

SECTION 17, TOWNSHIP 31 NORTH, RANGE 5 EAST, W.M., SNOHOMISH COUNTY, WA

GRAPHIC SCALE
 0 30 60 120
 (IN FEET)
 1 INCH = 60 FT

DATUM: HORIZONTAL NAD 83
BENCH: SEWER MANHOLE
 RIM = 115.00'
 CENTER OF CHANNEL I.E. = 102.60' (NAVD 88)
 NGVD 29 (CONVERSION TO NAVD88 +3.71')

- CONSTRUCTION SEQUENCE:**
 THIS CONSTRUCTION SEQUENCE IS TO BE USED AS A GUIDELINE. CONDITIONS MAY REQUIRE CHANGES IN TIMING OF WORK. CHANGES SHALL BE DISCUSSED WITH AND APPROVED BY INSPECTOR AND OWNER.
- ARRANGE AND ATTEND PRE-CONSTRUCTION MEETING WITH THE CITY.
 - FLAG CLEARING LIMITS AS INDICATED AND INSTALL S.W.P.P. MEASURES.
 - CONSTRUCT DRAINAGE POND.
 - STABILIZE DISTURBED LAND SURFACES.

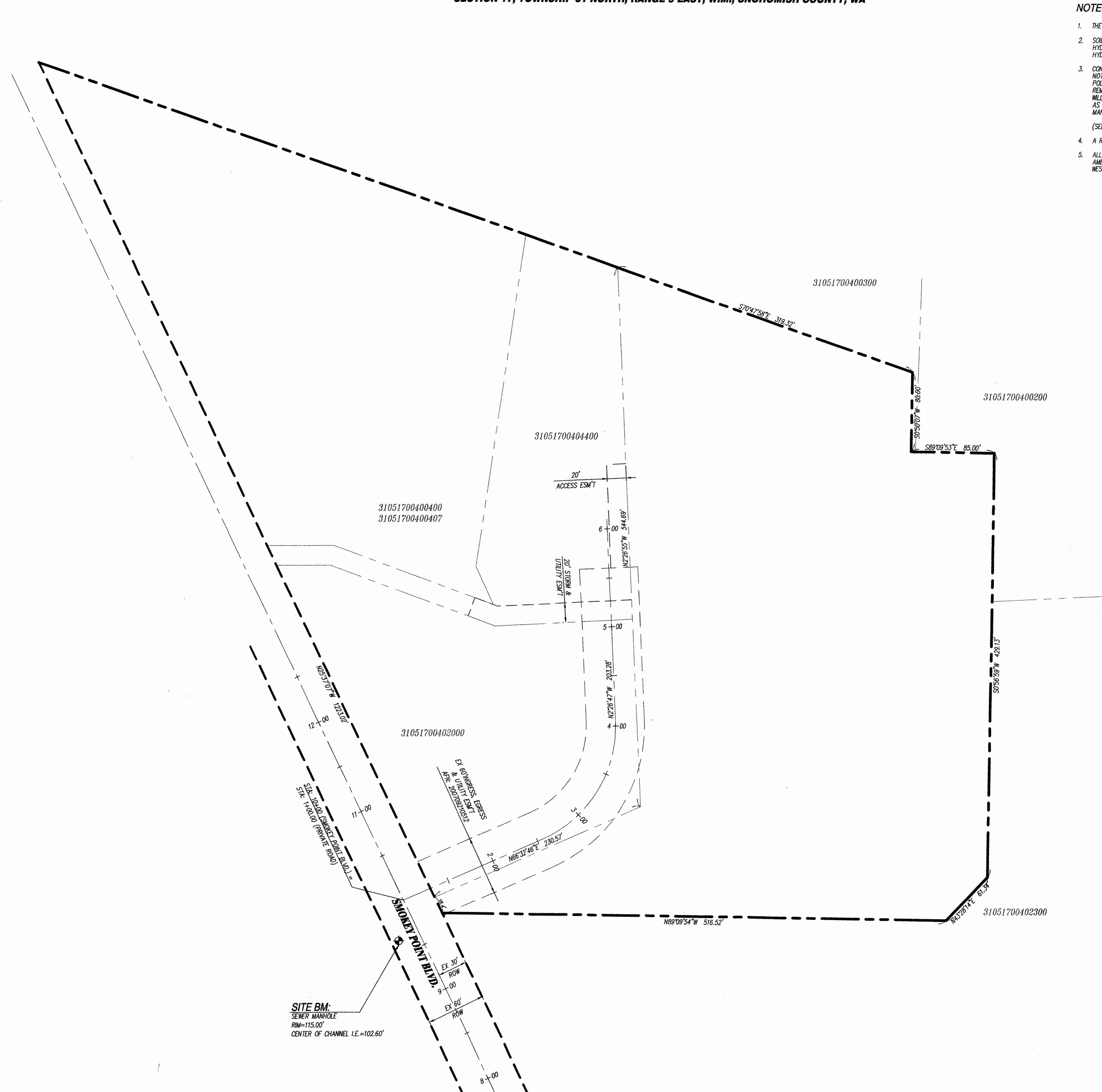
TOTAL DISTURBED AREA:
 36,205 SF

ABBREVIATIONS TABLE

(A/P) = ANGLE POINT	(MCSE) = MIN CRAWL SPACE ELEV.
(BC) = BOTTOM OF CURB-F/L	(OWS) = OIL WATER SEPARATOR
(BO) = BOTTOM OF WALL	(OS) = POINT OF CURVATURE
(BO) = BLOWOFF	(PI) = POINT OF INTERSECTION
(BRK) = BREAK/GRADE BREAK	(PL) = PROPERTY LINE
