFORM A SITE VISIT, AND OTHERWISE COMMUNICATE WITH THE GEOTECHNICAL ENGINEER TO FAMILIARIZE HIMSELF WITH GROUNDWATER CONDITIONS ON-SITE. DEWATERING OF UTILITY TRENCHES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND INCORPORATED INTO THE VARIOUS BID ITEMS. CONTRACTOR SHALL DEVELOP A DEWATERING PLAN AS NECESSARY. DEWATERING MAY BE ACCOMPLISHED BY PUMPING FROM A SUMP IN THE UTILITY TRENCH OR BY WELL POINTS.

### ENGINEER'S CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (LATEST EDITION), KITITAS COUNTY, AND NEW SUNCADIA, LLC STANDARDS AND SPECIFICATIONS. THE STATE STANDARD SPECIFICATIONS AND PLANS SHALL BE MAINTAINED BY THE CONTRACTOR ON SITE DURING THE ENTIRE PERIOD OF THE CONSTRUCTION. DEFINITIONS NOTED AS "STATE" AND "CONTRACTING AGENCY" SHALL BE AMENDED TO READ "OWNER".
- BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE CONSTRUCTION REPRESENTATIVE AND THE OWNER.
- UTILITIES AND GRADES SHALL BE CONSTRUCTED PER THE APPROVED PLANS. A COPY OF THE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION WORK HOURS FOR THE MPR SHALL BE FROM 7:00 A.M. UNTIL 7:00 P.M. MONDAY THROUGH SATURDAY. WORK ON SUNDAYS WILL BE ON AN EMERGENCY BASIS ONLY. EQUIPMENT SERVICING AND MAINTENANCE TIMES WILL BE UNRESTRICTED.
- EXCEPT FOR EMERGENCY WORK, CONSTRUCTION CONTRACTOR SHALL NOT, ON OR WITHIN FIVE HUNDRED (500) FEET OF ANY NOISE SENSITIVE PROPERTY, OPERATE OR CAUSE TO BE OPERATED ANY EQUIPMENT USED IN CONSTRUCTION, REPAIR, ALTERATION, EXCAVATION, GRADING OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS, OR APPURTENANCES THERETO:
  - WITH SOUND-CONTROL DEVICES LESS EFFECTIVE THAN THOSE PROVIDED ON THE ORIGINAL EQUIPMENT; AND
  - WITH NOISE LEVELS EXCEEDING:
    - 80 DB DURING ANY CALENDAR DAY FOR MORE THAN THREE (3) CONSECUTIVE OR NON-CONSECUTIVE CALENDAR DAYS IN A THREE HUNDRED SIXTY FIVE (365) DAY PERIOD. NOISE DETERMINATION TESTS SHALL BE FOR AT LEAST TEN (10) MINUTES, WITH ANY FOUR (4) TESTS IN CONSECUTIVE OR NON-CONSECUTIVE CLOCK HOURS ABOVE THE 80 DB LEVEL CONSTITUTING AN EXCEEDANCE FOR THAT DAY; OR
    - 90 DB DURING ANY CLOCK HOUR FOR MORE THAN FOUR (4) CONSECUTIVE OR NON-CONSECUTIVE CLOCK HOURS. TESTS SHALL BE FOR AT LEAST TEN (10) MINUTES, WITH ANY SINGLE TEST ABOVE THE 90 DB LEVEL CONSTITUTING AN EXCEEDANCE FOR THAT HOUR; OR
  - A NOISE SENSITIVE PROPERTY SHALL MEAN ANY NON-OWNER PROPERTY OUTSIDE THE MASTER PLANNED RESORT (MPR). THE LOCATION OF SOUND LEVEL MEASUREMENTS SHALL BE ON ANY RECEIVING NOISE-SENSITIVE PROPERTY OUTSIDE THE MPR, PROVIDED THAT EACH TEST IS TAKEN FROM THE SAME PROPERTY, AND THE PROVISIONS IN THIS SECTION SHALL APPLY TO THAT SPECIFIC TEST LOCATION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS AND RIGHT-OF-WAY PERMITS NECESSARY BEFORE INITIATING OFF-SITE WORK WITHIN THE ROAD RIGHT-OF-WAY.
- FRANCHISED UTILITIES OR OTHER INSTALLATIONS THAT ARE NOT SHOWN ON THESE APPROVED PLANS SHALL NOT BE CONSTRUCTED UNLESS A SEPARATE SET OF PLANS HAS BEEN APPROVED BY THE REVIEWING AUTHORITY.
- OPEN CUTTING OF EXISTING ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY KITITAS COUNTY OR OWNER (IF APPROPRIATE) AND NOTED ON THESE APPROVED PLANS. APPROVED CUTS OF EXISTING ROADS SHALL BE PERFORMED WITH A NEAT SAW CUT AND RESTORED PER THE APPROPRIATE JURISDICTIONAL STANDARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF WORKERS AND THE PUBLIC, AND TO PROTECT PROPERTY AND WORK PERFORMED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT INTERRUPTS NORMAL TRAFFIC FLOW REQUIRES AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT/APWA STANDARD SPECIFICATIONS 1-07.23, PUBLIC CONVENIENCE AND SAFETY, SHALL APPLY.
- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, HE IS REQUIRED TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION. THIS INCLUDES SAFETY OF ALL PERSONS AND PROPERTY. THIS RESPONSIBILITY SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR IS TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHOWN ON THE PLAN ARE BASED UPON THE BEST AVAILABLE PUBLIC AND PRIVATE RECORDS, SURFACE UTILITY FEATURES OBTAINED BY SURVEY, AND VERBAL INFORMATION OBTAINED FROM REPRESENTATIVES OF FRANCHISED UTILITIES. NEITHER THE OWNER NOR THE ENGINEER GUARANTEE THE ACCURACY OR COMPLETENESS OF HIS INFORMATION AND ASSUME NO RESPONSIBILITY FOR IMPROPER LOCATIONS OR FAILURE TO SHOW UTILITY LOCATIONS ON THE CONSTRUCTION PLANS.
- THE CONTRACTOR SHALL CALL THE UTILITIES UNDERGROUND LOCATION CENTER (811) FOR FIELD LOCATION OF ALL UTILITIES AND SHALL NOT BEGIN EXCAVATION UNTIL ALL KNOWN UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED WORK HAVE BEEN LOCATED AND MARKED. FOR UTILITIES NOT SUBSCRIBING TO THE UNDERGROUND LOCATION CENTER, THE CONTRACTOR SHALL GIVE INDIVIDUAL NOTICE TO THE UTILITY AS PER SECTION 1-07.17 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.
- PRIOR TO COMMENCING SANITARY SEWER, STORM DRAIN, WATER MAIN AND OTHER UTILITY SERVICES, THE CONTRACTOR SHALL VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF THE PROPOSED TIE-IN LOCATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR ALTERED LOCATION OF PROPOSED TIE-INS TO THE ENGINEER AND PUBLIC AGENCY(S).
- IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE ENGINEER. THE CONTRACTOR SHALL RESTORE THE UTILITY TO ITS EXISTING CONDITION AS PER SECTION 1-07.17 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.
- WHERE THE PLANS CALL FOR UTILITIES TO BE RELOCATED BY OTHERS, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY FOR RELOCATION AND COORDINATE HIS WORK SO AS TO AVOID EXISTING AND FUTURE CONFLICTS.
- DETECTABLE MARKING TAPE SHALL BE INSTALLED ON ALL PIPES.
- AIR AND WATER POLLUTION LAWS - THE ATTENTION OF THE CONTRACTOR IS CALLED TO THE STATUTES OF THE STATE OF WASHINGTON RELATING TO THE POLLUTION OF WATER AND AIR. THE CONTRACTOR SHALL CARRY OUT HIS OPERATIONS AND CONFORM WITH THE APPLICABLE SECTIONS OF THE STATE AND FEDERAL STATUTES AND ALL REGULATIONS ADOPTED PURSUANT THERETO.
- INSPECTION - THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES AND DEPARTMENTS FOR ALL REQUIRED INSPECTIONS PRIOR TO PLACING ANY UTILITIES INTO SERVICE.
- RECORD DRAWINGS - THE CONTRACTOR SHALL MAINTAIN AT THE JOB SITE ONE FULL SIZE, REPRODUCIBLE SET OF THE APPROVED DRAWINGS AND ANY SUPPLEMENTAL DRAWINGS FOR RECORD KEEPING. ALL CHANGES MADE DURING THE COURSE OF CONSTRUCTION INCLUDING INVERT, DEPTHS AND LOCATION OF ALL UTILITIES ENCOUNTERED, ETC., SHALL BE NEATLY MARKED ON THE REPRODUCIBLES. THE MARKED UP REPRODUCIBLES SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE WORK.
- UNAUTHORIZED CHANGES AND USES - CAUTION: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL REQUESTS FOR CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
- PRIOR TO TRANSPORTING ANY OVERSIZED OR OVERWEIGHT HAULS ON WSDOT-MAINTAINED RIGHTS-OF-WAY, THE CONTRACTOR SHALL OBTAIN THE APPROPRIATE PERMIT FROM WSDOT.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

