## **GENERAL NOTES**

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION," WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, 2000 EDITION, EXCEPT WHERE MODIFIED BY THE LATEST EDITION OF THE CITY OF ARLINGTON CONSTRUCTION STANDARDS AND SPECIFICATIONS.
- AN APPROVED COPY OF CONSTRUCTION PLANS AND A CURRENT COPY OF THE CITY OF ARLINGTON PUBLIC WORKS CONSTRUCTION STANDARDS AND SPECIFICATIONS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN
- 3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE CITY RIGHT-OF-WAY. SEE SECTION "WORK WITHIN EXISTING RIGHT-OF-WAY", CITY OF ARLINGTON SPECIFICATIONS.
- 4. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CITY OF ARLINGTON PUBLIC WORKS DEPARTMENT 360-435-3811 MUST BE CONTACTED FOR A PRECONSTRUCTION MEETING.
- 5. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS. AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES WHICH MAY BE AFFECTED BY HIS WORK. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION SERVICE (1-800-424-5555) PRIOR TO CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE IMMEDIATELY CONTACTED IF A UTILITY CONFLICT EXISTS. A FEE OF \$35.00 WILL BE CHARGED FOR EACH RE-LOCATE
- 6. ALL MATERIALS SHALL BE NEW AND UNDAMAGED, OF AN APPROVED BRAND, WITH REPLACEMENT AND REPAIR PARTS READILY AVAILABLE FORM THE GENERAL ARLINGTON/EVERETT/SEATTLE AREA.
- 7. ALL MATERIALS SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION.
- ALL PUBLIC WATER, SEWER AND STORM DRAINAGE PIPING NOT IN PUBLIC RIGHT— OF-WAY REQUIRES 10 FOOT WIDE PERMANENT EASEMENTS GRANTED TO THE CITY.
- AS-BUILT PLANS SHALL BE SUBMITTED FOR ALL DEVELOPMENTS, SHORT PLATS, SUBDIVISIONS, AND ANY OTHER CONSTRUCTION RELATING TO THE CITY OF ARLINGTON STREETS, DRAINAGE, AND UTILITY SYSTEMS.
- 10. SEDIMENT LADEN WATERS SHALL NOT ENTER THE NATURAL DRAINAGE SYSTEM.
- 11. TRENCH BACK FILL OF NEW UTILITIES AND STORM DRAINAGE FACILITIES SHALL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) UNDER ROAD-WAYS AND 90% MAXIMUM DENSITY (MODIFIED PROCTOR) OFF ROADWAYS AS SPECIFIED IN SECTION 2-03.3(14)C COMPACTING EARTH EMBANKMENTS, METHOD "B"
- 12. THE CONTRACTOR SHALL NOTIFY COMMUNITY DESIGN, THE OWNER AND THE CITY ENGINEER OR DESIGNEE WHEN CONFLICTS BETWEEN THE PLANS AND FIELD CONDITIONS EXIST. PRIOR TO CONSTRUCTION, AND SAID CONFLICTS SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 13. BOUNDARY AND TOPOGRAPHIC INFORMATION HAS BEEN FURNISHED BY THE OWNER OR HIS DESIGNATED PROJECT SURVEYOR.
- 14. THE CONTRACTOR SHALL KEEP TWO SETS OF PLANS ON SITE AT ALL TIMES FOR RECORDING AS-BUILT INFORMATION; ONE SET SHALL BE SUBMITTED TO COMMUNITY DESIGN, INC. AT COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE
- 15. A GRADING PERMIT ISSUED PURSUANT TO TITLE 17 SCC AND CHAPTER 33 UBC AND APPROVAL OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN SHALL HAVE BEEN OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS FOR ANY ON SITE GRADING WHICH IS NOT EXPRESSLY EXEMPT BY SECTION 17.04.280 SCC.

#### STORM DRAINAGE NOTES

- 1. ALL PIPE JOINTS SHALL BE RUBBER GASKETED. PIPE MATERIALS THAT ARE ALLOWED FOR USE IN STORM SEWER SYSTEMS IN THE CITY OF ARLINGTON ARE AS FOLLOWS:
- a). PVC STANDARD SEWER PIPE (SDR 35, ASTM D 3034) SHALL BE USED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. MAINTAIN 30-INCH MINIMUM COVER.
- b). DUCTILE IRON SAME SPECIFICATIONS AS SANITARY SEWER USAGE.
- c). REINFORCED CONCRETE PIPE NO STORM DRAIN PIPE BETWEEN CATCH BASINS OR MANHOLES IN THE PUBLIC RIGHT-OF-WAY SHALL BE LESS THAN 12 INCH DIAMITER WITH THE EXCEPTION THAT 8 INCH MAY BE USED BETWEEN INLETS AND CATCH
- BASINS IN RUNS OF 50 FEET OR LESS. d). HDPE PIPE (AASHTOM252, AASHTOM294, ASTM F 405, ASTM F 667) e). PVC RIB PIPE (AASHTOM 304, ASTM F 794)
- 2. BEDDING MATERIALS ARE THE SAME AS FOR SANITARY SEWER PIPE.
- 3. INLETS, CATCH BASINS AND MANHOLES SHALL BE IN CONFORMANCE WITH SECTION 7-05 OF THE WSDOT/APWA STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY CITY OF ARLINGTON STANDARD DETAILS.
- STANDARD DRAWING S6-TYPICAL TRENCH SECTION. 5. FOUNDATION GRAVEL, BEDDING GRAVEL AND BACKFILL GRAVEL SHALL BE

4. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH CITY OF ARLINGTON

- IN ACCORDANCE WITH CITY OF ARLINGTON STANDARD SECTION 3-4.
- 6. ALL GRATES (INLET AND CATCH BASIN) SHALL BE FLUSH WITH GUTTER.
- 7. ALL CATCH BASINS TO BE TYPE I UNLESS OTHERWISE NOTED.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET, AND CATCH BASIN FRAMES AND GRATES JUST PRIOR TO POURING OF CURBS AND PAVING.
- 9. ALL CATCH BASINS WITH A DEPTH OVER 5.0 FEET TO THE FLOW LINE SHALL BE A TYPE II CB (MANHOLE).

- 10. ALL TYPE II CATCH BASIN MANHOLES AND ALL INLET AND CATCH BASINS SHALL HAVE LOCKING LIDS. ROLLED GRATES ARE NOT APPROVED FOR OUTSIDE OF CITY RIGHT-OF-WAY OR FOR USE WITH TYPE II MANHOLE(S).
- 11. STANDARD LADDER STEPS SHALL BE PROVIDED IN ALL CATCH BASINS/MANHOLES EXCEEDING 5 FEET IN DEPTH.
- 12. CORRUGATED POLYETHYLENE PIPE: THE MATERIAL SUPPLIED UNDER THIS SPECIFICATION SHALL BE HIGH DENSITY CORRUGATED POLYETHYLENE SMOOTH INTERIOR PIPE AND SHALL BE MANUFACTURED IN CONFORMITY WITH THE LATEST AASHTO SPECIFICATIONS OR M294 TYPE "S" AND THE MATERIAL COMPOUND SHALL CONFORM TO ASTM D-3350. PIPE JOINTS AND FITTINGS SHALL CONFORM TO AASHTO M294. COUPLERS SHALL COVER NOT LESS THAN ONE FULL CORRUGATION ON EACH ANNULAR SECTION OF PIPE.
- 13. ALL NON-PERFORATED METAL PIPE SHALL HAVE NEOPRENE GASKETS AT THE JOINTS. O-RING GASKETS MAY BE USED FOR TYPE "F" COUPLING BAND.
- 14. THE CULVERT ENDS SHALL BE BEVELED TO MATCH THE SIDE SLOPE. FIELD CUT OF CULVERT ENDS IS PERMITTED, WHEN APPROVED BY THE INSPECTOR
- 15. ALL FIELD CUT CULVERT PIPE SHALL BE TREATED WITH TREATMENT AS SHOWN IN THE STANDARD SPECIFICATIONS OR GENERAL SPECIAL PROVISIONS.
- 16. CORRUGATED ALUMINUM PIPE AND COUPLING BANDS SHALL MEET THE REQUIREMENTS OF AASHTO M196 AND M197.

# SITE GRADING AND T.E.S.C.P. NOTES

- NONCOMPLIANCE WITH THE EROSION CONTROL REQUIREMENTS, WATER QUALITY REQUIREMENTS AND CLEARING LIMITS VIOLATIONS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL AND BOND FORECLOSURES.
- PRIOR TO ANY SITE CONSTRUCTION TO INCLUDE CLEARING/LOGGING OR GRADING, THE SITE/LOT CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR AS REQUIRED BY THESE PLANS. THE PROJECT SURVEYOR'S NAME AND TELEPHONE NUMBER ARE TRI-COUNTY LAND SURVEYING, 425-776-2926.
- 3. THE DEVELOPER/PROJECT ENGINEER IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM, ESTABLISHED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER'S NAME AND PHONE NUMBER ARE ANDREW REAVES, P.E., COMMUNITY DESIGN INC.,
- 4. THE TEMPORARY EROSION/SEDIMENTATION CONTROL FACILITY SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE APPROVED TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- 5. ALL SITE WORK MUST COMPLY TO CHAPTER 33 OF THE UNIFORM BUILDING CODE. (LATEST EDITION)
- 6. ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARDS. PRECONSTRUCTION SOILS INVESTIGATION MAY BE REQUIRED TO EVALUATE SOILS STABILITY.
- 7. IF CUT AND FILL SLOPES EXCEED A MAXIMUM OF TWO FEET HORIZONTAL TO ONE FOOT VERTICAL, A ROCK OR CONCRETE RETAINING WALL MAY BE REQUIRED. ALL ROCK RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT ARE TO FOLLOW CITY SPECIFICATIONS AND TO BE DESIGNED AND CERTIFIED BY A CIVIL ENGINEER EXPERIENCED IN SOILS MECHANICS.
- 8. STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY CLEAR PLASTIC COVERING. BMP E1.20
- 9. ALL STRUCTURAL FILLS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY BY MODIFIED PROCTOR TEST.
- 10. T.E.S.C. MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE WORK (SEE ATTACHED PLAN).
- 11. THE DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLAN (SEE ATTACHED). (APPROVAL BY THE CITY BUILDING INSPECTOR IS NEEDED FOR INSTALLING INDIVIDUAL LOT DRAINAGE SYSTEMS PRIOR TO FRAMING INSPECTION OF HOUSE.)
- 12. THE SURFACE OF ALL SLOPES SHALL BE COMPACTED. THIS MAY BE ACCOMPLISHED BY OVER-BUILDING THE SLOPES, THEN CUTTING BACK TO FINAL GRADES, OR BY RUNNING THE COMPACTOR OVER THE SLOPE AS EACH FILL LIFT IS BEING PLACED. ALL SLOPES SHALL BE COMPACTED BY THE END OF EACH WORK DAY.
- 13. SILTS FROM DETENTION POND TO BE CLEANED TO DESIGN POND BOTTOM ELEVATION PRIOR TO CONSTRUCTION ACCEPTANCE.
- SEEDING SPECIFICATIONS GRASS SEED SHALL BE 20% ANNUAL PERENNIAL OR HYBRID RYE GRASS, 40% CREEPING RED FESCUE 40% WHITE CLOVER, FERTILIZER SHALL BE APPLIED AT THE RATE OF 400 LBS PER ACRE OF 10-20-20 OR EQUIVALENT.