(CB) = CATCH BASIN	(PP) = POWER/UTILITY POLE
(CBU) = COLLECTION BOX UNITS	(PT) = POINT OF TANGENCY
(CE) = CULVERT END	(PWT) = PAVEMENT
(CL) = CENTER LINE	(RE) = R/W ELEVATION
(CO) = CLEANOUT	(SD) = STORM DRAIN
(CSBC) = CR. SURF'G BASE COURSE	(SL) = SOLID LOCKING LID
(CSTR) = CR. SURF'G TOP COURSE	(SS) = SANITARY SEWER
(CTR) = CENTER	(SSMH) = SEWER MANHOLE
(DIP) = DUCTILE IRON PIPE	(STR) = STRUCTURE
(DRNG) = DRAINAGE	(TBR) = TO BE REMOVED
(EL) = ELEVATION	(TC) = TOP OF CURB
(EQA) = EDGE OF ASPHALT	(TO) = THRU CURB INLET
(EG) = EDGE OF GRAVEL	(TB) = TOP OF BANK
(ESMT) = EASEMENT	(TW) = TOP OF WALL
(EX) = EXISTING	(TP) = TYPICAL
(C/L) = OUTER LINE OF CURB	(T-2) = TYPE-2/4" MH
(GR) = GRATE	(T-1) = TYPE 1 CB
(GRVL) = GRAVEL	(YD) = YARD DRAIN
(HY) = FIRE HYDRANT	(V) = VANED GRATE
(FL) = FLOW LINE	(W) = WATER/WATER MAIN
(FC) = FACE OF CURB	(WCR) = WHEEL CHAIR RAMP
(E) = INVERT ELEVATION	(WM) = WATER METER
(INT) = INTERSECTION	(WV) = WATER VALVE
(L) = LOT LINE	(1/4 Δ) = 1/4 PARTS DELTA
(MB) = MAILBOX	