### DRAINAGE SPECIFICATIONS

- STORMWATER STRUCTURES, CULVERTS AND CONDUITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION, LATEST EDITION (ENGLISH UNITS) EXCEPT AS OTHERWISE SPECIFIED. CONSTRUCTION SHALL CONFORM TO THE FOLLOWING SECTIONS OF SUCH STANDARDS SPECIFICATIONS:
  - CULVERTS
  - STORM SEWERS
  - MANHOLES, INLETS, CATCH BASINS, AND DRY WELLS
  - GENERAL PIPE INSTALLATION
  - DRAINAGE STRUCTURES, CULVERTS AND CONDUITS
- BACKFILL MATERIAL SHALL BE BANK RUN GRAVEL FOR TRENCH BACKFILL PER SECTIONS 9-03.19 OF THE WSDOT/APWA STANDARD SPECIFICATIONS, OR, WITH THE APPROVAL OF THE PROJECT GEOTECHNICAL ENGINEER, NATIVE MATERIAL OF SIMILAR CHARACTERISTICS TO BANK RUN GRAVEL FOR TRENCH BACKFILL.
- UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST METHOD.
- ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
- ALL CONCRETE STORM DRAINAGE CATCH BASINS SHALL BE WSDOT/APWA TYPE 1 MEETING THE REQUIREMENTS OF ASTM C-478 (WSDOT STANDARD PLAN B-1) UNLESS OTHERWISE NOTED AS TYPE 1L. TYPE 1L CATCH BASINS SHALL CONFORM WITH WSDOT STANDARD PLAN B-1a EXCEPT THE MAXIMUM DEPTH SHALL BE 6 FEET. ALL CATCH BASIN COVERS SHALL BE PER ASTM A-536 AND WSDOT/APWA STANDARDS. CATCH BASINS DEEPER THAN 6 FEET (RIM TO INVERT) SHALL BE PRECAST TYPE 2 (WSDOT STANDARD PLAN B-1E) MEETING THE REQUIREMENTS OF ASTM C-478 AND JOINTS MEETING THE REQUIREMENTS OF ASTM C-443. TYPE 2 CATCH BASINS SHALL BE EQUIPPED WITH SAFETY STEPS PER WSDOT/APWA STANDARD PLANS. SAFETY STEPS SHALL BE ORIENTED IN THE CATCH BASIN SUCH THAT IMPEDIMENTS TO ENTRY ARE A MINIMUM OF 24-INCHES FROM THE STEPS.
- ALL STORM DRAIN AND CULVERT PIPE (SD) SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING MATERIALS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
  - DUCTILE IRON (DI) - 24-INCH DIAMETER AND SMALLER SHALL BE CLASS 50 CONFORMING TO AWWA C-151 (WHEN SHOWN ON THE PLANS.)
  - CONCRETE (CONC) - 4-INCH THROUGH 12-INCH DIAMETER PIPE SHALL BE NON-REINFORCED, BELL AND SPIGOT WITH RUBBER GASKET JOINTS, CONFORMING TO ASTM C-14 (CLASS 3), OR ASTM C-76 (CLASS 3) FOR 12-INCH TO 36-INCH DIAMETER PIPE.
  - PVC - 4-INCH THROUGH 15-INCH DIAMETER PIPE, SHALL BE IN ACCORDANCE WITH ASTM D-3034 SDR 35 AND ASTM F-679 FOR 18-INCH TO 24-INCH PIPE. ALL JOINTS SHALL BE PUSH-ON RUBBER GASKET CONFORMING TO ASTM F-477.
  - CORRUGATED HIGH DENSITY POLYETHYLENE PIPE WITH SMOOTH INTERIOR, CONFORMING TO AASHTO DESIGNATION M-2945.
  - HIGH DENSITY POLYETHYLENE PIPE (HDPP) SHALL COMPLY WITH THE REQUIREMENTS OF AWWA C906 FOR PIPE MATERIALS AND PRESSURE RATING AS FOLLOWS:
 

| STANDARD PE CODE DESIGNATION       | PE 3408 |
|------------------------------------|---------|
| STANDARD DIMENSION RATIO - MAXIMUM | 32.5    |
| PRESSURE CLASS - MINIMUM           | 50 PSVG |
- ALL PIPE COUPLINGS SHALL BE WATERTIGHT TO 2 PSI (MINIMUM). MINIMUM COVER AT ALL TIMES SHALL BE 1.5 FEET OR 1 FOOT FOR DUCTILE IRON. ADAPTERS AT MANHOLES AND CATCH BASINS SHALL BE WATERTIGHT TO 6.5 PSI (MINIMUM).
  - HELICAL CORRUGATED ALUMINUM PIPE (CAP) SHALL BE 14 GAUGE WITH 2-2/3 INCH X 1/2 INCH CORRUGATIONS MEETING THE REQUIREMENTS OF AASHTO M-129. THE MAXIMUM DEPTH OF COVER IS 10-FEET. HELICAL ALUMINIZED CORRUGATED STEEL PIPE (CSP) SHALL BE 16 GAUGE WITH 2-2/3 INCH X 1/2 INCH CORRUGATIONS MEETING THE REQUIREMENTS OF AASHTO M-167. THE MAXIMUM DEPTH OF COVER IS 10-FEET.
- ALL LOT DRAINAGE IS THE RESPONSIBILITY OF INDIVIDUAL PROPERTY OWNERS PER NEW SUNCADIA DESIGN STANDARDS.

APPROVED FOR CONSTRUCTION

KITITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

#### REVISIONS

| NO. | DESCRIPTION/DATE | BY |
|-----|------------------|----|
|     |                  |    |
|     |                  |    |



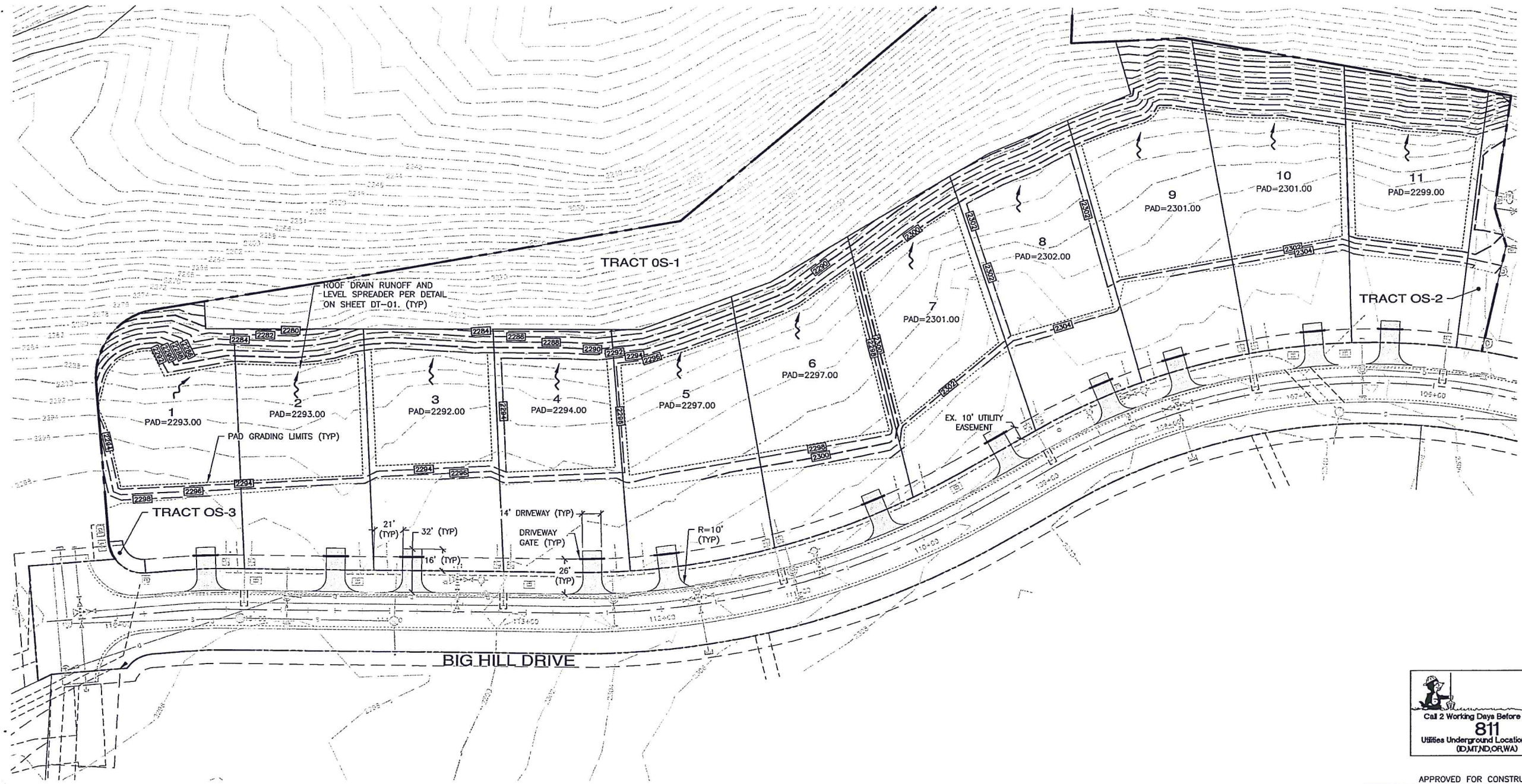
ESM CONSULTING ENGINEERS LLC  
 FEDERAL WAY, WA 98003  
 206.835.1113  
 206.835.1115  
 www.esmctvl.com  
 Lead: Surveying  
 Lead: Project Management  
 Lead: Planning  
 Lead: Landscape Architecture  
 Civil Engineering  
 Public Works  
 Surveying

NEW SUNCADIA LLC  
 OSPREY RIDGE  
 NOTES AND LEGEND  
 WASHINGTON  
 KITITAS COUNTY

JOB NO.: 1282-009-007  
 DWG. NAME: NT-01  
 DESIGNED BY: LGB  
 DRAWN BY: JH  
 CHECKED BY:  
 DATE: 11/11/2014  
 DATE OF PRINT:



SCALE: 1"=40' HORIZ.  
1"=10' VERT.