# **ENVIRONMENTAL MITIGATION NOTES**

REFERENCE FILE NO. SEPA #261

- CONSTRUCTION PROJECT IMPROVEMENTS WILL BE MONITORED AND THE DEVELOPER DIRECTED ACCORDINGLY TO AIR QUALITY CONTROL PRACTICES RELATING TO THEIR WORK.
- 2. WATERING OF THE CONSTRUCTION SITE SHALL BE UTILIZED TO REDUCE DUST.
- 3. AS PER THE GEOTECHNICAL REPORT, ANY GROUNDWATER THAT IS ENCOUNTERED WILL RESULT IN A HALT WHILE SLOPE STABILITY IS RE-EVALUATED.
- 4. THE DETENTION VAULT SHALL BE CONSTRUCTED AND OPERATIONAL TO HANDLE ON SITE RUN-OFF PRIOR TO STRIPPING ROADWAY SECTIONS AND UTILITY INSTAL-
- 5. AT FINAL GRADING, YARD DRAINS SHALL BE REQUIRED AT THE FRONT, SIDE AND REAR OF LOTS, AS DETERMINED BY THE BUILDING DEPARTMENT, TO INTERCEPT SURFACE WATER. ROCK SWALES DIRECTING WATER TO THE SIDEWALK WILL NOT BE ALLOWED.
- 6. CLEARING OF THE ENTIRE SITE WILL NOT BE ALLOWED. THE APPLICANT WILL WORK WITH THE DEPARTMENT OF PUBLIC WORKS TO ADDRESS THE STAGING PROCESS.
- 7. STRIPPED AREAS SHALL BE STABILIZED IMMEDIATELY BY USING SEEDING AND MULCHING PROCEDURES BEFORE OTHER SECTIONS CAN BE STRIPPED.
- 8. ALL SIGNIFICANT TREES SHALL BE PRESERVED BASED ON A PREDETERMINED PLAN BETWEEN THE APPLICANT AND THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT. (SEE LANDSCAPING PLAN)
- 9. CONSTRUCTION HOURS SHALL BE LIMITED TO 7 AM TO 7 PM.
- 10. SHOULD ANY ARCHEOLOGICAL MATERIALS BE FOUND, THE APPROPRIATE AGENCIES SHALL BE CONTACTED AND MEASURES TAKEN TO PRESERVE THE MATERIALS AND THE

# - PLASTIC COVERING USED ON SPOILS 20'x20' QUARRY (SEE TIME LIMITATIONS SPOILS SPALL PAD BELOW IN NOTE 1) DEEP-GRADE PROPOSED HOUSE (ON ALL DOWNHILL LINES)

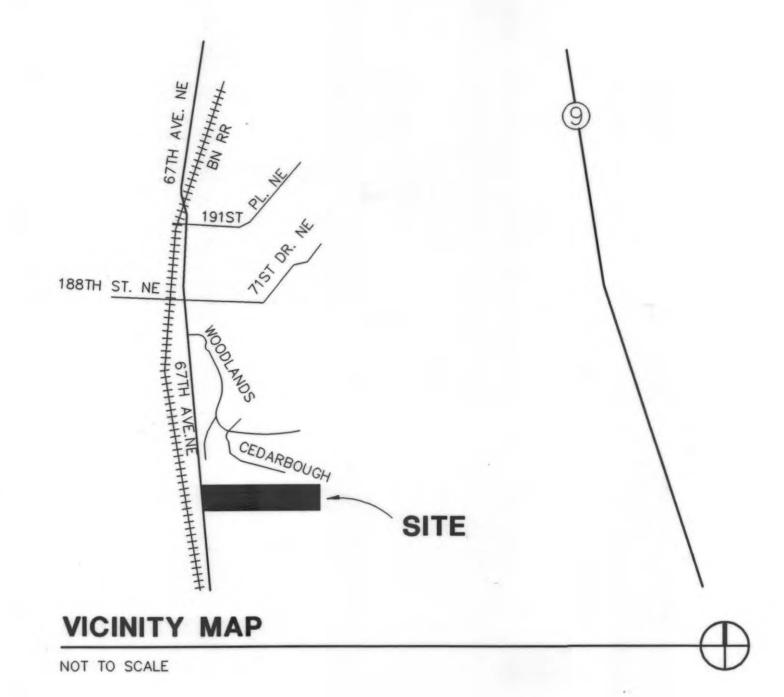
1. SOIL STABILIZATION. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF BMP'S, INCLUDING BUT NOT LIMITED TO SOD OR OTHER VEGETATION, PLASTIC COVERING, MULCHING, OR APPLICATION OF GROUND BASE ON AREAS TO BE PAVED. ALL BMP'S SHALL BE SELECTED, DESIGNED AND MAINTAINED IN ACCORDANCE WITH AN APPROVED MANUAL.

> A) FROM OCTOBER 1 THROUGH APRIL 30, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN 2 DAYS. B) FROM MAY 1 THROUGH SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN 7 DAYS.

- ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY APPROPRIATE USE OF VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES OR MULCHING, OR BY A COMBINATION OF THESE MEASURES AND OTHER APPROPRIATE BMP'S.
- 3. ALL EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REGULARLY INSPECTED AND MAINTAINED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
- 4. AS REQUIRED BY THE LOCAL PLAN APPROVAL AUTHORITY, OTHER APPROPRIATE BMP'S TO MITIGATE THE EFFECTS OF INCREASED RUNOFF SHALL BE APPLIED.

# TYPICAL LOT TESCP PLAN

NOT TO SCALE



# LEGAL DESCRIPTION:

THE NORTH HALF OF THE NORTH HALF OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 31 NORTH, RANGE 5 EAST, EXCEPT THE AS BUILD AND EXISTING COUNTY ROAD RUNNING ALONG THE WEST LINE THEREOF.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

# BENCHMARK AND DATUM:

SPIKE IN EAST FACE OF POWER POLE AT WEST SIDE OF 67TH AVE. N.E. 60' SOUTH OF THE CENTERLINE OF UPLAND DRIVE MARKED D-PAC" TBM NO. 5, EL = 154.45. POLE NO. 369, NAVD 1929 DATUM.

# **GRADING QUANTITIES:**

CUT = 5,800 CYFILL = 5,800 CY

### NOTES:

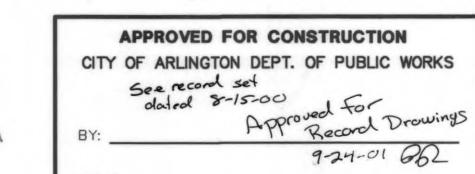
- 1. STORM DRAINAGE FROM SITE AND ROADS WILL BE DETAINED AND DISCHARGED TO STORM SEWER SYSTEM (EXCEPT BYPASS WHICH HAS BEEN ACCOUNTED FOR IN DRAINAGE ANALYSIS).
- 2. WATER QUALITY TREATMENT: BIOFILTRATION SWALE
- 3. ALL ROOF DRAINAGE WILL BE TIGHTLINED TO STORM SYSTEM.

#### PROPERTY TAX ACCOUNT NUMBER:

233105-3-0002

## SHEET INDEX:

- CONSTRUCTION NOTES GRADING AND EROSION CONTROL PLAN GRADING AND EROSION CONTROL NOTES & DETAILS ROAD PLAN
- DRAINAGE PLAN ROAD AND DRAINAGE PROFILE - BOVEE LANE ROAD AND DRAINAGE PROFILES/CURB DETAILS
- ROAD AND DRAINAGE DETAILS WATER AND SEWER NOTES WATER PLAN
- SEWER PLAN SEWER PROFILE
- SEWER PROFILES 67TH, AVE NE, UPLAND DR & PRIVATE ACCESS RDS LANDSCAPE PLAN (SHEET 1 OF 1) DETENTION VAULT STRUCTURAL PLAN (SHEET 1 OF 2)
- DETENTION VAULT STRUCTURAL PLAN (SHEET 2 OF 2)

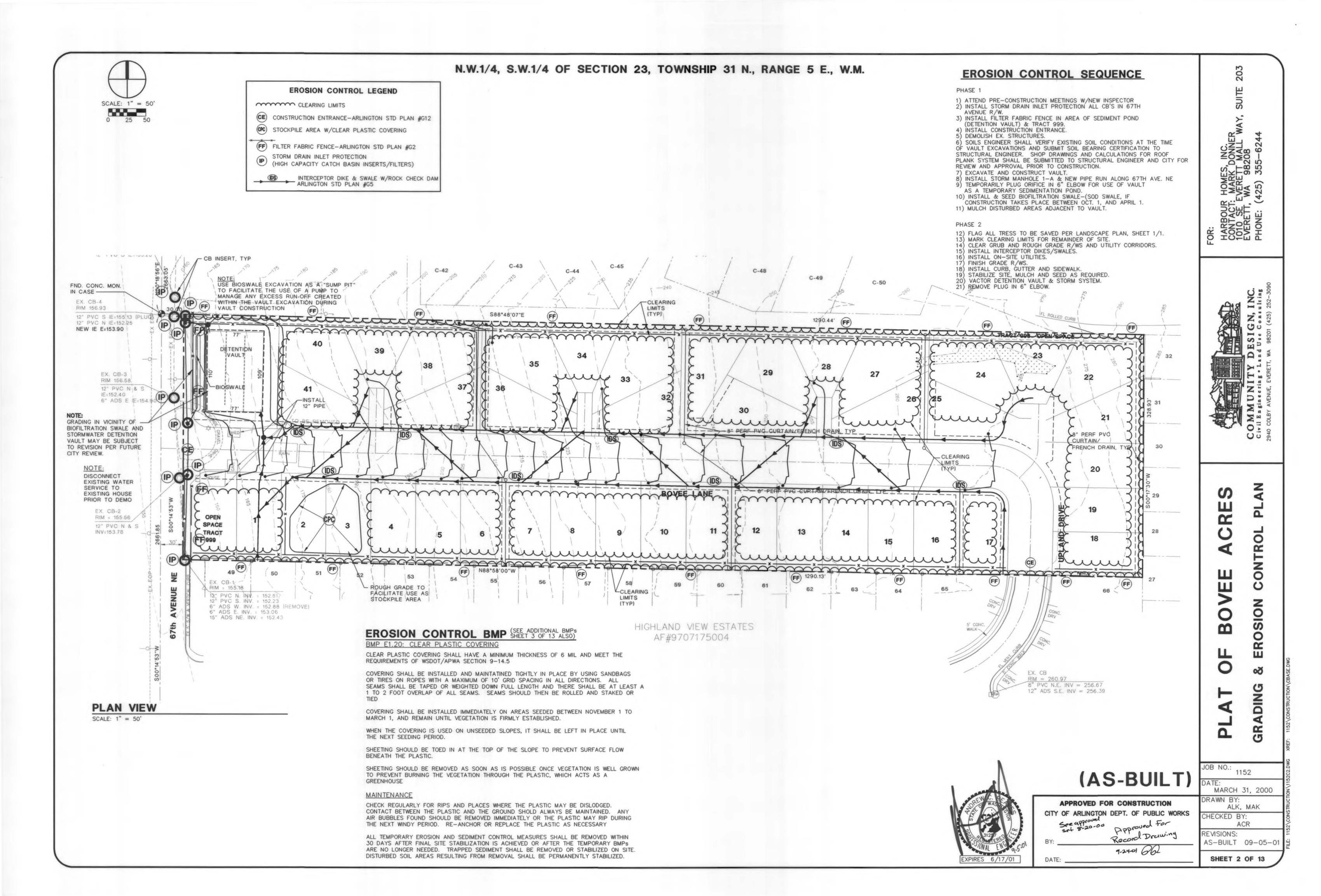


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JOB NO.: 1152 JUNE 21, 2000 RAWN BY: ALK, MAK HECKED BY: ACR REVISIONS:

AS-BUILT 09-05-01

SHEET 1 OF 13



# GENERAL EROSION CONTROL NOTES

- 1. ALL RUNOFF SHALL ENTER THE INTERIM SEDIMENT CONTROL FACILITY.
- DURING CONSTRUCTION, ANY AREAS STRIPPED OF VEGETATION MAY HAVE TO BE PROTECTED AGAINST EROSION BY A LAYER OF GRAVEL OR ROCK SPALLS.
- 3. ANY GROUNDWATER THAT IS ENCOUNTERED WILL RESULT IN A HALT WHILE SLOPE STABILITY IS RE-EVALUATED.
- 4. STRIPPED AREAS SHALL BE STABILIZED IMMEDIATELY BY USING SEEDING AND MULCHING PROCEDURES BEFORE OTHER SECTIONS CAN BE STRIPPED.