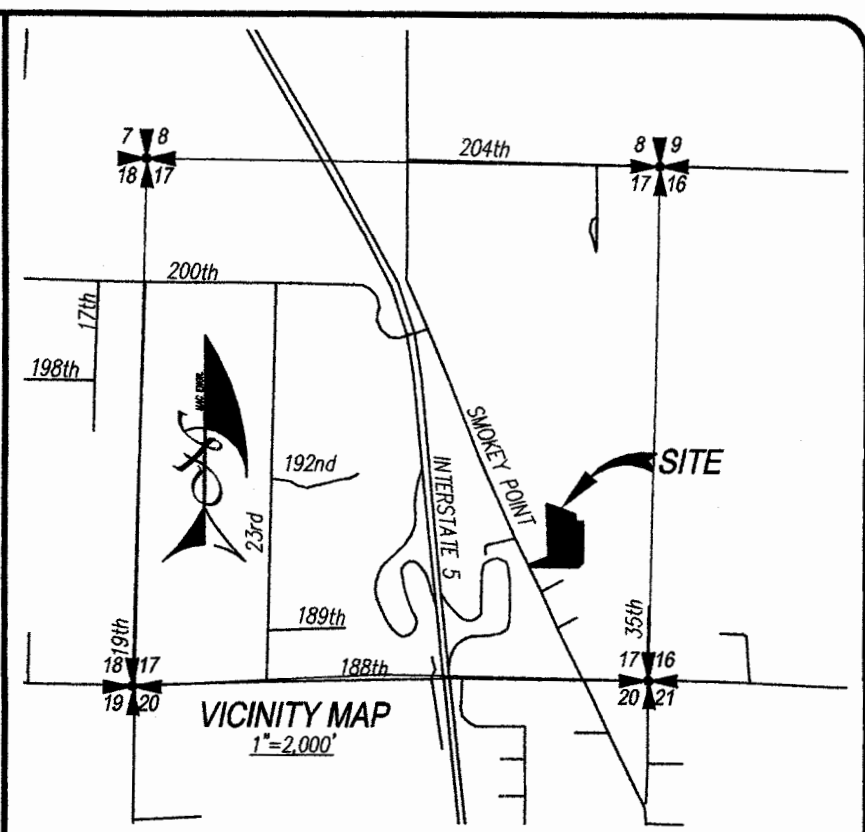
LEGEND

EXISTING	DESCRIPTION	PROPOSED
	STORM DRAIN CB (1y-1)	
	STORM DRAIN SERVICE STUB	
	SAN. SEWER CLEAN OUT	
	SAN. SEWER MANHOLE	
	SAN. SEWER CLEAN OUT	
	SAN. SEWER STUB	
	BLOW-OFF (BO)	
	WATER SERVICE (WS)	
	WATER VALVE (WV)	
	WELL	
	FIRE HYDRANT	
	UTILITY POLE (PP, UP)	
	TREE	
	SHRUB	
	PAVEMENT (EOA)	
	CONCRETE (EOC)	
	GRAVEL (EOG)	
	BLDG SETBACK LINE (BSL)	
	PROPERTY LINE (P/L)	
	RIGHT OF WAY (R/W)	
	ROAD CENTER (CTR) LINE	
	FENCE LINE	
	DRAINAGE FLOW PATTERNS	
	SECTION CORNER	
	SOIL LOG	
	TEMPORARY BENCHMARK	



NOTES:

- THE EXISTING DEVELOPED SITE SLOPES TO THE NORTH.
- SOILS ON SITE AREA ARE ALDERWOOD-EVERETT GRAVELLY SANDY LOAM; HYDROLOGIC SOIL GROUP IS 'T' AND EVERETT GRAVELLY SANDY LOAM; HYDROLOGIC SOIL GROUP IS 'T'.
- CONTRACTOR WILL TAKE CARE IN REMOVING EXISTING VEGETATED AREAS AS TO NOT REMOVE TOP SOIL OR VEGETATION OUTSIDE OF THE CLEARING LIMITS OR POLLUTION GENERATING IMPERVIOUS SURFACE (PGS) PRIZOM. IF SOILS ARE REMOVED OUTSIDE OF THE BUILDING OR PGS PRIZOM, THEN THE CONTRACTOR WILL RECALCULATE AND INCORPORATE WITH EXISTING SOIL OR AMENDED SOILS AS LONG AS THEY MEET THE REQUIREMENTS IDENTIFIED IN STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME V, BMP 15.13. (SEE REQUIREMENT CALCULATIONS IN DRAINAGE REPORT).
- A ROCK CONSTRUCTION ENTRANCE IS NOT REQUIRED.
- ALL DISTURBED AREAS, NOT COVERED WITH IMPERVIOUS SURFACE WILL HAVE AMENDED SOILS INSTALLED PER STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME V, BMP 15.13.



LEGAL DESCRIPTION:
 PARCEL A OF SNOHOMISH COUNTY BL 08-108545, AS RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NO. 20081140197

OWNER/APPLICANT:
 R & B DEVELOPERS, LLC
 C/O RAY PHILLIPS
 10226 STATE AVENUE
 MARYSVILLE, WASHINGTON 98271

SITE DATA:
 TAX PARCEL NO.: 31051700400100
 SITE ADDRESS: 19129 SMOKEY POINT BLVD., ARLINGTON WA 98223
 TOTAL SITE AREA: 5.13 AC
 EXISTING/PROPOSED ZONING: CITY OF ARLINGTON
 WATER DISTRICT: CITY OF ARLINGTON
 SEWER DISTRICT: ARLINGTON DISTRICT #16
 FIRE DISTRICT: DISTRICT #19