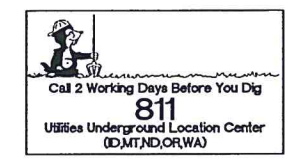
| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM CONSULTING ENGINEERS LLC**  
35400 8th Ave S, Suite 205  
Federal Way, WA 98003  
www.esmcevl.com  
Civil Engineering  
Public Works  
Land Surveying  
Project Management  
Land Planning  
Landscape Architecture

**NEW SUNCADIA LLC**  
**OSPREY RIDGE**  
**STORM DRAINAGE & GRADING PLAN**  
WASHINGTON  
KITITAS COUNTY

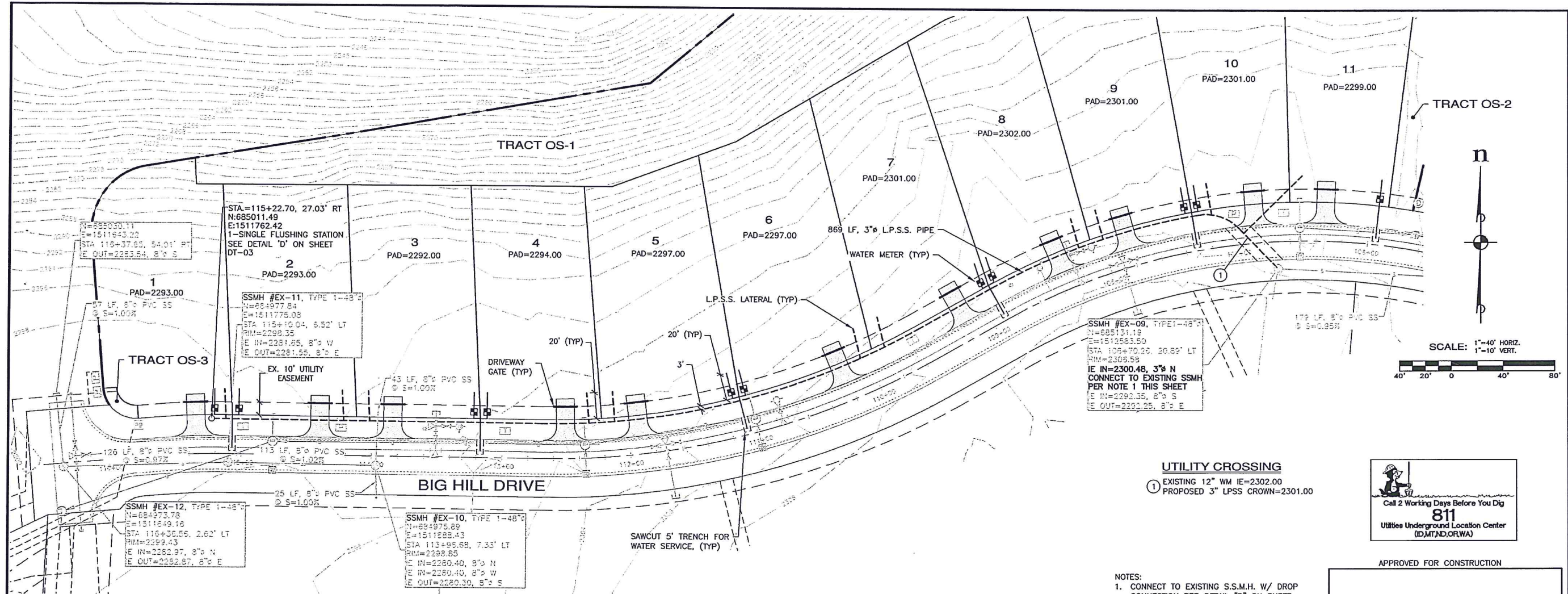
|                |               |
|----------------|---------------|
| JOB NO.:       | 1262-009-007  |
| DWG. NAME:     | SD-01         |
| DESIGNED BY:   | LGB           |
| DRAWN BY:      | JJH           |
| CHECKED BY:    |               |
| DATE:          | 11/11/2014    |
| DATE OF PRINT: |               |
|                | <b>SD-01</b>  |
|                | 3 OF 9 SHEETS |



APPROVED FOR CONSTRUCTION

|                         |      |
|-------------------------|------|
| KITITAS COUNTY ENGINEER | DATE |
|-------------------------|------|

File: \\suncadia\cadd\1262-009-007\1262-009-007\p11\_1336\_sd-01.dwg  
Plotted: 11/17/2014 9:52 AM  
Plotted By: JJJ



SSMH #EX-09, TYPE 1-48"  
 N=625131.19  
 E=1512533.50  
 STA 109+70.00, 20.89' LT  
 RIM=2306.59  
 IE IN=2300.48, 3" N  
 CONNECT TO EXISTING SSMH  
 PER NOTE 1 THIS SHEET  
 IE IN=2292.35, 8" S  
 IE OUT=2292.25, 8" E

STA=115+22.70, 27.03' RT  
 N=685011.49  
 E=1511762.42  
 1-SINGLE FLUSHING STATION  
 SEE DETAIL 'D' ON SHEET  
 DT-03  
 PAD=2293.00

N=625030.11  
 E=1511843.22  
 STA 116+37.85, 34.01' RT  
 IE OUT=2293.54, 8" S

SSMH #EX-12, TYPE 1-48"  
 N=694973.78  
 E=1511649.18  
 STA 116+30.55, 2.62' LT  
 RIM=2299.43  
 IE IN=2292.97, 8" N  
 IE OUT=2292.87, 8" E

SSMH #EX-10, TYPE 1-48"  
 N=694975.89  
 E=1511283.43  
 STA 113+96.69, 7.33' LT  
 RIM=2298.65  
 IE IN=2280.40, 8" N  
 IE IN=2280.40, 8" W  
 IE OUT=2280.30, 8" S

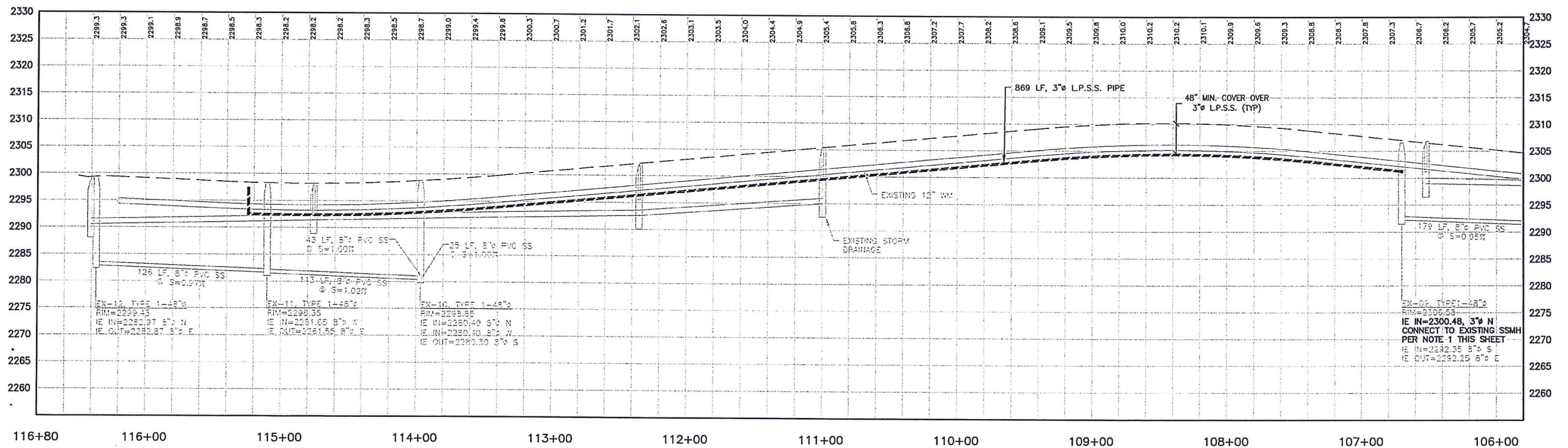
**UTILITY CROSSING**  
 ① EXISTING 12" WM IE=2302.00  
 PROPOSED 3" LPSS CROWN=2301.00

NOTES:  
 1. CONNECT TO EXISTING S.S.M.H. W/ DROP CONNECTION PER DETAIL "D" ON SHEET DT-03. CONTRACTOR TO VERIFY LOCATION, ELEVATION, INVERT AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.



APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



File: \\Energy\ESM-005A\1262\009\007\004\PH.dwg, 1/11/2014 10:02 AM  
 Plotted By: jll

| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM CONSULTING ENGINEERS, LLC**  
 33400 6th Ave S, Suite 205  
 Federal Way, WA 98003  
 FEDERAL WAY, WA 98003  
 (206) 835-1133  
 (206) 337-1100

www.esmcevl.com

Civil Engineering  
 Public Works

Land Surveying  
 Project Management

Land Planning  
 Landscape Architecture

**NEW SUNCADIA LLC**

**OSPREY RIDGE**

KITTITAS COUNTY, P.S.S. PLAN & PROFILE & WATER SERVICES WASHINGTON

JOB NO.: 1262-009-007

DWG. NAME: SS-01

DESIGNED BY: LGB

DRAWN BY: JH

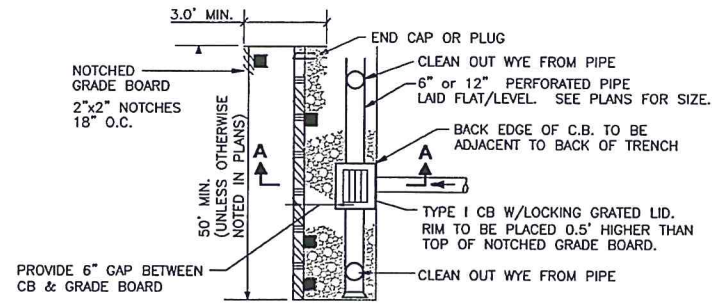
CHECKED BY:

DATE: 11/11/2014

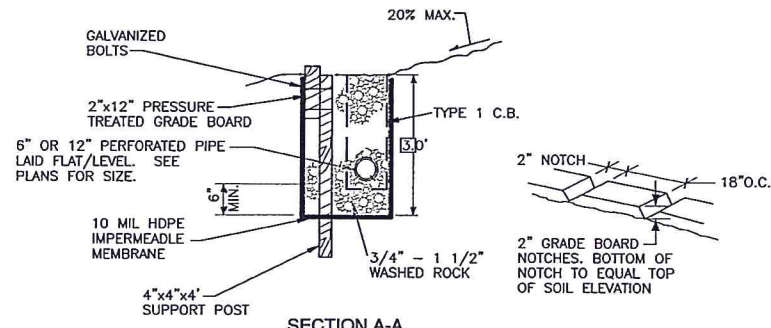
DATE OF PRINT:

**SS-01**

4 OF 9 SHEETS



PLAN

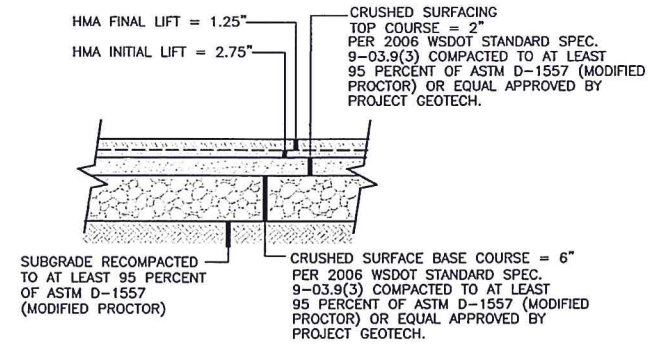


SECTION A-A

NOTES:

1. WHEN TWO CB'S ARE SHOWN IN THE SAME DISPERSION TRENCH, THEY SHALL BE CONNECTED BY A 12" PERFORATED PIPE.
2. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINT DISCHARGE AND/OR EROSION.
3. TRENCHES MAY BE PLACED NO CLOSER THAN 50 FEET TO ONE ANOTHER. (100 FEET ALONG FLOWLINE)
4. TRENCH AND GRADE BOARD MUST BE LEVEL ALIGN TO FOLLOW CONTOURS OF SITE.
5. SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS TO ENSURE GRADE BOARD REMAINS LEVEL.

**A** LEVEL SPREADER  
NOT TO SCALE



**C** BIG HILL DRIVE  
PAVEMENT SECTION DETAIL  
NOT TO SCALE

| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM** CONSULTING ENGINEERS LLC  
 FEDERAL HWY 1015  
 FEDERAL WAY, WA 98003  
 (206) 834-1113  
 (206) 241-1100  
 www.esmcivil.com  
 Land Surveying  
 Project Management  
 Landscape Architecture  
 Civil Engineering  
 Public Works

NEW SUNCADIA LLC  
 OSPREY RIDGE  
 ROAD & STORM DRAINAGE DETAILS  
 WASHINGTON  
 KITTITAS COUNTY

|                |              |
|----------------|--------------|
| JOB NO.:       | 1262-009-007 |
| DWG. NAME:     | DT-01        |
| DESIGNED BY:   | LGB          |
| DRAWN BY:      | JJH          |
| CHECKED BY:    |              |
| DATE:          | 11/11/2014   |
| DATE OF PRINT: |              |

DT-01  
 5 OF 9 SHEETS

APPROVED FOR CONSTRUCTION

\_\_\_\_\_  
 KITTITAS COUNTY ENGINEER      DATE

File: \\esmf\ENR\ESM-095\1262\_009\007\plan\PH1\_139\DT-01.dwg  
 Plotted: 11/11/2014 10:59 AM  
 Plotted By: Jeff Rice

### WATER MAIN CONSTRUCTION SPECIFICATIONS

1. WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND WASHINGTON STATE CHAPTER OF THE AMERICAS PUBLIC WORKS ASSOCIATION, LATEST EDITION (ENGLISH UNITS.) MATERIALS SHALL CONFORM TO APWA/WSDOT STANDARD SPECIFICATIONS, SECTION 9-30, EXCEPT AS MODIFIED HEREIN. CONSTRUCTION SHALL CONFORM WITH THE FOLLOWING SECTIONS OF STANDARD SPECIFICATIONS:

- 7- 9 PIPE AND FITTINGS FOR WATER MAINS
- 7-10 TRENCH EXCAVATION, BEDDING AND BACKFILL FOR WATER MAINS
- 7-11 PIPE INSTALLATION FOR WATER MAINS
- 7-12 VALVES FOR WATER MAINS
- 7-13 HYDRANTS
- 7-14 SERVICE CONNECTIONS

2. SERVICE CONNECTION CONSTRUCTION SHALL BE IN ACCORDANCE WITH WATER MAIN PIPE 4-INCH THROUGH 12-INCH DIAMETER SHALL BE CLASS 150 (DR18), POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF AWWA C-900. WATER MAIN PIPE LARGER THAN 12-INCH DIAMETER SHALL BE CLASS 165 (DR25), POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF AWWA C-905. PVC PIPE SHALL HAVE THE SAME OUTSIDE DIMENSIONS AS DUCTILE IRON PIPE. JOINTS SHALL BE PUSH-ON TYPE MEETING THE REQUIREMENTS OF ASTM D-3139 USING A RESTRAINED RUBBER GASKET CONFORMING TO ASTM F-477. THE MINIMUM DEPTH OF COVER SHALL BE 48".

3. PVC WATER MAINS SHALL HAVE BLUE DETECTABLE UNDERGROUND UTILITY MARKING TAPE INSTALLED NEAR THE SURFACE DIRECTLY ABOVE THE WATER MAIN. THE MARKING TAPE SHALL BE 5 MIL OVERALL THICKNESS SOLID ALUMINUM CORE, 2 MIL CLEAR FILM DETECTABLE UNDERGROUND UTILITY MARKING TAPE OR EQUIVALENT DETECTABLE.

4. FITTINGS FOR PVC PIPE SHALL BE NEW DUCTILE IRON CONFORMING TO AWWA C-110 AND C-111 OR AWWA C-153 AND SHALL BE CEMENT MORTAR LINED CONFORMING TO AWWA C-104.

5. ALL GATE VALVES SMALLER THAN 12-INCH DIAMETER SHALL BE RESILIENT WEDGE CONFORMING TO AWWA C-509. VALVES 12-INCH DIAMETER AND LARGER SHALL BE BUTTERFLY TYPE CONFORMING TO AWWA C-504 AND SUITABLE FOR DIRECT BURIAL.