#### REFERENCE:

PRELIMINARY GEOTECHNICAL INVESTIGATION
BOVEE ACRES - 17911 67TH AVENUE, NE - ARLINGTON, WA L&A JOB #7120, DATED DECEMBER 31, 1997 PREPARED BY LIU AND ASSOCIATES, INC.

RESPONSES TO COMMENTS BY CITY OF ARLINGTON BOVEE ACRES - 17911 67TH AVENUE, NE - ARLINGTON, WA L&A JOB #7120, DATED JULY 26, 1999 PREPARED BY LIU AND ASSOCIATES, INC.

# CONTRACTOR RESPONSIBILITY FOR **EROSION/SILTATION CONTROL**

IT IS THE INTENT OF THIS TEMPORARY EROSION AND SILTATION CONTROL PLAN THAT STORM WATER RUN-OFF BE CONTROLLED AT ALL TIMES TO PREVENT SOIL EROSION AND TO MAINTAIN WATER QUALITY, ANY AND ALL MEASURES NECESSARY TO DO SO SHALL BE EM-PLOYED BY THE CONTRACTOR.

REGARDLESS OF SITE, WEATHER, SOIL OR OTHER CONDITIONS, THE CONTRACTOR SHALL BE FULLY EN-SURING THAT EROSION DOES NOT OCCUR ON THE SITE AND THAT POLLUTED OR SILT-LADEN RUNOFF DOES NOT LEAVE THE SITE OR ENTER INTO ANY CREEK, STREAM, WETLAND OR WATER BODY ON THE SITE

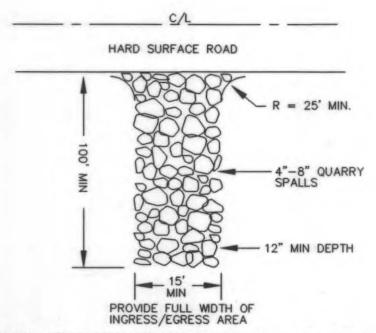
BEYOND THE MINIMUM REQUIREMENTS SHOWN ON THIS PLAN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND IMPLEMENTING APPROPRIATE METHODS, "BEST MANAGEMENT PRACTICES" (BMP'S), FOR STORM WATER TREATMENT AND CONTROL THAT MEET THE REQUIREMENTS OF BOTH THE WASHINGTON STATE DEPARTMENT OF ECOLOGY AND CITY OF

THE CONTRACTOR SHALL REPORT ALL WATER QUALITY CONCERNS AND ACTIVITIES TO THE PROJECT ENGINEER AND TO THE CITY OF ARLINGTON PUBLIC WORKS DEPARTMENT. IN THE EVENT THAT THE INSTALLED WATER QUALITY CONTROL MEASURES ARE INEFFECTIVE AT CON-TROLLING EROSION AND SILTATION, THE CONTRACTOR SHALL IMMEDIATELY REPORT TO, AND CONSULT WITH, THE PROJECT ENGINEER TO FIND AN APPROPRIATE REMEDY. ALL CONSTRUCTION ACTIVITIES, WITH THE EXCEPTION OF EROSION AND SILTATION CONTROL MEASURES, SHALL CEASE UNTIL SUCH TIME AS THE WATER QUALITY IS BROUGHT UNDER CONTROL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING WEATHER FORECASTS AND ANTICIPATING STORM ACTIVITY AND SHALL SCHEDULE ALL PROJECT ACTIVITIES IN ANTICIPATION OF THE WEATHER.

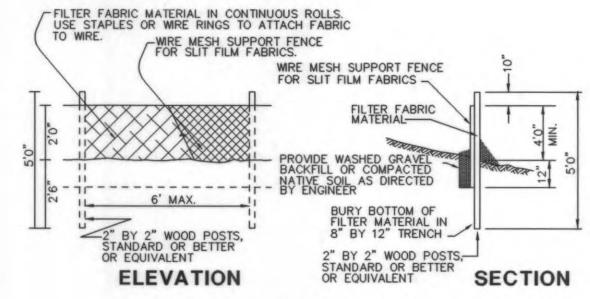
ALL SUPPLIES AND MATERIALS NECESSARY FOR IMPLEMENTING BMPs SHALL BE STORED ON SITE AND SHALL BE IMMEDIATELY AVAILABLE FOR USE. SUCH SUPPLIES AND MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO, STRAW BALES OR OTHER MULCHING MATERIAL, SILT FENCING AND STAKES, FILTER FABRIC

DURING AND AFTER RUNOFF PRODUCING STORM EVENTS, CONTRACTOR SHALL MONITOR ALL EROSION CONTROL MEASURES AND SHALL PRIORITIZE IMPLE-MENTATION AND MAINTENANCE OF EROSION AND SILT-ATION CONTROL MEASURES ABOVE ALL OTHERS.



# ROCK CONSTRUCTION ENTRANCE

N.T.S. (SEE STD PLAN G-12)



# SILT FENCE DETAIL

N.T.S. (SEE STD PLAN G-2)

# **EROSION CONTROL BMPs**

BMP E2.10: STABILIZED CONSTRUCTION ENTRANCE & TIRE WASH

MATERIAL SHOULD BE QUARRY SPALLS (WHERE FEASIBLE), 4"-8" SIZE

THE ROCK PAD SHALL BE AT LEAST 12" THICK AND 100' IN LENGTH FOR SITES MORE THAN 1 ACRE, AND MAY BE REDUCED TO 50' IN LENGTH FOR SITES LESS THAN 1 ACRE.

WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS/EGRESS AREA (MINIMUM 20').

ADDITIONAL ROCK SHOULD BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.

TIRE WASHING SHOULD BE DONE BEFORE THE VEHICLE ENTERS A PAVED STREET. WASHING SHOULD BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND THE WASH WATER SHOULD BE DRAINED TO A SEDIMENT RETENTION FACILITY SUCH AS A SEDIMENT TRAP OR BASIN.

THE VOLUME OF WASH WATER PRODUCED BY TIRE WASHING SHOULD BE INCLUDED WHEN CALCULATING THE SEDIMENT TRAP OR BASIN SIZE.

#### MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE, AS CONDITIONS DEMAND. AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BI REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED, OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RE-SULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

#### BMP E3.30: STORM DRAIN INLET PROTECTION

FOR SYSTEMS USING CB INSERTS: INSPECTIONS SHOULD BE MADE ON A REGULAR BASIS, ESPECIALLY AFTER LARGE STORM EVENTS. IF THE INSERT BECOMES CLOGGED, IT SHOULD BE REPLACED. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY ONE-HALF THE DEPTH OF THE INSERT.

ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PER-FORMANCE OF THEIR INTENDED FUNCTION. ALL MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED MANUAL.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE RE-MOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULT-ING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

#### BMP E2.20: DUST CONTROL

MINIMIZE THE PERIOD OF SOIL EXPOSURE THROUGH USE OF TEMPORARY GROUND COVER AND OTHER TEMPORARY STABILIZATION PRACTICES (SEE SEEDING AND MULCHING, BMPs E1.10 AND E1.15)

SPRINKLE THE SITE WITH WATER UNTIL SURFACE IS WET. REPEAT AS NEEDED SPRAY EXPOSED SOIL AREAS WITH APPROVED DUST PALLIATIVE. OIL SHOULD

NOT BE USED FOR DUST SUPPRESSION. CHECK WITH LOCAL GOVERNMENT TO SEE WHICH OTHER DUST PALLIATIVES MAY BE USED IN THE AREA.

RESPRAY AREA AS NECESSARY TO KEEP DUST TO A MINIMUM.

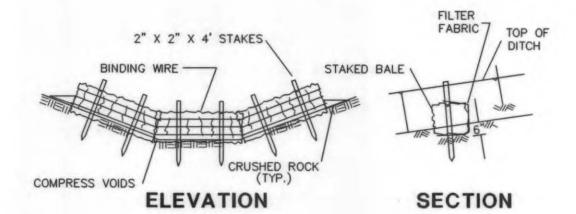
#### BMP E2.60: CHECK DAMS

THE MAXIMUM SPACING BETWEEN THE DAMS SHALL BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWN-STREAM DAM. SEE DETAILS THIS SHEET.

ROCK CHECK DAMS SHALL BE CONSTRUCTED OF APPROPRIATELY SIZED ROCK. THE ROCK MUST BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMP-ING OF ROCK TO FORM DAM) TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE, AND TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. THE ROCK USED MUST BE LARGE ENOUGH TO STAY IN PLACE GIVEN THE EXPECTED DESIGN FLOW THROUGH THE CHANNEL.

CHECK DAMS SHALL BE MONITORED FOR PERFORMANCE AND SEDIMENT ACCUM-ULATION DURING AND AFTER EACH RUN-OFF PRODUCING RAINFALL. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE HALF THE SUMP DEPTH

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE RE-MOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED



## STRAW BALE DETAIL N.T.S. (SEE STD PLAN G-4)

BMP E1.10: TEMPORARY SEEDING OF STRIPPED AREAS

TIME OF PLANTING - PLANTING SHOULD PREFERABLY BE DONE BETWEEN APRIL 1 AND JUNE 30, AND SEPTEMBER 1 THROUGH OCTOBER 31. IF PLANTING IS DONE IN THE MONTHS OF JULY AND AUGUST, IRRIGATION MAY BE REQUIRED. IF PLANTING IS DONE BE-TWEEN NOVEMBER 1 AND MARCH 31, MULCHING SHALL BE REQUIRED IMMEDIATELY AFTER PLANTING. IF SEEDING IS DONE DURING THE SUMMER MONTHS, IRRIGATION WILL PROBABLY BE NECESSARY.

SITE PREPARATION - BEFORE SEEDING, INSTALL NEEDED SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTER-CEPTOR DIKES/SWALES, LEVEL SPREADERS AND SEDIMENT BASINS.

SEEDBED PREPARATION - THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPE. SEE BMP E1.45, TOPSOILING AND BMP E2.35, SURFACE ROUGHENING FOR MORE INFORMATION ON SEEDBED PREPARATION. A MINIMUM OF 2-4" OF TILLED TOPSOIL IS REQUIRED.

FERTILIZATION - AS PER SUPPLIERS AND/OR SOIL CONSERVATION SERVICE RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHOROUS FERTILIZER.