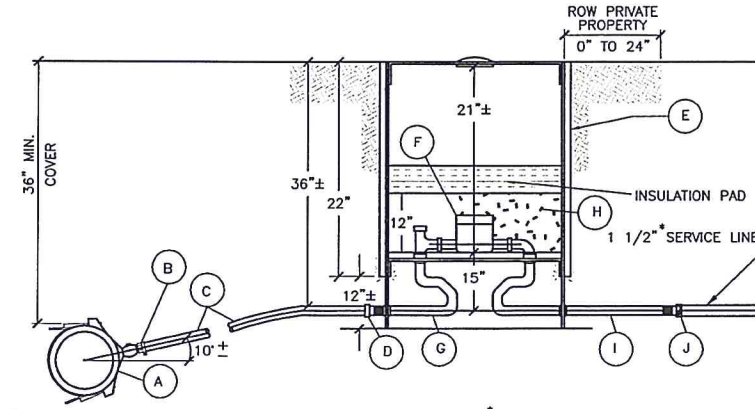
6. VALVE BOXES SHALL BE INSTALLED ON ALL BURIED VALVES. THE BOX SHALL BE CAST IRON, TWO PIECE SLP DESIGN WITH A BASE CORRESPONDING TO THE SIZE OF THE VALVE. THE COVER SHALL HAVE THE WORD "WATER" CAST IN IT AND THE LID "EARS" SHALL BE INSTALLED PARALLEL TO THE MAIN. VALVE BOX SHALL BE OLYMPIC FOUNDRY PART NO. VB1, OR APPROVED EQUAL.

7. VALVE STEM EXTENSIONS SHALL BE REQUIRED ON ALL VALVES WITH AN OPERATING NUT THAT IS MORE THAN 3 FEET BELOW GRADE TO BRING THE OPERATING NUT TO WITHIN 2- FEET OF THE GROUND SURFACE. THE VALVE STEM EXTENSION SHALL BE 1" DIAMETER AND BE EQUIPPED WITH A SELF-CENTERING SUPPORT ON THE SHAFT, AND A 2-INCH OPERATING NUT.

8. CONCRETE THRUST BLOCKING SHALL BE PER WSDOT/APWA AND MSRR STANDARDS AND SHALL UTILIZE 3000 PSI CONCRETE.

9. PRIOR TO CONNECTION WITH EXISTING MAINS, ALL NEW WATER MAINS AND HYDRANTS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH SECTION 7-11.3(11) THROUGH SECTION 7-11.3(12) OF THE STANDARD SPECIFICATIONS. PRESSURE TESTING AND DISINFECTION SHALL BE PERFORMED IN THE PRESENCE THE MSRR INSPECTOR. THE CONTRACTOR SHALL PROVIDE PLUGS, PORTABLE PUMP, BLOW OFF ASSEMBLIES, TEMPORARY BLOCKING, AND OTHER EQUIPMENT AND MATERIALS NECESSARY FOR PRESSURE TESTING AND DISINFECTION.

10. MINIMUM TEST PRESSURE IS 200 PSI.



- (A) DOUBLE STRAP STAINLESS STEEL SERVICE SADDLE WITH 1 1/2" AWWA TAPER (CC) TAP, ROMAC 202S, SIZE AS REQUIRED.
- (B) CORPORATION STOP, 1-1/2" AWWA TAPER (CC) INLET BY 1-1/2" PACK JOINT (COMPRESSION FITTING) FOR HDPE OUTLET, FORD FB1000 OR APPROVED EQUAL.
- (C) 1 1/2" HDPE W/ TRACER WIRE.
- (D) 1 1/2" x 1" REDUCER
- (E) ARMORCAST 173022; LID-1730RPM WITH INTRON LID; PAD-ABUP17304R20.
- (F) 1" BRASS WATER METER SETTER, 15" HEIGHT & DOUBLE CHECK ASSY; ANGLE LOCKWING BALL VALVE W/ PLAIN METER NUT (NO LIP); FLANGED TUBING W/ PLAIN METER NUT (NO LIP).
- (G) WATER METER SETTER : AY McDONALD MODEL 50.415WCDD.44.
- (H) STYROFOAM PACKING PEANUTS.
- (I) 1" BRASS TAIL PIECE (EXTEND 24" FROM BOX)
- (J) PROVIDE 1" x 1 1/2" INCREASER OFF TAIL PIECE AND CAP FOR FUTURE CONNECTION.

#### NOTES:

1. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATERMAIN, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. APPROVED BACKFLOW PREVENTION MUST BE INSTALLED WITH IRRIGATION SERVICE PER D.S.H.S. REQUIREMENTS IRRIGATION SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL THE BACKFLOW PREVENTION DEVICE IS APPROVED BY MOUNTAINSTAR RESORT RESOURCES.
3. DEFLECT WATER LATERALS UNDER STORM AS REQUIRED.

**(A) 1 1/2" x 1" SINGLE WATER SERVICE**  
NOT TO SCALE

\* NOTE: FOR DOUBLE WATER SERVICES, USE 2" SERVICE LINE.

| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM CONSULTING ENGINEERS LLC**  
 1262-009-007  
 FEDERAL WAY, WA 98003  
 (206) 885-2113  
 (206) 885-2000  
 www.esmce.com  
 Land Surveying | Project Management | Landscape Architecture  
 Civil Engineering | Public Works

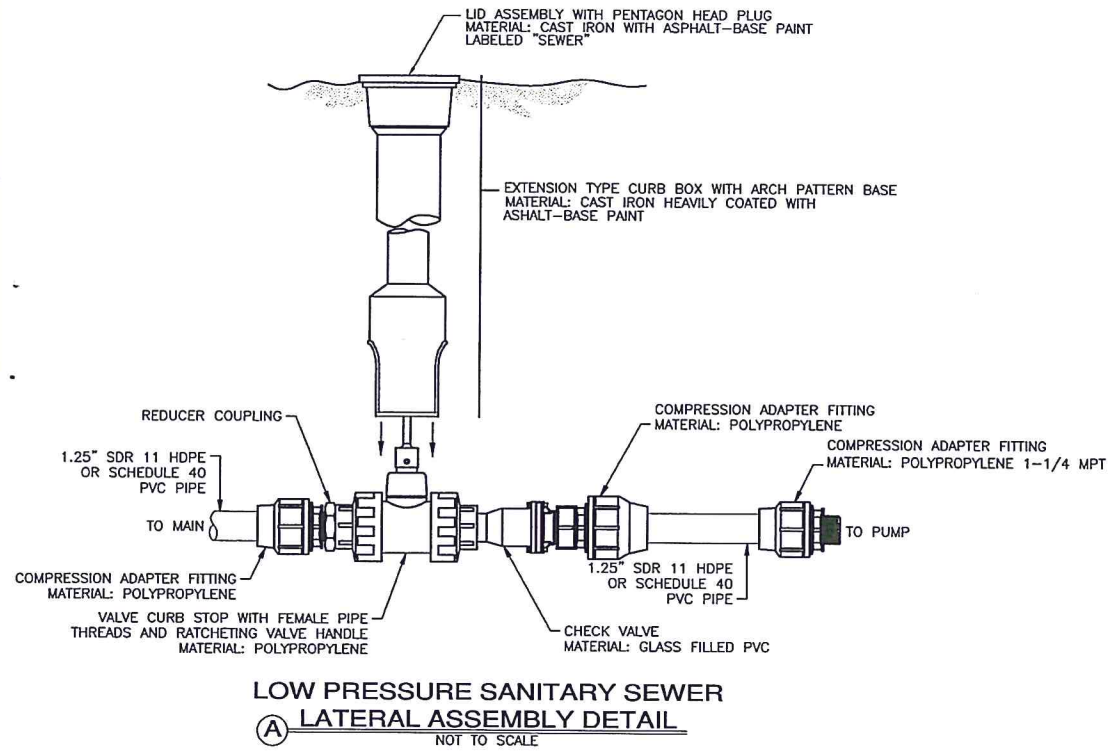
**NEW SUNCADIA LLC**  
**OSPREY RIDGE**  
 SEWER & WATER DETAILS & NOTES  
 KITTITAS COUNTY      WASHINGTON

|                |              |
|----------------|--------------|
| JOB NO.:       | 1262-009-007 |
| DWG. NAME:     | DT-02        |
| DESIGNED BY:   | LGB          |
| DRAWN BY:      | JH           |
| CHECKED BY:    |              |
| DATE OF PRINT: | 11/11/2014   |

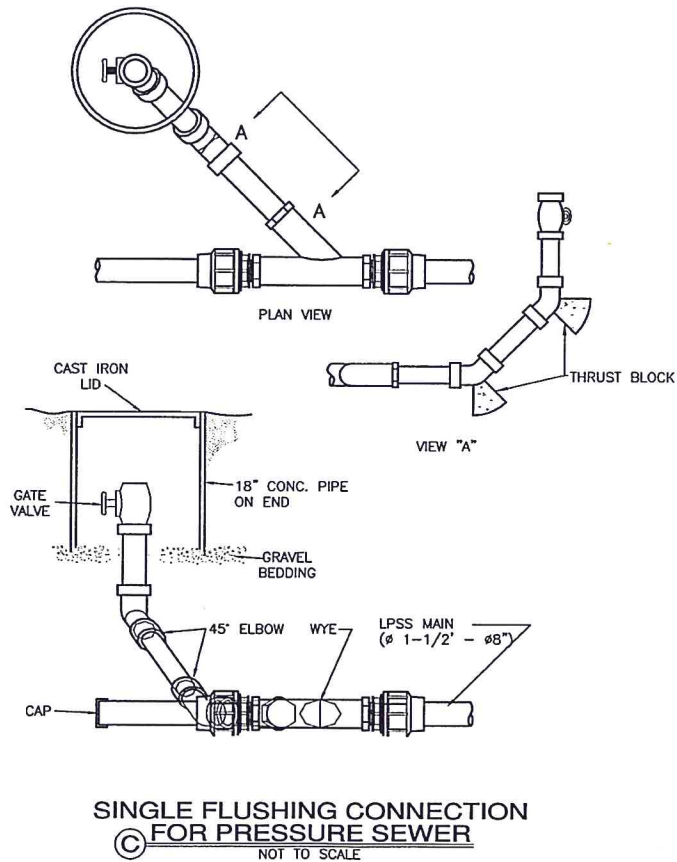
DT-02  
6 of 9 SHEETS

APPROVED FOR CONSTRUCTION

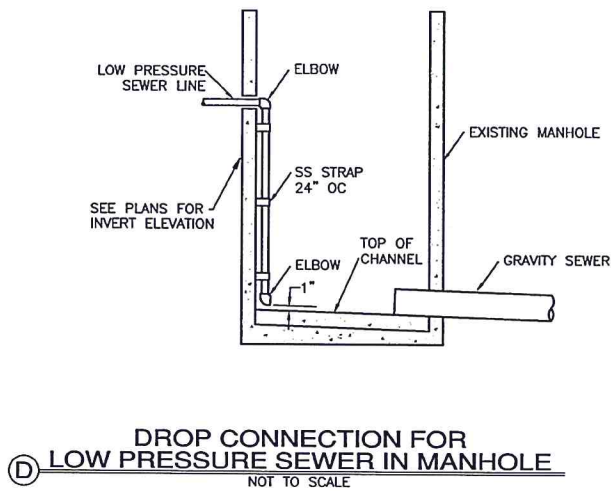
KITTITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



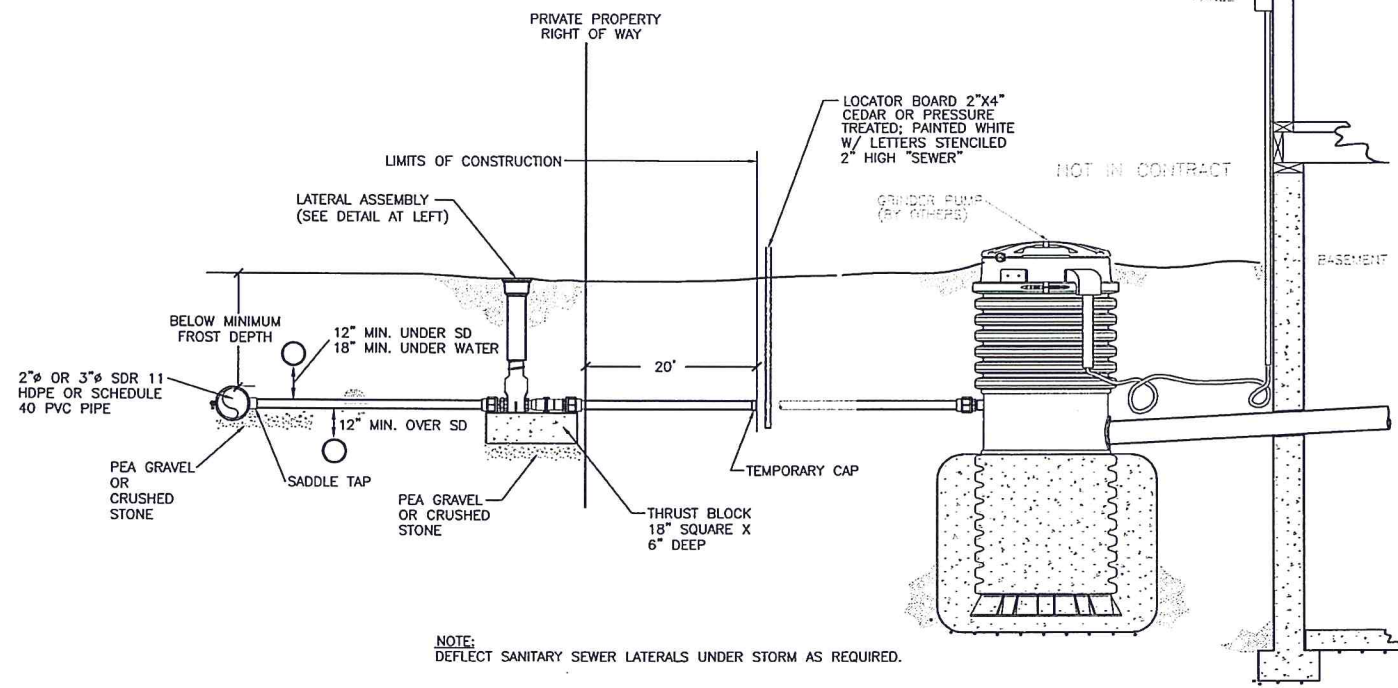
**LOW PRESSURE SANITARY SEWER LATERAL ASSEMBLY DETAIL**  
 (A) NOT TO SCALE



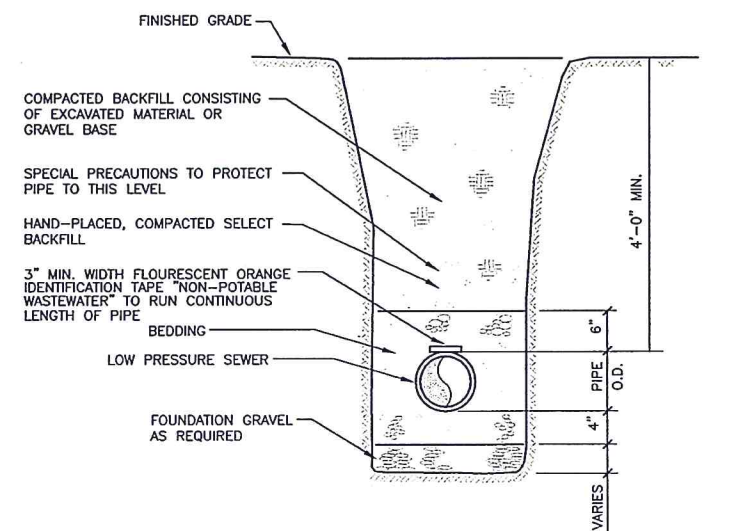
**SINGLE FLUSHING CONNECTION FOR PRESSURE SEWER**  
 (C) NOT TO SCALE



**DROP CONNECTION FOR LOW PRESSURE SEWER IN MANHOLE**  
 (D) NOT TO SCALE



**LOW PRESSURE SANITARY SEWER INSTALLATION DETAIL**  
 (B) NOT TO SCALE



**LOW PRESSURE SEWER TYPICAL TRENCH SECTION**  
 (E) NOT TO SCALE

**LOW PRESSURE SANITARY SEWER CONSTRUCTION SPECIFICATIONS**

1. PRESSURE SEWER LINES SHALL BE CONSTRUCTED OF HIGH DENSITY POLYETHYLENE PIPE CONFORMING WITH ASTM-D-2737, SDR 11 WITH A WORKING PRESSURE OF 150 PSI, OR SCHEDULE 40 PVC.
2. CONTRACTOR SHALL STUB-OUT PRESSURE SEWER LATERALS TWENTY FEET BEYOND ROAD RIGHT-OF-WAY ONTO PRIVATE PROPERTY. LATERAL ASSEMBLY SHALL CONSIST OF A 1.25-INCH CURB STOP, PACK JOINTS AND ADAPTERS, CHECK VALVE AND COUPLINGS. THE LATERAL ASSEMBLY SHALL BE MARKED ON THE SURFACE WITH A 2-INCH X 4-INCH STUD.
3. PRESSURE SEWER AND MAINS SHALL HAVE GREEN DETECTABLE UNDERGROUND UTILITY MARKING TAPE INSTALLED NEAR THE SURFACE DIRECTLY ABOVE THE PRESSURE SEWER PIPE. THE MARKING TAPE SHALL BE 5 MIL OVERALL THICKNESS SOLID ALUMINUM CORE, 2 MIL CLEAR FILM DETECTABLE UNDERGROUND UTILITY MARKING TAPE OR EQUIVALENT.
4. BEDDING AND BACKFILL FOR PRESSURE SEWER SHALL BE AS SPECIFIED FOR GRAVITY SEWERS.