SEEDING - SEEDING MIXTURES WILL VARY DEPENDING ON THE EXACT LOCATION, SOIL TYPE, SLOPE, ETC. INFORMATION ON MIXES MAY BE OBTAINED FROM LOCAL SUPPLIERS, THE WASHINGTON STATE DEPART-MENT OF TRANSPORTATION OR THE SOIL CONSERVATION SERVICE. HOWEVER, APPROVAL TO USE ANY PARTICULAR MIX MUST BE OBTAINED FROM THE LOCAL GOVERNMENT. THE FOLLOWING SEED MIX IS SUPPLIED AS GUIDANCE:

NAME	PROPORTIONS BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
REDTOP (AQROSTIS ALBA) ANNUAL RYE (LOLIUM MULTIFLORUM) CHEWINGS FESCUE	10% 40% 40%	92 98 97	90 90 80
(FESTUCA RUBRA COMMUTATA) WHITE DUTCH CLOVER (TRIFOLIUM REPENS)	10%	96	90

"HYDRO-SEEDING" APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.

MAINTENANCE SEEDING SHOULD BE SUPPLIED WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY IN ABNORMALLY HOT OR DRY WEATHER, OR ON ADVERSE SITES. WATER APPLICATION RATES SHOULD BE CONTROLLED TO PREVENT RUNOFF.

RE-SEEDING - AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT EROSION SHALL BE RE-SEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABIL-IZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT MUST BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

#### BMP E2.55: INTERCEPTOR DIKE AND SWALE

INTERCEPTOR DIKES SHALL MEET THE FOLLOWING CRITERIA:

TOP WIDTH - 2 FEET MINIMUM HEIGHT - 18 INCHES MINIMUM, MEASURED FROM UPSLOPE TOE AND AT A COMPACTION OF 90% ASTM D698

STANDARD PROCTOR SIDE SLOPE - 2:1 OR FLATTER GRADE - TOPOGRAPHY DEPENDENT, EXCEPT THAT DIKE SHALL BE LIMITED TO GRADES BETWEEN 0.5 AND 1.0%

HORIZONTAL SPACING OF INTERCEPTOR DIKES: SLOPES < 5% = 300 FEETSLOPES 5-10% = 200 FEET SLOPES 10-40% = 100 FEET

#### STABILIZATION: SLOPES = <5%

SEED AND MULCH APPLIED WITHIN 5 DAYS OF DIKE CONSTRUCTION (SEE BMP E1.10) SLOPES = 5-40% DEPENDENT ON RUNOFF VELOCITIES AND DIKE MATERIALS. STABILIZATION SHOULD BE DONE IMMEDIATELY, USING EITHER SOD

OR RIPRAP TO AVOID EROSION OUTLET - THE UPSLOPE SIDE OF THE DIKE SHALL PROVIDE POSITIVE DRAINAGE TO THE DIKE OUTLET. NO EROSION SHALL OCCUR AT THE OUTLET. PROVIDE ENERGY DIS-SIPATION MEASURES AS NECESSARY. SEDIMENT-LADEN RUNOFF MUST BE RELEASED THROUGH A SEDIMENT TRAPPING FACILITY.

MINIMIZE CONSTRUCTION TRAFFIC OVER TEMPORARY DIKES

#### INTERCEPTOR SWALES SHALL MEET THE FOLLOWING CRITERIA:

BOTTOM WIDTH - 2 FEET MINIMUM; THE BOTTOM SHALL BE LEVEL DEPTH - 1 FOOT MINIMUM SIDE SLOPE - 2:1 OR FLATTER GRADE - MAXIMUM 5%, W/ POSITIVE DRAINAGE TO A SUITABLE

OUTLET (SUCH AS A SEDIMENT TRAP) STABILIZATION - SEED AS PER BMP E1.10 TEMPORARY SEEDING OR E2.75, RIPRAP 12" THICK PRESSED INTO THE BANK AND EXTENDING AT LEAST 8" VERTICAL FROM THE

#### SWALE SPACING SLOPES < 5% = 300 FEET

SLOPES 5-10% = 200 FEET SLOPES 10-40% = 100 FEET OUTLET - LEVEL SPREADER OR RIPRAP TO STABILIZED OUTLET/

SEDIMENTATION POND.

MAINTENANCE
THE MEASURE SHOULD BE INSPECTED AFTER EVERY MAJOR STORM AND REPAIRS MADE AS NECESSARY. DAMAGE CAUSED BY CON-

STRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS

ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL ARES RESULTING FROM REMOVAL SHALL BE PERMA-NENTLY STABILIZED.

(AS-BUILT)

#### BMP E1.15: MULCHING AND MATTING

STRAW - STRAW IS THE MULCH MOST COMMONLY USED IN CONJUNCTION WITH SEEDING. ITS USE IS RECOMMENDED WHERE IMMEDIATE PROTECTION IS DESIRED. AND PREFERABLY WHERE THE NEED FOR PROTECTION WILL BE LESS THAN 3 MONTHS. THE STRAW SHOULD COME FROM WHEAT OR OATS AND MAY BE SPREAD BY HAND OR MACHINE. IF THE STRAW IS NOT CLEAN, WEED GROWTH CAN OCCUR. STRAW CAN BE WINDBLOWN AND MUST BE ANCHORED DOWN. COMMON ANCHORING METHODS ARE:

1. CRIMPING, DISKING, ROLLING OR PUNCHING INTO THE SOIL;

2. COVERING WITH NETTING: S. SPRAYING WITH A CHEMICAL OR FIBER BINDER (TACKIFIER); AND 4. KEEPING MOIST. NATURAL PRECIPITATION CAN OFTEN PROVIDE SUFFICIENT MOISTURE.

WOOD FIBER - USED IN HYDRO-SSEEDING OPERATIONS, APPLIED AS PART OF THE SLURRY. THESE SHORT CELLULOSE FIBERS DO NOT REQUIRE TACKING. ALTHOUGH A TACKING AGENT OR SOIL BINDERS ARE SOMETIMES USED WITH WOOD FIBER. THE LONGER THE FIBER LENGTH, THE BETTER THE WOOD WILL WORK IN EROSION CONTROL. THIS FORM OF MULCH DOES NOT PROVIDE SUFFICIENT PROTECTION TO ERODIBLE SOILS TO BE USED ALONE DURING THE SEVERE HEAT OF SUMMER OR FOR LATE FALL SEEDINGS WOOD FIBER HYDRO-SEED SLURRIES MAY BE USED TO TACK STRAW MULCH. THIS COMBINATION TREATMENT IS WELL SUITED FOR STEEP SLOPES AND CRITICAL AREAS. AND FOR SEVERE CLIMATE CONDITIONS. THERE ARE OTHER ORGANIC MATERIALS WHICH MAKE EXCELLENT MULCHES BUT ARE ONLY AVAILABLE LOCALLY OR SEASONALLY. CREATIVE USE OF THESE MATERIALS CAN REDUCE COSTS.

SITE PREPARATION - SAME AS TEMPORARY SEEDING

MULCH MATERIALS, APPLICATION RATES AND SEPECIFICATIONS - SEE TABLE II-5.2 BELOW

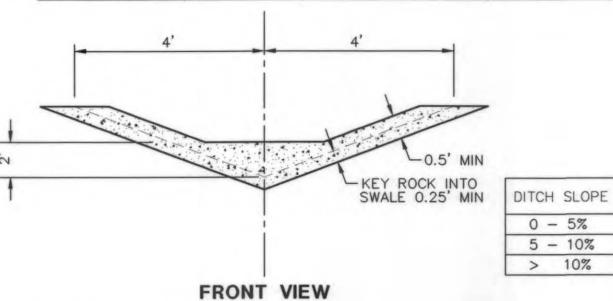
MULCHED AREAS SHOULD BE CHECKED PERIODICALLY, ESPECIALLY FOLLOWING SEVERE STORMS, WHEN DAMAGED AREAS OF MULCH OR TIE-DOWN MATERIAL

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RE-SULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

#### TABLE II-5.2

GUIDE TO MULCH MATERIALS, RATES AND USES

MULCH MATERIAL	QUALITY STANDARDS	APPLICATIO /1000 FT	N RATES /ACRE	DEPTH OF APPLICATION	REMARKS
HAY OR STRAW	AIR-DRIED, FREE FROM UNWANTED SEEDS & COARSE MATERIAL	75-100 LBS OR 2-3 BALES	11/2 – 21/2 TONS OR 90–120 BALES	MIN 2 INCHES	USE WHERE THE MULCHING EFFECT IS TO BE MAINTAINED FOR >3 MONTHS. IS SUBJECT TO WIND BLOWING UNLESS KEPT MOIST OR TACKED DOWN. MOST COMMON & WIDELY USED MULCHING MATERIAL. CAN BE USED IN CRITICAL EROSION AREAS.
WOOD FIBER CELLULOSE (PARTIALLY DIGESTED WOOD FIBERS)	DYED GREEN SHOULD NOT CONTAIN GROWTH INHIBITING FACTORS	25-30 LBS	1000- 1500 LBS		IF USED ON CRITICAL AREAS, DOUBLE THE NORMAL APPLICATION RATE. APPLY W/ HYDROMULCHER. NO TIE-DOWN REQUIRED. PACKAGED IN 100 LB BAGS.



# INTERCEPTOR DITCH X-SECTION & ROCK DAM

0.5'-1'KEY ROCK INTO SWALE SUMP BEHIND ROCK CHECK DAM MIN. 0.25' SHALL BE INSPECTED DAILY AND CLEANED WHEN COLLECTED DEBRIS EXCEEDS 1/2 OF ITS DEPTH.

# SIDE VIEW

ROCK CHECK DAM X-SECTION NO SCALE

> APPROVED FOR CONSTRUCTION 9-24-01 666

CHECK DAM SPACING

150'

100'