APPROVED FOR CONSTRUCTION  
 KITITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**REVISIONS**

| NO. | DESCRIPTION/DATE | BY |
|-----|------------------|----|
|     |                  |    |
|     |                  |    |
|     |                  |    |
|     |                  |    |

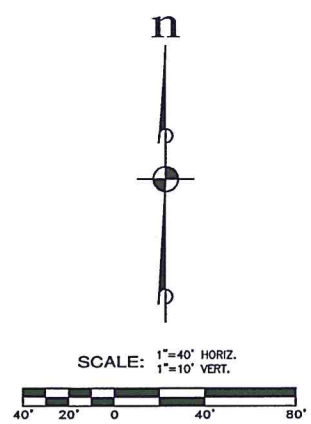
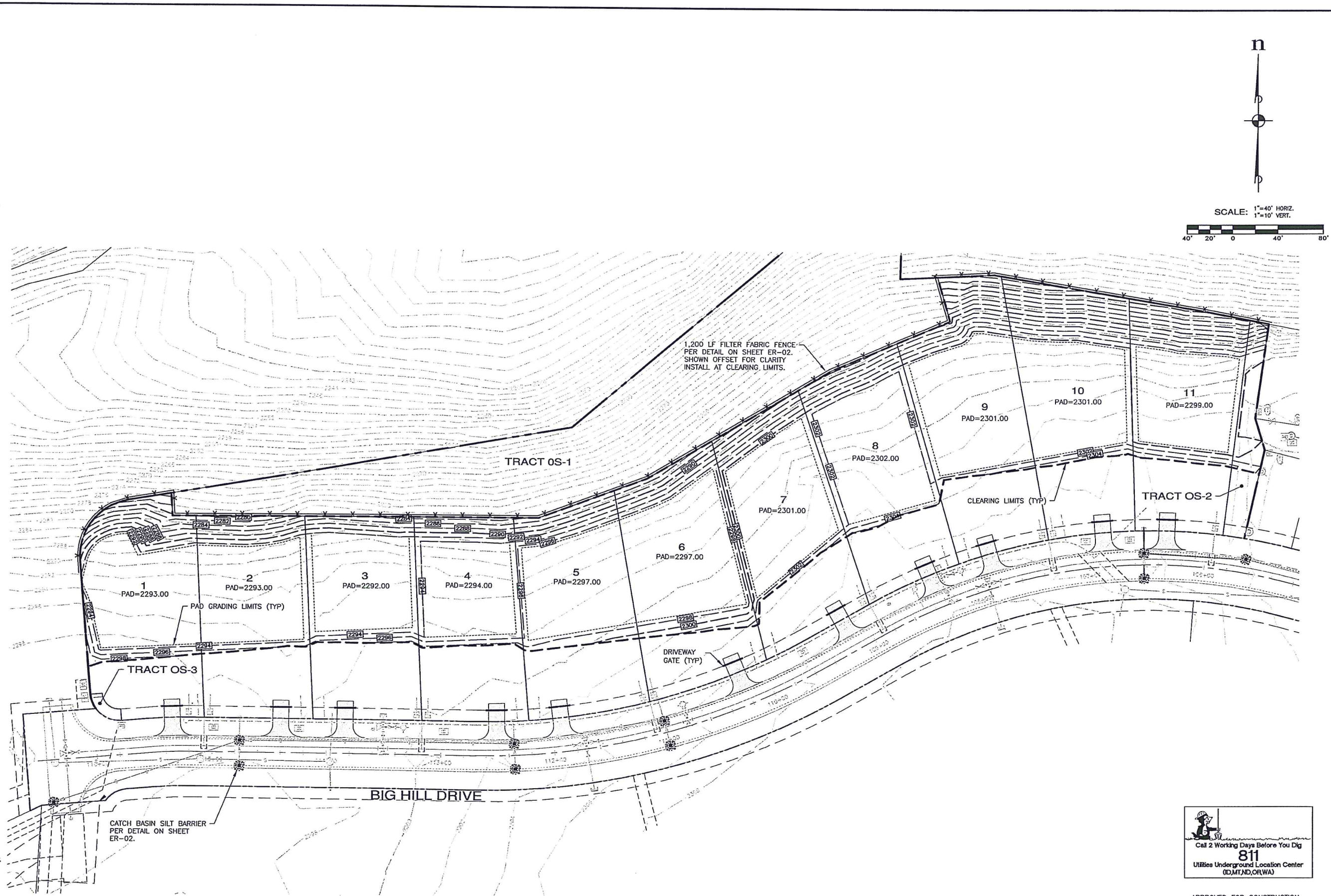
**ESM CONSULTING ENGINEERS LLC**  
 35400 8th Avenue, Suite 205  
 Federal Way, WA 98003  
 (206) 413-4113  
 (206) 317-9600  
 www.esmcevil.com  
 Civil Engineering Public Works  
 Land Surveying Project Management  
 Land Planning Landscape Architecture

**NEW SUNCADIA LLC**  
**OSPREY RIDGE**  
 L.P.S.S. DETAILS & NOTES  
 WASHINGTON  
 KITITAS COUNTY

JOB NO.: 1262-009-007  
 DWC. NAME: DT-03  
 DESIGNED BY: LGB  
 DRAWN BY: JH  
 CHECKED BY:  
 DATE: 11/11/2014  
 DATE OF PRINT:

File: \\suncadia\ENGR\ESM-0095\1262\009\007\pss\PH 13B\DT-03.dwg  
 Plotted By: JRF, JRF  
 11/11/2014 10:09 AM

File: \\Esm\ENR\ESM-1095\1282\009\007\p014\PHI 13\ER-01.dwg  
 Plotted: 11/11/2014 10:14 AM  
 Plotted By: jff hng



APPROVED FOR CONSTRUCTION

Call 2 Working Days Before You Dig  
**811**  
 Utilities Underground Location Center  
 (ID,MT,ND,OR,WA)

KITITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM CONSULTING ENGINEERS, LLC**  
 39400 8th Ave, Ste 205  
 Federal Way, WA 98003  
 www.esmcivil.com  
 Civil Engineering | Land Surveying | Project Management  
 Land Planning | Landscape Architecture

**NEW SUNCADIA LLC**  
**OSPREY RIDGE**  
 T.E.S.C. PLAN  
 WASHINGTON  
 KITITAS COUNTY

|                |              |
|----------------|--------------|
| JOB NO.:       | 1262-009-007 |
| DWG. NAME:     | ER-01        |
| DESIGNED BY:   | LGB          |
| DRAWN BY:      | JJH          |
| CHECKED BY:    |              |
| DATE:          | 11/11/2014   |
| DATE OF PRINT: |              |
| <b>ER-01</b>   |              |
| 8 of 9 SHEETS  |              |



**CONSTRUCTION SEQUENCE**

1. CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL AN ACCIDENTAL SPILL CONTROL AND CLEANUP PLAN.
2. CONTACT THE KITTITAS COUNTY DEPARTMENT OF PUBLIC WORKS AND SCHEDULE A PRECONSTRUCTION MEETING.
3. INSTALL FILTER FABRIC FENCE, CHECK DAMS, INTERCEPTOR SWALES, STRAW BALE BARRIERS, SEDIMENT TRAPS AND OTHER TESC MEASURES AS SPECIFIED IN THE DETAILS OR AS FIELD CONDITIONS DICTATE.
4. INSTALL TEMPORARY CONSTRUCTION ENTRANCE(S). (IF NECESSARY)
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INCORPORATE THE NECESSARY EROSION CONTROL MEASURES SHOWN ON THESE PLANS FOR THE SPECIFIC SITE AREA CONDITIONS.
6. CONTROL DUST BY USE OF WATER TRUCKS ON ROADS AND EXPOSED AREAS AS NECESSARY. IF FLOCCULANT AGENTS ARE USED (PAM), FOLLOW THE MANUFACTURER'S GUIDELINES FOR APPLICATION RATES.
7. PARTICULAR ATTENTION SHALL BE PAID TO THE LOESS MATERIALS PRESENT ON THE SITE.
8. CONTRACTOR SHALL HAVE STREET SWEEPING EQUIPMENT AVAILABLE AND SHALL USE AS CONDITIONS DICTATE.
9. DURING THE CONSTRUCTION PERIOD, ANY AND ALL POLLUTANTS INCLUDING SEDIMENTS SHALL BE HANDLED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE CONTAMINATION OF STORMWATER.
10. LANDSCAPE OR SEED ALL EXPOSED AREAS.
11. DURING THE CLEARING OPERATIONS IMPLEMENTATION OF THE EROSION CONTROL MEASURES DETAILED IN THESE PLANS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE BASED ON AREA CLEARED AND WEATHER CONDITIONS.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THEY ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED AREAS RESULTING FROM SEDIMENT REMOVAL SHALL BE PERMANENTLY STABILIZED.
13. COLLECTED AND TREATED RUNOFF SHALL BE EITHER INFILTRATED OR, WHERE FEASIBLE, DISCHARGED IN A DISPERSED MANNER SUCH THAT SOIL EROSION DOES NOT OCCUR.
14. DEVELOP TESC INSPECTION CHECKLIST FOR USE IN WEEKLY INSPECTIONS. PROVIDE MONTHLY REPORT TO OWNER ON INSPECTIONS AND MAINTENANCE/UPGRADE ACTIVITIES.