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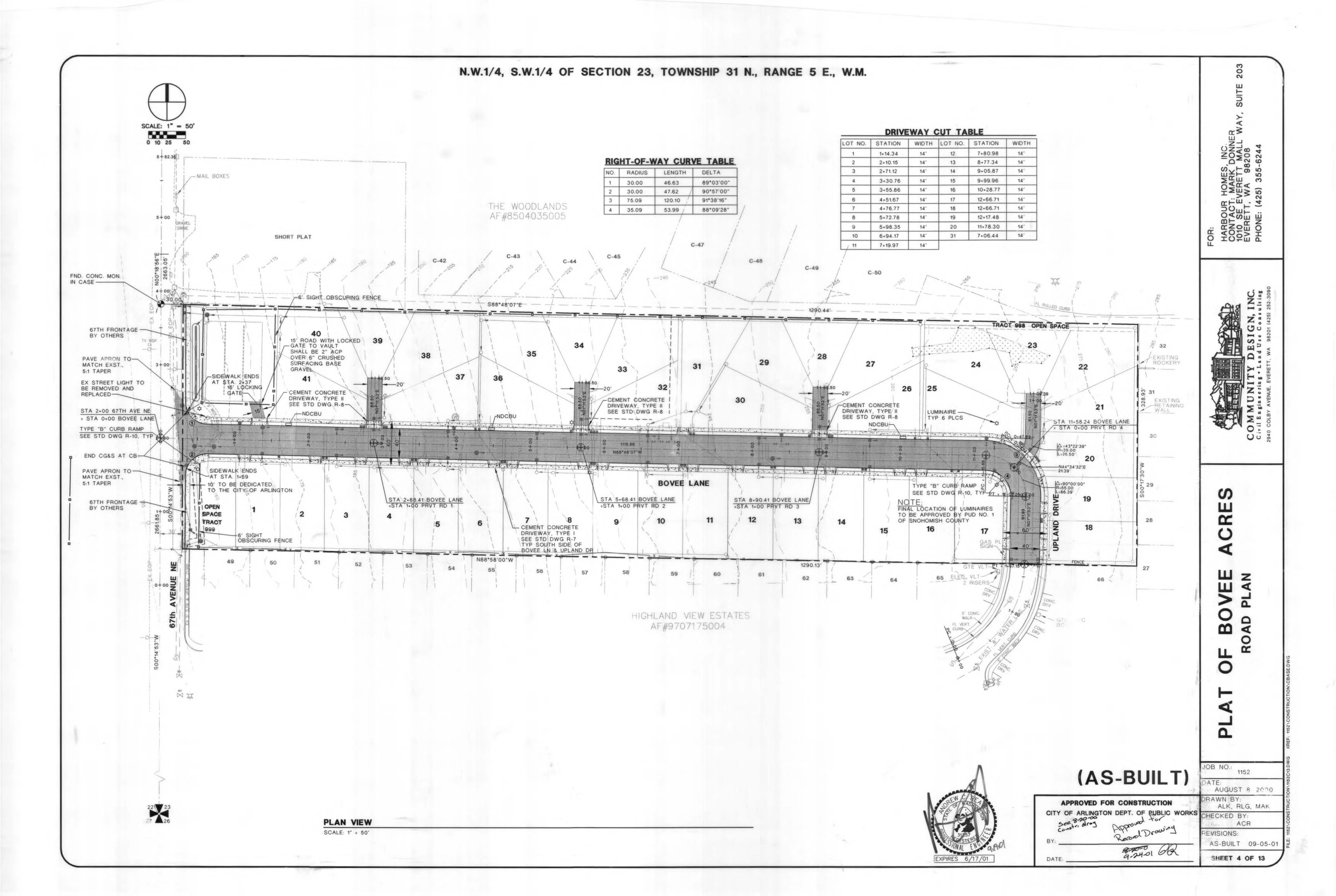
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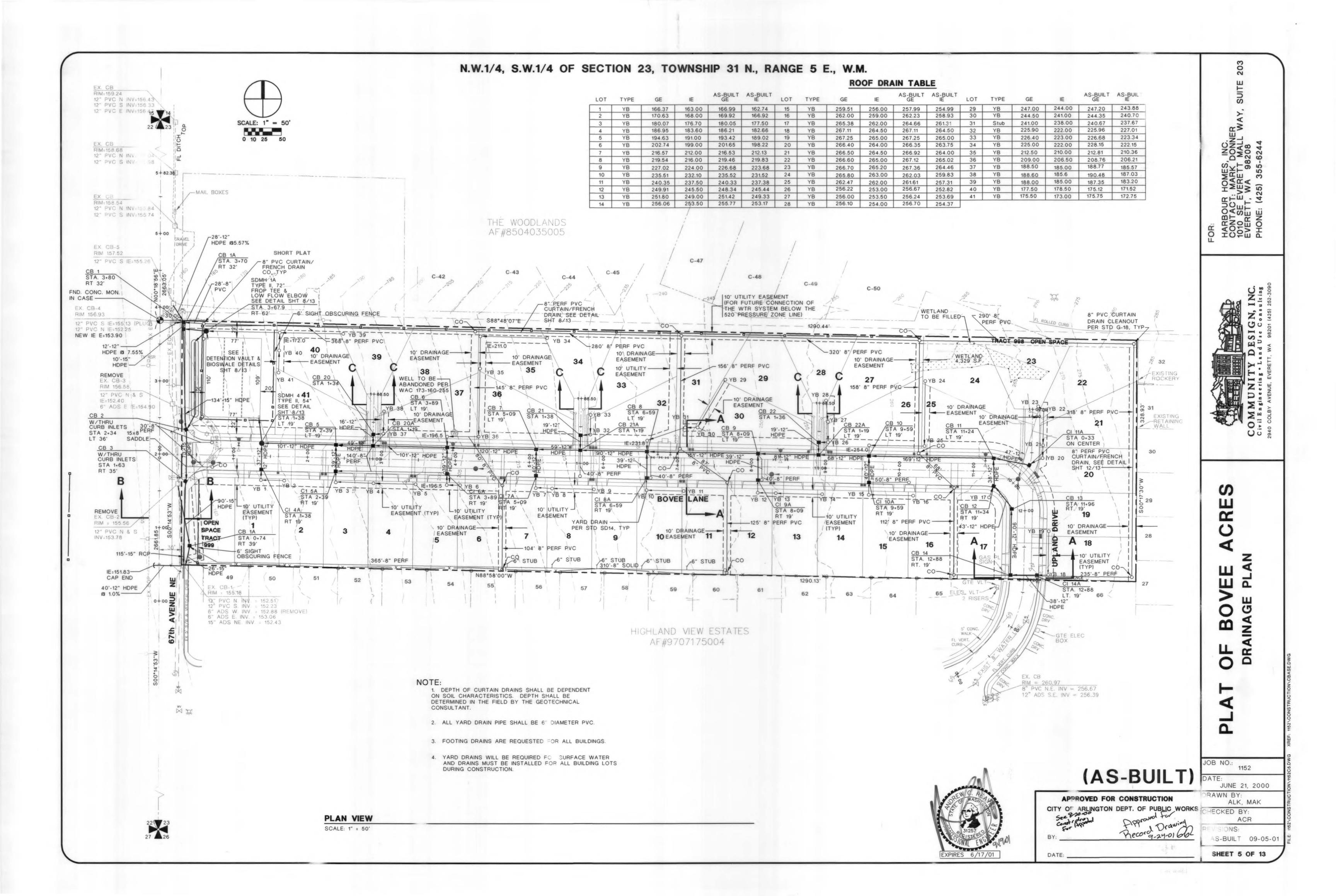
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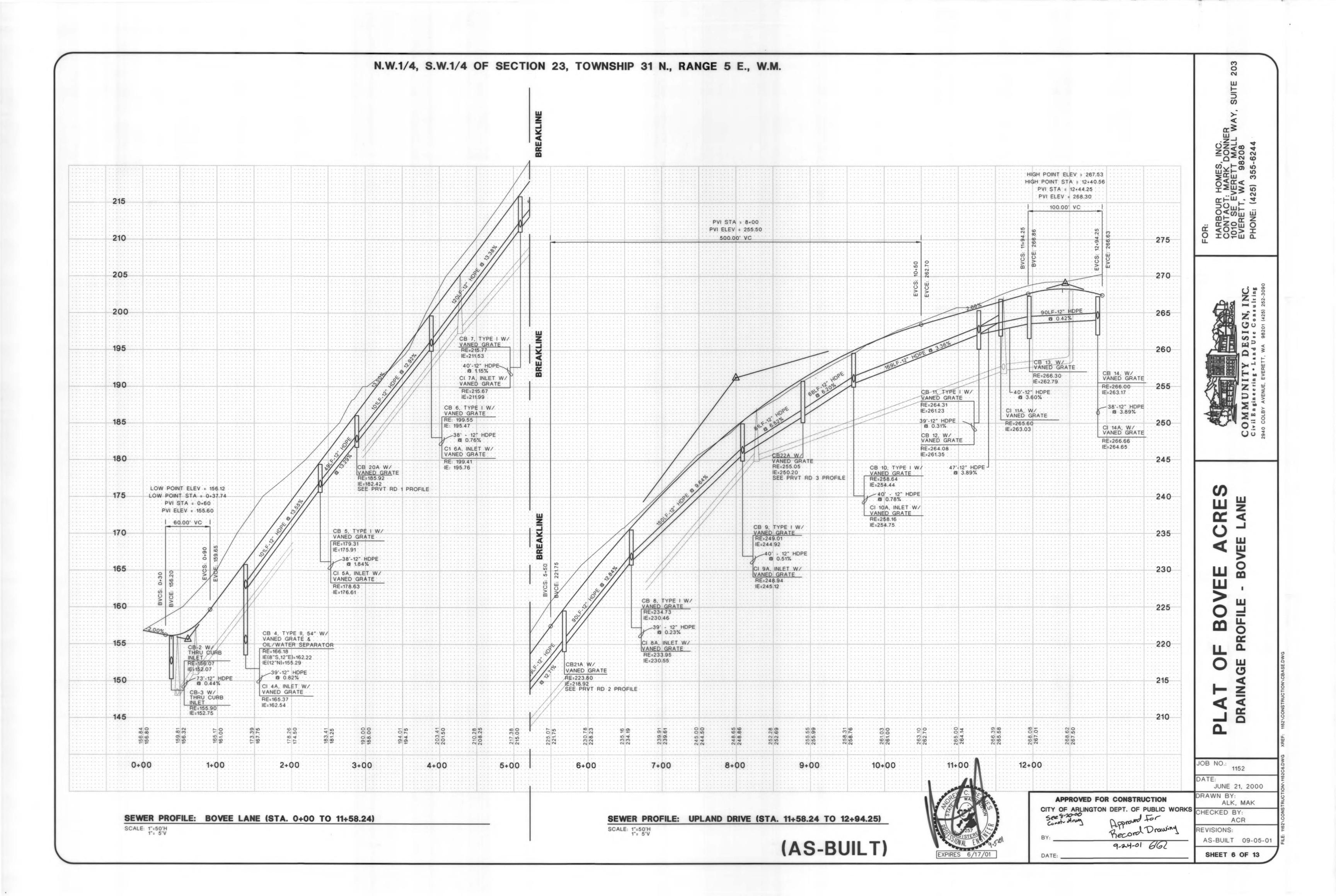
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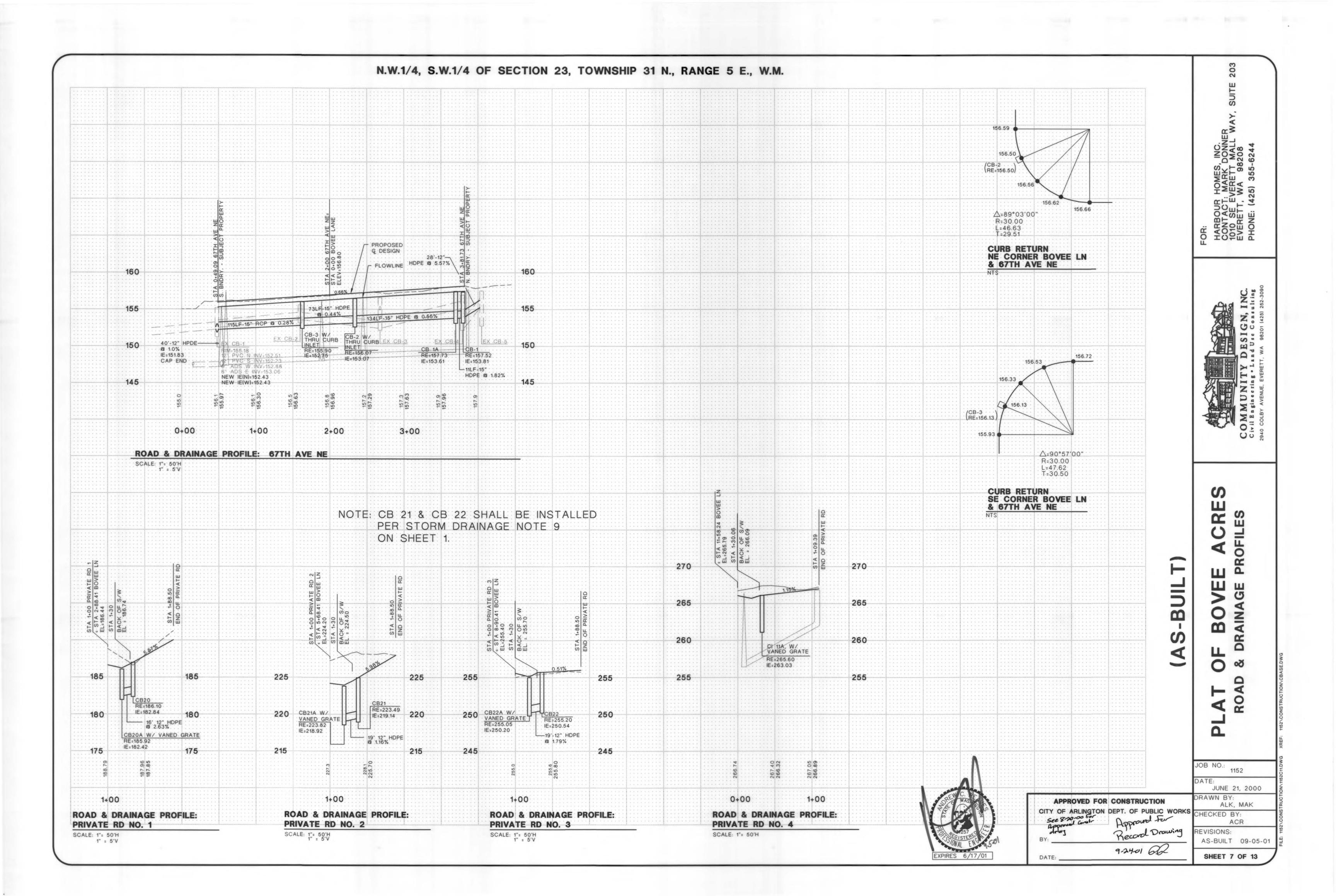
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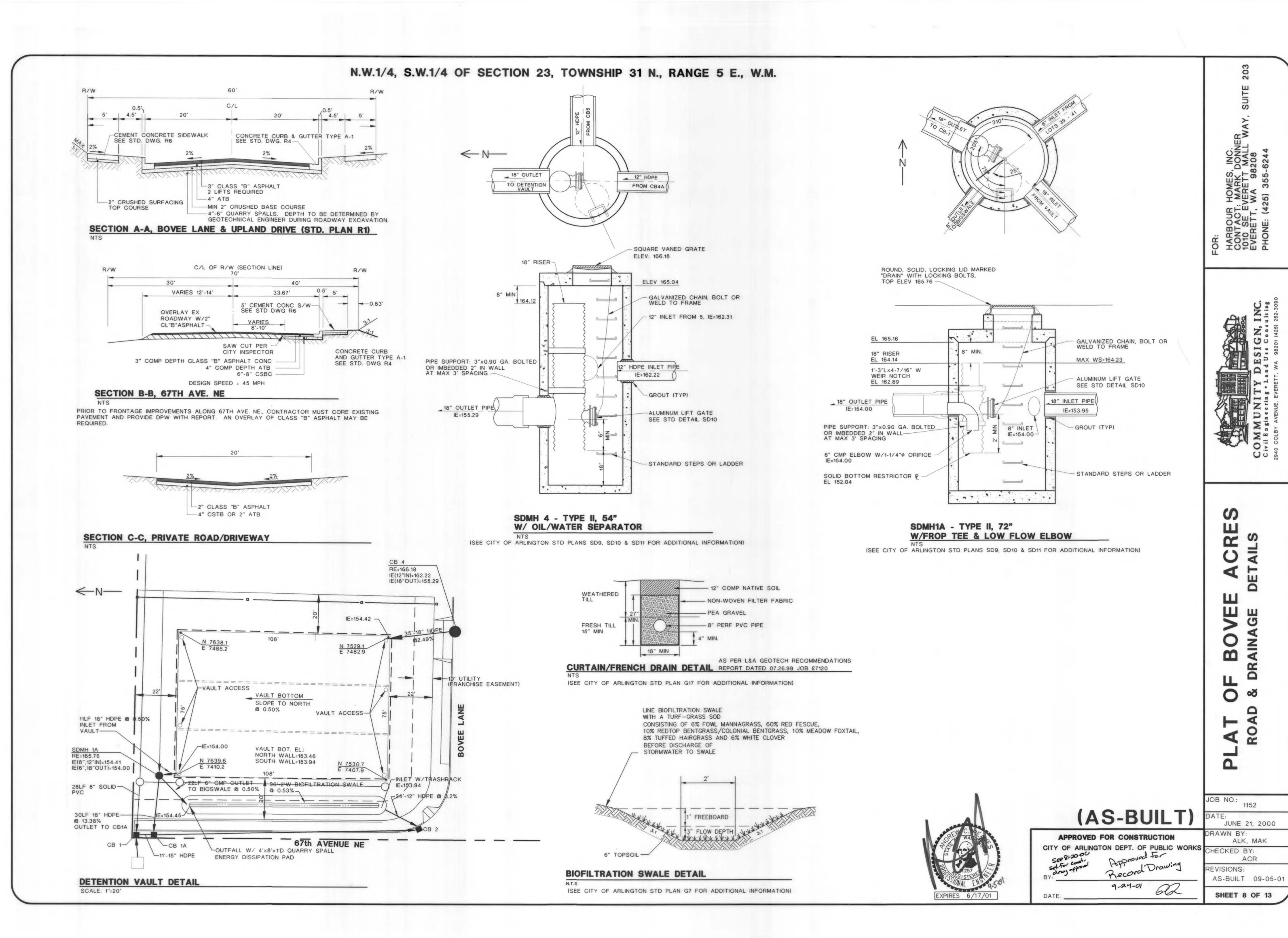
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#### WATER PIPE INSTALLATION

A) TRENCHES SHALL BE EXCAVATED TO LINE AND DEPTH SO ALL NEW PIPELINES CONSTRUCTED SHALL HAVE NOT LESS THAN THREE (3) FEET OR IN EXCESS OF FOUR (4) FEET OF COVER, MEASURED FROM THE TOP OF THE PIPE TO THE APPROVED FINISH GRADE.

B) THE EXCAVATION SHALL BE MADE IS A STRAIGHT GRADE THROUGH LOCALIZED BREAKS IN GRADE. THE EXCAVATION SHALL BE DEEPENED GRADUALLY AT CHANGES IN THE STREET GRADES SO THAT THERE ARE NO ABRUPT CHANGES IN PIPELINE GRADE. DEFLECTIONS AT EACH PIPE JOINT SHALL NOT EXCEED THE MAXIMUM PERMISSIBLE DEFLECTION.

C) EXCEPT FOR UNUSUAL CIRCUMSTANCES SHERE APPROVED BY THE ENGINEER, THE TRENCH SIDES SHALL BE EXCAVATED VERTICALLY AND THE TRENCH WIDTH SHALL BE EXCAVATED ONLY TO SUCH WIDTHS AS ARE NECESSARY FOR ADEQUATE WORKING SPACE.

D) TRENCHING OPERATIONS SHALL NOT PROCEED MORE THAN 100 FEET IN ADVANCE OF PIPE LAYING, EXCEPT WITH WRITTEN APPROVAL OF THE CITY.

E) WHEN TRENCHING OPERATIONS CUT THROUGH CONCRETE PAVEMENT, THE PAVEMENT SHALL BE REMOVED TO A WIDTH OF 18 INCHES OR GREATER THAN THE TOP WIDTH OF THE TRENCH. ASPHALT PAVING SHALL BE CUT AHEAD OF THE TRENCHING EQUIPMENT TO PREVENT EXCESSIVE TEARING UP OF THE SURFACING AND TO ELIMINATE RAGGED EDGES.

F) ALL TRENCHING OPERATIONS SHALL BE PERFORMED IN STRICT COMPLIANCE WITH APPLICABLE FEDERAL, STATE, LOCAL AND INDUSTRY SAFETY REGULATIONS AND REQUIREMENTS.

G) SEE SECTION TITLED "ROADWAY AND RELATED WORK" FOR TRENCH WORK IN EXISTING ROADWAYS.

#### 2. LAYING OF WATER PIPE

A) ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THESE SPECIFICATIONS, AWWA SPECIFICATIONS, AND THE INSTRUCTIONS OF THE MANUFACTURER SUBJECT TO THE APPROVAL OF THE CITY. ALL PIPE ENDS SHALL BE SQUARE WITH THE LONGITUDINAL AXIS OF THE POPE AND ANY DAMAGE TO THE ENDS SHALL BE CUT OFF BEFORE INSTALLATION. WHERE NECESSARY TO CUT THE PIPE, THE PIPE SHALL BE CUT WITH APPROVED CUTTING TOOLS.

B) THE PIPE SHALL BE LAID IN A STRAIGHT GRADE THROUGH LOCALIZED BREAKS IN GRADE, THE EXCAVATION SHALL BE DEEPENED GRADUALLY AT CHANGES IN THE STREET GRADES SO THAT THERE ARE NO ABRUPT CHANGES IN PIPELINE GRADE. TO MAINTAIN THE REQUIRED ALIGNMENT, USE SHORT LENGTHS AND DEFLECT THE JOINTS OR USE NECESSARY BENDS. MAXIMUM DEFLECTION ALLOWED PER DIPRA INSTALLATION GUIDE, 1994.

C) EACH PIPE SECTION SHALL BE CAREFULLY LOWERED INTO PLACE IN THE DITCH AFTER INSPECTING IT FOR DEFECTS REMOVING ANY GRAVEL OR DIRT, ETC., FROM THE INTERIOR OF THE PIPE.

D) WHEN NECASSARY, WATER MAINS TO BE CONSTRUCTED UNDER OTHER UTILITIES SHALL MEET THE MINIMUM COVER REQUIREMENTS.

E) WHERE IT IS NECESSARY TO CROSS SANITARY SEWER OR STORM SEWER TRENCHES, ALL TRENCH BACKFILL SHALL BE REMOVED AND REPLACED WITH MECHANICALLY COMPACTED PIT RUN MATERIAL TO PROVIDE A UNIFORM SUPPORT FOR THE LENGTH OF THE PIPE.

F) A 10-FOOT HORIZONTAL SEPERATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER LINES AND WATER LINES. A 5-FOOT MINIMUM HORIZONTAL SEPERATION SHALL BE MAINTAINED BETWEEN ALL WATER FACILITIES AND UNDERGROUND POWER AND TELEPHONE FACILITIES, UNLESS OTHERWISE APPROVED.

#### CONCRETE BLOCKING

A) CONCRETE BLOCKING PER CITY OF ARLINGTON STANDARD DETAIL W-3.

B) ALL BENDS AND TEES SHALL BE BLOCKED IN ACCORDANCE WITH STANDARD BLOCKING DETAILS. THE CONTRACTOR SHALL INSTALL BLOCKING WHICH IS ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY STAND OPERATING PRESSURES UNDER ALL CONDITIONS OF SERVICE. FOR CONCRETE BLOCKING BASED ON 200 PSI TEST PRESURE WITH SAFE SOIL BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT, SEE STANDARD DETAIL.

#### 4. FIRE HYDRANT INSTALLATION

A) FIRE HYDRANTS SHALL BE SET AS SHOWN IN THE CITY OF ARLINGTON STANDARD DETAIL, W-1.

B) THE HYDRANT SHALL BE SET ON A SOLID CONCRETE BLOCK 12"x 12"x 4" AND A MINIMUM OF 6 CUBIC FEET OF CLEAN GRAVEL SHALL BE PLACED AROUND THE BASE OF THE NEW HYDRANT FOR A DRAIN POCKET.

C) IN SOME INSTANCES, IT MAY BE NECESSARY TO MAKE A CUT OR PROVIDE A FILL TO SET A HYDRANT. WHERE THIS OCCURS, THE AREA FOR AT LEAST A THREE (3) FOOT RADIUS AROUND THE HYDRANT SHALL BE GRADED AND LEVEL, AND THE CUT SLOPES OR FILL SLOPES SHALL BE NEATLY GRADED BY HAND, UNLESS OTHERWISE APPROVED BY THE CITY AND THE FIRE CHIEF.