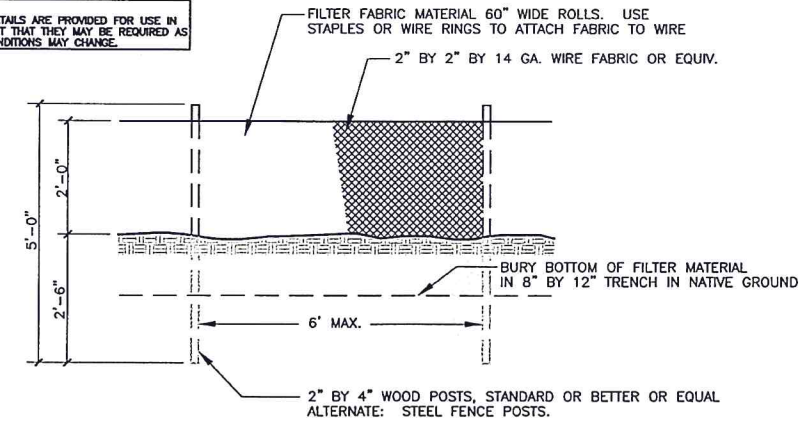
**EROSION/SEDIMENTATION CONTROL SPECIFICATIONS**

1. AGENCY APPROVAL OF THIS TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. UTILITIES, ETC.). SEPARATE PERMITS ARE REQUIRED FOR BUILDING AND UTILITIES CONSTRUCTION.
2. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. IMPLEMENTATION OF THESE TESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES AS NECESSARY TO PREVENT SEDIMENTATION OR SILTATION OF ON-SITE AND OFF-SITE DRAINAGE FEATURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED. THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR ASSISTANCE SHOULD THE NEED ARISE. CLEARING AND GRADING ACTIVITIES ON THE SITE SHALL ADHERE TO THE REQUIREMENTS ESTABLISHED BY THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES (DNR) FOREST PRACTICES DIVISION CONDITIONS FOR THIS SITE (CLASS IV GENERAL, CONVERSION, FPP #2702155) DATED AUG. 23, 2002. CONTACT: LORRAINE POWELL (509) 925-8510.
3. THE BOUNDARIES OF THE CLEARING LIMITS, BOTH INTERIOR AND EXTERIOR, SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL LIMIT CLEARING TO THOSE AREAS NECESSARY FOR THE CURRENT OPERATION.
4. AS CONSTRUCTION PROGRESSES THE CONTRACTOR SHALL PHASE IMPLEMENTATION OF THE TESC MEASURES SHOWN ON THESE PLANS AS CLEARING AND GRADING ACTIVITIES ALLOW. PHASING OF TESC MEASURES SHALL BE PERFORMED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT VIOLATE STATE WATER QUALITY STANDARDS. THE CONSTRUCTION SEQUENCE PROVIDED ON THESE PLANS SHALL SERVE AS GENERAL GUIDANCE IN THE DEVELOPMENT OF THE OPERATIONAL PHASING PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP THE OPERATIONAL PHASING PLAN AND TO ENSURE THAT SEDIMENTATION AND SILTATION OF ON-SITE AND OFF-SITE DRAINAGE FEATURES DOES NOT OCCUR.
5. THE TESC FACILITIES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND MAINTAINED/UPGRADED AS NECESSARY.
6. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR AN EXTENDED PERIOD OF TIME, SHALL BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.) SEEDING SHALL BE PERFORMED IN A MANNER TIMELY TO GERMINATION OF SEED BY SITE RAINFALL.
7. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED PRIOR TO RAINFALL EVENTS. THERE MAY BE AREAS NOT SHOWN ON THESE PLANS THAT WILL REQUIRE TESC MEASURES PRIOR TO A RAINFALL EVENT, SUCH AS ADDITIONAL CLEARING, CUTS AND FILLS, ETC. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR IMPLEMENTATION OF THE ADDITIONAL TESC MEASURES.
8. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.
9. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. (RCW 46.61.655).
10. DURING THE TIME PERIOD OF NOVEMBER 1 THROUGH FEBRUARY 28, NO CLEARING OR GRADING SHALL OCCUR IN AREAS OF HIGH EROSION POTENTIAL AS DEFINED IN THE PROJECT EIS.
11. CLEAN WATER ENTERING CONSTRUCTION AREA SHALL NOT BE ALLOWED TO MIX WITH CONSTRUCTION AREA RUNOFF.
12. TEMPORARY AND PERMANENT COVER OF EXPOSED SOILS AND MAJOR STOCKPILES OF ERODIBLE SOIL IS REQUIRED.
13. CONTRACTOR SHALL ESTABLISH SILT FENCES ALONG BOUNDARIES OF SENSITIVE AREAS AS REQUIRED FOR THEIR PROTECTION. SENSITIVE AREAS SHALL BE AS DEFINED IN THE PROJECT EIS.
14. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT A RATE OF 20 LB/ACRE ACCORDING TO THE FOLLOWING SEED MIXTURE:

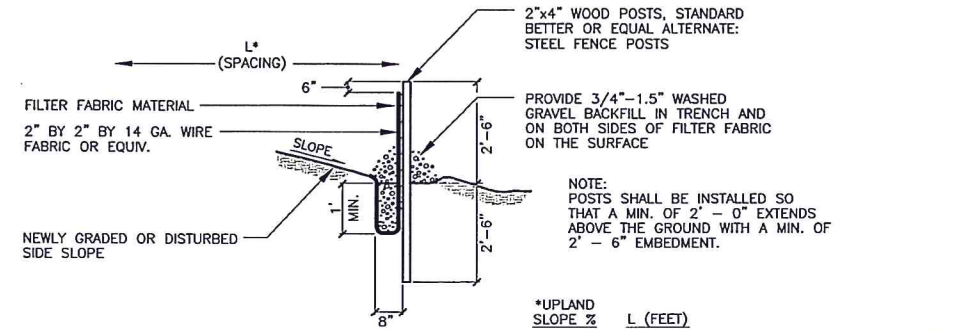
| NAME<br>BASIC SEED MIX @ 20 LB/ACRE | PROPORTION<br>PERCENT BY WEIGHT | PERCENT<br>PURITY | PERCENT<br>GERMINATION |
|-------------------------------------|---------------------------------|-------------------|------------------------|
| CREeping RED FESCUE                 | 23                              | 98                | 90                     |
| SHEEP FESCUE                        | 23                              | 98                | 90                     |
| CANADA BLUEGRASS                    | 24                              | 98                | 90                     |
| RED TOP                             | 10                              | 98                | 90                     |
| SHERMAN BIG BLUE                    | 20                              | 98                | 90                     |

15. THE CONTRACTOR SHALL ADJUST HIS EROSION CONTROL OPERATIONS ACCORDING TO THE FIELD CONDITIONS TO ENSURE ANY SEDIMENT LADEN WATER DOES NOT ENTER OFFSITE OR SURFACE WATER SYSTEMS.

NOTE:  
THESE DETAILS ARE PROVIDED FOR USE IN  
THE EVENT THAT THEY MAY BE REQUIRED AS  
FIELD CONDITIONS MAY CHANGE.



**SECTION**

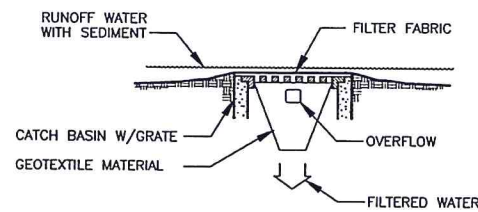


**PROFILE**

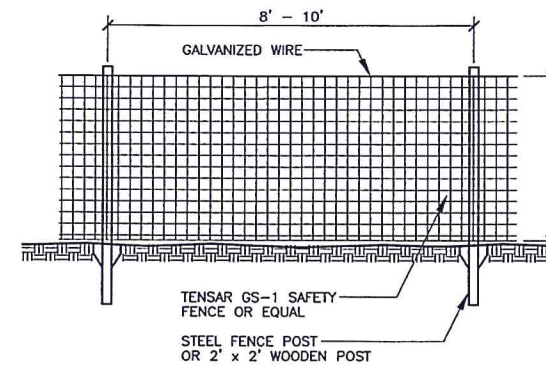
1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

**TYPICAL FILTER FENCE DETAIL**  
NOT TO SCALE

**CONDITIONS FOR USE:**  
TO PREVENT OFF-SITE SEDIMENT TRANSPORT TO  
SENSITIVE AREAS FROM CLEARED AND GRUBBED  
AREAS.



**CATCH BASIN SILT BARRIER**  
N.T.S.



**TEMPORARY N.G.P.E. FENCE DETAIL**  
NOT TO SCALE

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

| REVISIONS |                  |    |
|-----------|------------------|----|
| NO.       | DESCRIPTION/DATE | BY |
|           |                  |    |
|           |                  |    |
|           |                  |    |



**ESM** CONSULTING ENGINEERS, LLC  
30400 9th Ave S, Suite 208  
Federal Way, WA 98003  
Phone: (206) 837-8900  
www.esmengineers.com  
Civil Engineering | Land Surveying  
Public Works | Project Management  
Land Planning  
Landscape Architecture

NEW SUNCADIA LLC  
OSPREY RIDGE  
T.E.S.C. DETAILS & NOTES  
WASHINGTON  
KITTITAS COUNTY

JOB NO.: 1262-000-007  
DWG. NAME: ER-02  
DESIGNED BY: LCB  
DRAWN BY: JHI  
CHECKED BY:  
DATE: 11/11/2014  
DATE OF PRINT:

File: \\esm\Eng\Projects\1262\000\007\1262-000-007-ER-02.dwg  
Plotted By: JHI  
Plotted: 11/11/2014 10:18 AM