D) NO HYDRANT LEAD SHALL EXCEED 18' IN LENGTH.

#### 5. GUARD POST INSTALLATION

FIRE HYDRANT GUARD POST SHALL BE INSTALLED AS DIRECTED BY THE CITY. GUARD POSTS SHALL BE SET WITH THE TOP OF THE GUARD POSTS LEVEL WITH BONNET FLANGE OF THE FIRE HYDRANT. THEY SHALL BE PLUMB AND WHERE TWO POSTS ARE USED AT A HYDRANT, THEY SHALL BE SET WITH THEIR TOPS AT THE SAME ELEVATION. THE EXPOSED PORTION OF EACH HYDRANT GUARD POSTS SHALL BE PAINTED WITH TWO COATS OF EXTERIOR CONCRETE PAINT, COLOR AS DESIGNATED BY THE CITY. WHERE HYDRANTS ARE SET IN BACK OF A CONCRETE CURB, GUARD POSTS WILL NOT NORMALLY BE REQUIRED.

#### 6. GATE VALVE INSTALLATION

GATE VALVES SHALL BE SET IN THE GROUND VERTICALLY AND SHALL BE OPENED AND SHUT UNDER PRESSURE TO CHECK OPERATION AND, AT THE SAME TIME, SHOW NO LEAKAGE. VALVES 8 INCHES AND LARGER THAT ARE NOT FLANGED TO OTHER FITTINGS SHALL BE BLOCKED IN ACCORDANCE WITH THE STANDARD BLOCKING DETAILS. VALVE BOXES SHALL BE SET FLUSH IN PAVEMENT AND IN GRAVEL SHOULDER.

#### CONNECTION TO EXISTING WATER MAIN

A) THE CONTRACTOR SHALL NOT OPERATE ANY GATE VALVE OR MAKE ANY CONNECTIONS TO THE EXISTING WATER MAIN WITHOUT PRIOR APPROVAL OF THE CITY.

B) THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS WITH THE CITY FOR THE CONNECTION TO THE EXISTING WATER MAIN.

C) ALL MATERIAL USED FOR THE CONNECTION SHALL BE THOROUGHLY STERILIZED BY SWABBING THE INTERIOR WITH A CHLORINE SOLUTION OF

D) BACKFLOW PREVENTION REQUIREMENTS SHALL BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION.

#### 8. HYDROSTATIC TESTS

A) AFTER BACKFILLING THE WATER MAIN BETWEEN JOINTS WITH SUFFICIENT DIRT TO PREVENT MOVEMENT OF THE PIPELINE, ALLOWING SUFFICIENT TIME FOR THE CONCRETE BLOCKING TO SET, THE WATER MAIN SHALL BE TESTED IN CONVENIENT LENGTHS AS SO ORDERED AND WHEN ORDERED BY THE CITY. IN GENERAL, NEW MAINS SHALL BE TESTED IN CONVENIENT LENGTHS AS SO ORDERED AND WHEN ORDERED BY THE CITY. IN GENERAL, NEW MAINS SHALL BE TESTED BETWEEN VALVES AND LARGE SECTIONS OF UNTESTED MAIN WILL NOT BE PERMITTED TO ACCUMULATE.

B) THE PIPELINE SHALL BE FILLED WITH WATER SLOWLY AND ALL AIR EXPELLED FROM THE PIPELINE PRIOR TO STARTING THE TEST. ALL PIPELINES SHALL BE TESTED AT HYDROSTATIC PRESSURE OF 250 PSI. ALL NECESSARY PUMP, VALVES, METERS, GUAGES, PIPING, HOSE AND LABOR REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR.

C) ALL PRESSURE TESTING SHALL BE DONE IN THE PRESENCE OF THE CITY ENGINEER OR WATER DEPARTMENT INSPECTORS. A MINIMUM OF 24 HOURS ADVANCE NOTICE IS REQUIRED BEFORE THE CITY ENGINEER OR WATER DEPARTMENT INSPECTOR WILL WITNESS A PRESSURE TEST.

#### STERILIZATION AND FLUSHING OF WATER MAIN

THE PIPELINE SHALL BE THOROUGHLY STERILIZED BY THE CONTRACTOR. SANITARY TEST SAMPLES WILL BE TAKING IN ACCORDANCE WITH STATE HEALTH DEPARTMENT REGULATIONS. RE-STERILIZATION WILL BE REQUIRED WHEN UNSATISFACTORY SAMPLES ARE ENCOUNTERED.

B) THE CONTRACTOR SHALL NOT START UP THE PUMP TO BE USED FOR FLUSHING OF THE NEW MAINS UNTIL THE CITY INSPECTOR IS PRESENT TO WITNESS THE PUMP STARTUP.

C) THE CONTRACTOR SHALL NOT DO ANY FLUSHING OF THE PIPELINE WITHOUT PRIOR APPROVAL OF THE CITY.

D) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF CHLORINATED WATER USED IN TESTING OF NEW CONSTRUCTION. SUCH DISPOSAL SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL LAWS.

#### SAMPLING STATION

A MINIMUM OF ONE (1) #93-WM SAMPLING STATION SHALL BE INSTALLED BY THE CONTRACTOR FOR ALL NEW WATER MAIN CONSRUCTION.

#### BACKFLOW PREVENTION

A) TO PREVENT CONTAMINATED WATER FROM THE NEW MAIN FROM ENTERING THE EXISTING DISTRIBUTION SYSTEM, A DOUBLE CHECK VALVE ASSEMBLY SHALL BE USED ON THE LINE SUPPLYING THE WATER. A DOUBLE CHECK VALVE ASSEMBLY IS SUFFICIENT BACKFLOW PROTECTION ONLY FOR FILLING AND FLUSHING OF THE NEW MAIN. DURING THE HYDROSTATIC PRESSURE TEST, THE TEMPORARY CONNECTION BETWEEN THE NEW MAIN AND THE EXISTING DISTRIBUTION SYSTEM SHALL BE

B) CONSULT THE CITY'S CROSS-CONNECTION AND BACKFLOW PREVENTION MANUAL FOR TESTING, INSPECTION AND APPROVAL PROCEDURES. COPIES ARE AVAILIABLE AT THE PUBLIC WORKS OFFICE.

# **GENERAL SANITARY SEWER NOTES**

A 10 FOOT HORIZONTAL SEPERATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER LINES AND WATER LINES. A 5-FOOT MINIMUM HORIZONTAL SEPERATION SHALL BE MAINTAINED BETWEEN ALL WATER FACILITIES AND UNDERGROUND POWER AND TELEPHONE FACILITIES, UNLESS OTHERWISE APPROVED.

#### PIPE LAYING

THE SEWER PIPE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, SHALL BE INSTALLED UPGRADE FROM POINT OF CONNECTION ON THE EXISTING SEWER OR FROM A DESIGNATED STARTING POINT TO LINE AND GRADE PER APPROVED PLANS. THE SEWER PIPE SHALL BE INSTALLED WITH THE BELL END FORWARD OR UPGRADE. WHEN PIPE LAYING IS NOT IN PROGRESS, THE FORWARD END OF THE PIPE SHALL BE KEPT TIGHTLY CLOSED WITH AN APPROVED TEMPORARY PLUG.

#### PIPE JOINTING

ALL EXTENSIONS, ADDITIONS AND REVISIONS ON THE SEWER SYSTEM, UNLESS OTHERWISE INDICATED. SHALL BE MADE WITH SEWER PIPE JOINED BY MEANS OF A FLEXIBLE GASKET WHICH SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THESE SPECIFICATIONS. ALL JOINTS SHALL BE MADE UP IN STRICT COMPLIANCE WITH THE MANUFACTURER'S DIRECTIONS AND ALL SEWER PIPE MANUFACTURE AND HANDLING SHALL MEET OR EXCEED THE ASTM AND CPAW RECOMMENDED SPECIFICATIONS, CURRENT REVISIONS. CARE SHALL BE TAKEN TO PROPERLY ALIGN THE PIPE BEFORE JOINTS ARE ENTIRELY FORCED HOME.

#### SEWER PIPE INSTALLATION

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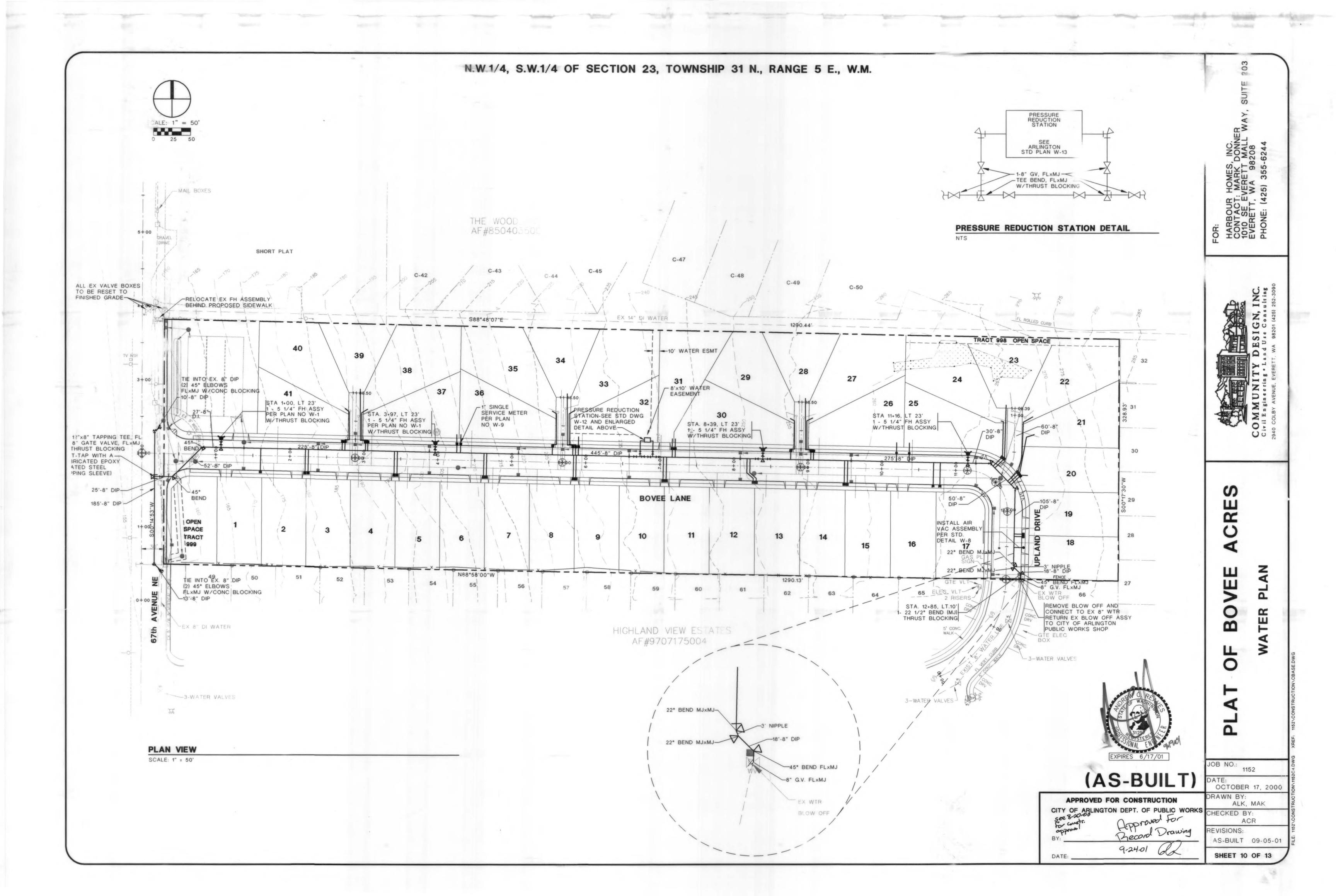
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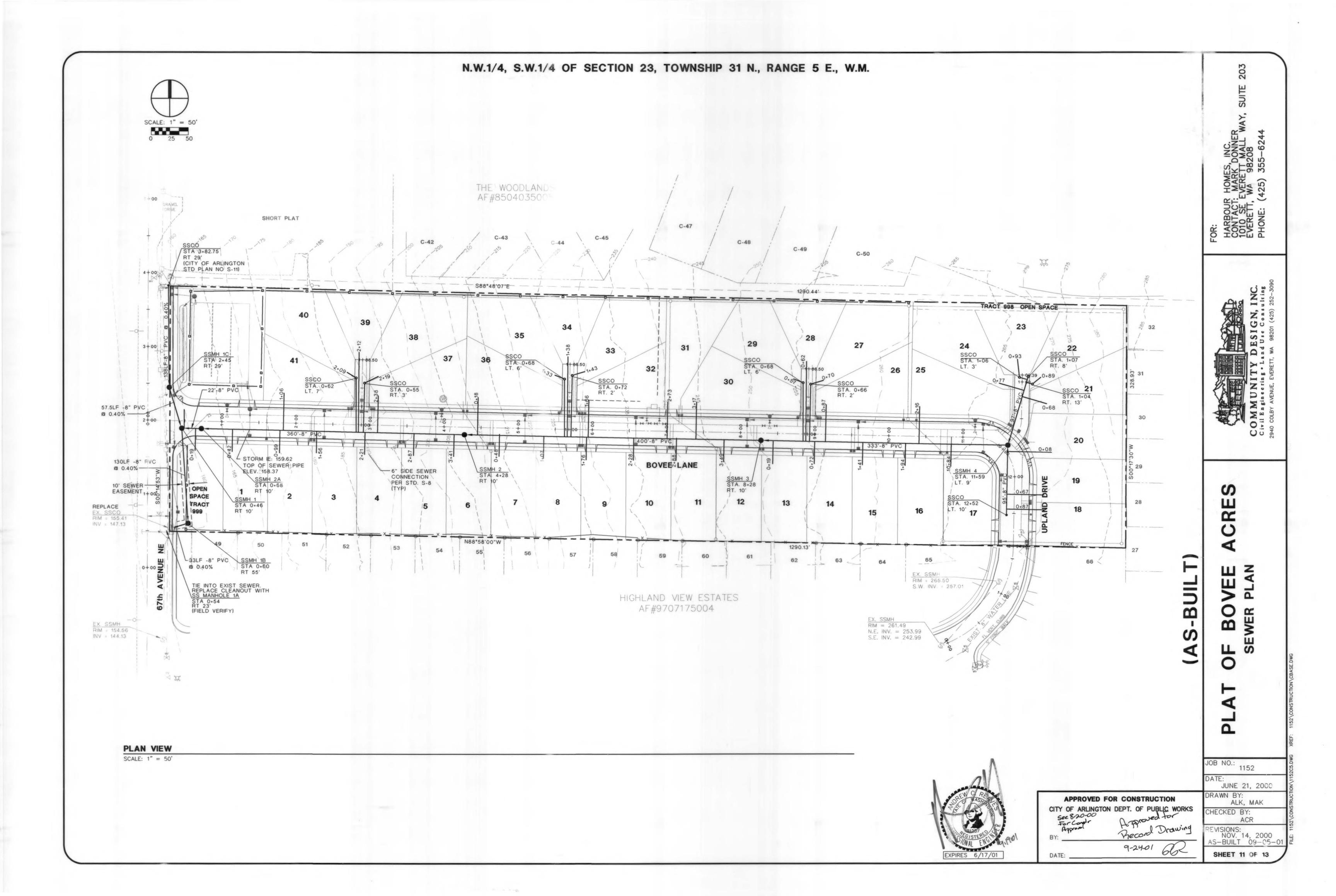
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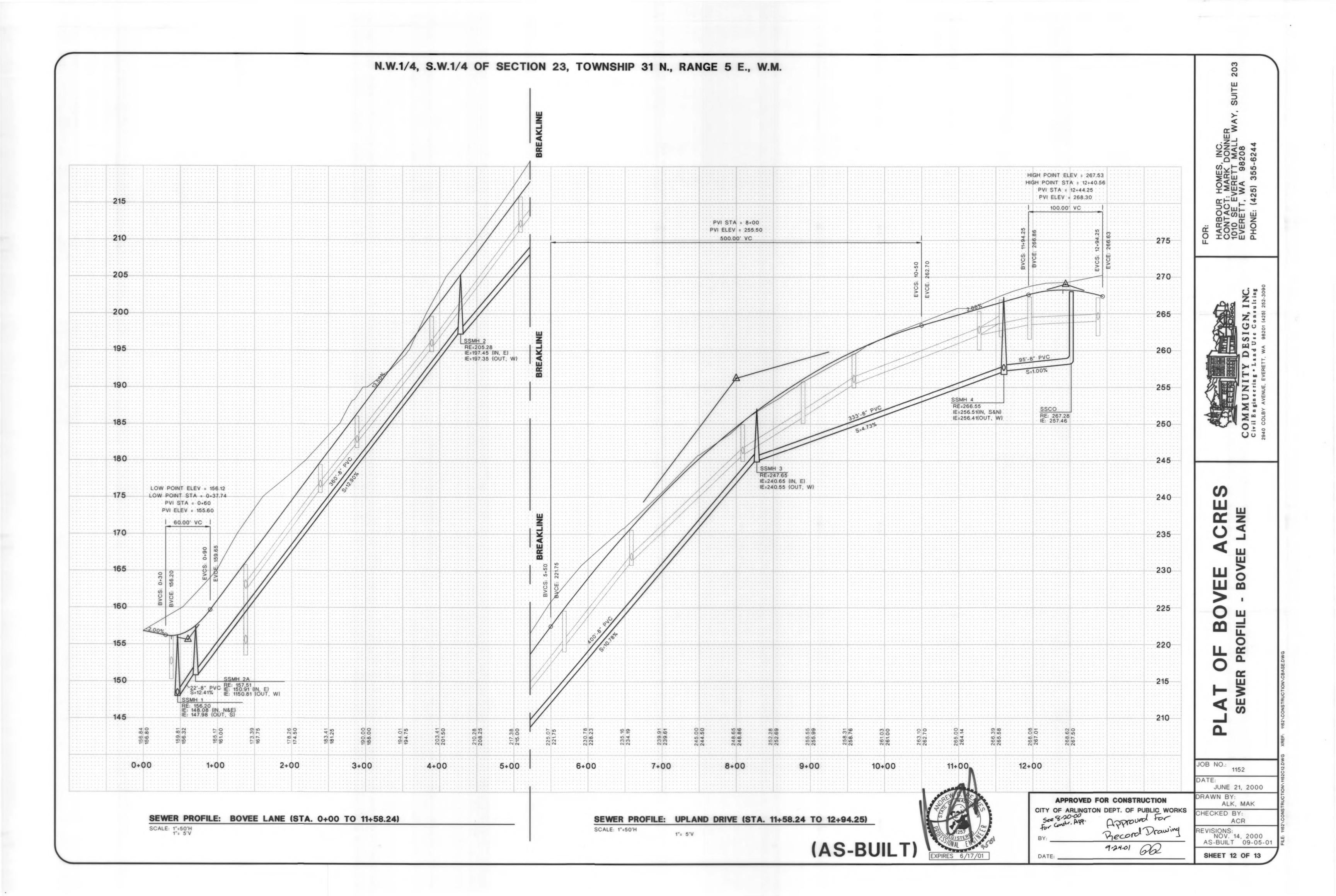
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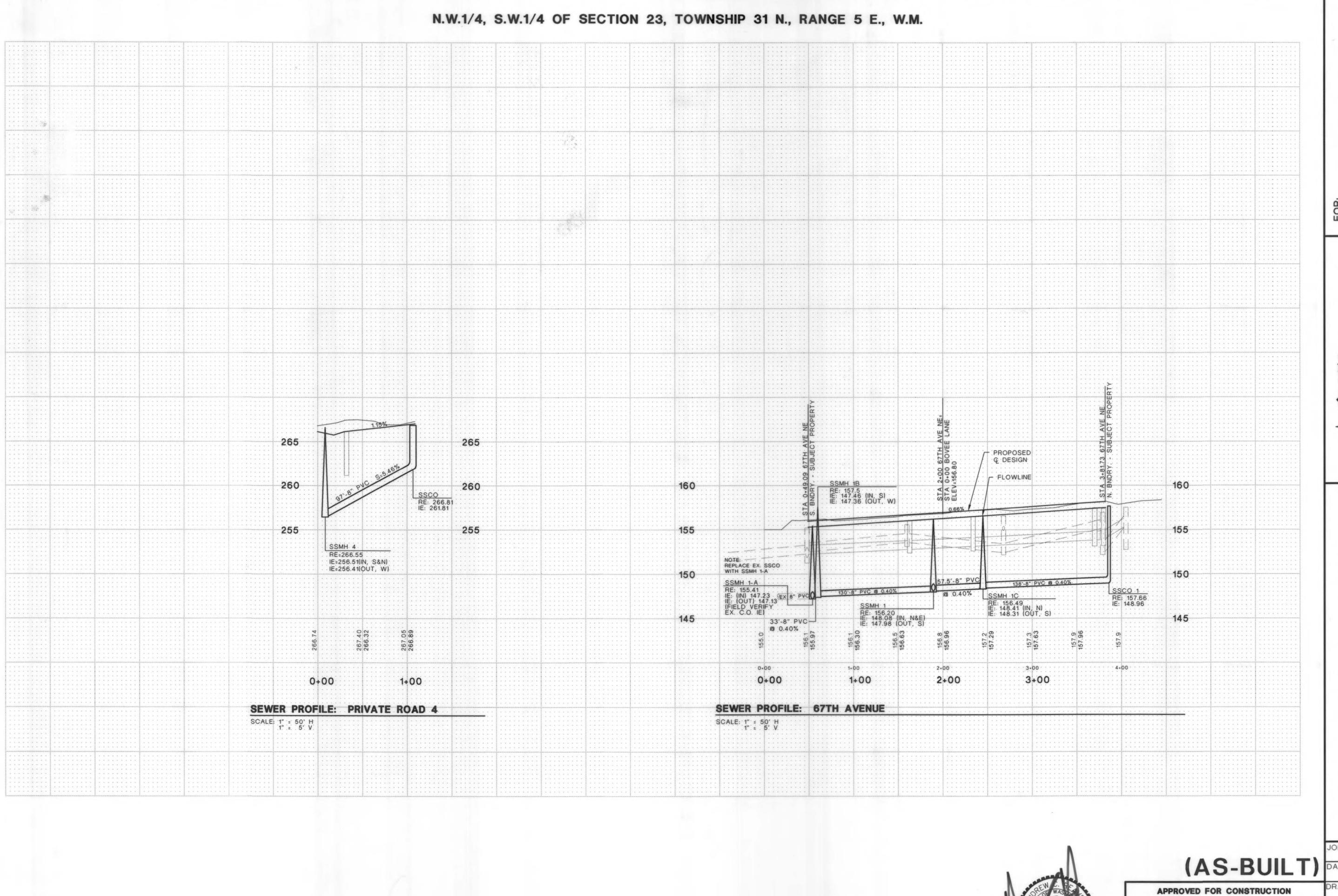
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