CONTACT: MAC ENGINEERING, LLC
 ELLEN D. MCGILL, P.E.
 P.O. BOX 177
 SILVANA, WA 98287
 TEL: 360-652-5820
 E-MAIL: macengineering@frontier.com

GEO-TECH ENGINEER: WESTERN GEOTECHNICAL CONSULTANTS LLC
 4185 SALTSPRINGS DR
 FERDINALE, WA 98248
 TEL: 360-380-2507

GENERAL NOTES:

- ALL WORK AND MATERIALS SHALL CONFORM TO THE CURRENT EDITION OF THE CITY OF ARLINGTON PUBLIC WORKS STANDARDS AND SPECIFICATIONS AND THE CURRENT EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
- IT IS THE SOLE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO OBTAIN A GRADING PERMIT, RIGHT-OF-WAY PERMIT, AND UTILITY PERMITS, FROM THE CITY. ALL REQUIRED PERMITS FROM OTHER AGENCIES MUST ALSO BE OBTAINED BY THE DEVELOPER/CONTRACTOR.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE DEVELOPER/ CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE CITY. THE CONTRACTOR SHALL SCHEDULE THE PRE-CONSTRUCTION CONFERENCE BY CALLING (360) 403-3500, PRIOR TO SCHEDULING. THE CONTRACTOR MUST SUBMIT AND RECEIVE APPROVAL FOR THE TRAFFIC CONTROL PLAN, CITY PERMITS, TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, PERFORMANCE BOND, COPY OF OTHER AGENCY PERMITS, A COPY OF THE CONTRACTOR'S LICENSE, AND PROOF OF INSURANCE COVERAGE.
- A COPY OF THE APPROVED CONSTRUCTION PLANS MUST BE ON THE JOB SITE WHEN CONSTRUCTION IS IN PROGRESS.
- ALL SITE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE PRIOR APPROVAL FROM THE OWNER, THE CITY ENGINEER, AND OTHER APPROPRIATE PUBLIC AGENCIES.
- ALL OF THE LOCATIONS OF THE EXISTING UTILITIES SHOWN IN THE PLANS HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHALL THEREFORE BE CONSIDERED APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATE SERVICE (1-800-424-5555 OR 811) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- INSPECTION AND ACCEPTANCE OF ALL WORK WILL BE ACCOMPLISHED BY REPRESENTATIVES OF THE CITY OF ARLINGTON. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND SCHEDULE APPROPRIATE INSPECTIONS, ALLOWING PROPER ADVANCE NOTICE. THE INSPECTOR MAY REQUIRE REMOVAL AND REPLACEMENT OF ITEMS THAT DO NOT MEET CITY STANDARDS OR WERE CONSTRUCTED WITHOUT INSPECTION.
- THE CONTRACTOR SHALL KEEP THE ON-SITE AND OFF-SITE STREETS CLEAN AT ALL TIMES BY CLEANING WITH A SWEEPING AND/OR VACUUM TRUCK. WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE CITY INSPECTOR.
- THE CONTRACTOR SHALL MAINTAIN TWO (2) SETS OF "AS-BUILT" PLANS SHOWING ALL FIELD CHANGES AND MODIFICATIONS. IMMEDIATELY AFTER CONSTRUCTION COMPLETION, THE CONTRACTOR SHALL DELIVER BOTH COPIES OF RED-LINED PLANS TO THE CITY. THE CITY WILL FORWARD ONE OF THE COPIES TO THE DESIGN ENGINEER.

CONSTRUCTION DRAWING REVIEW ACKNOWLEDGMENT

THIS PLAN HAS BEEN REVIEWED AND EVALUATED FOR GENERAL COMPLIANCE WITH THE CITY OF ARLINGTON CODES AND ORDINANCES. CONFORMANCE OF THIS DESIGN WITH ALL APPLICABLE LAWS AND REGULATIONS IS THE FULL AND COMPLETE RESPONSIBILITY OF THE LICENSED DESIGN ENGINEER. WHOSE STAMP AND SIGNATURE APPEAR ON THIS SHEET. ACKNOWLEDGMENT OF CONSTRUCTION DRAWING REVIEW DOES NOT IMPLY CITY APPROVAL FOR CONSTRUCTION ACTIVITIES THAT REQUIRE OTHER COUNTY, STATE OR FEDERAL PERMIT REVIEW AND APPROVAL. THE PROPERTY OWNER AND LICENSED DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE ACQUISITION AND COMPLIANCE OF ALL APPLICABLE PERMITS AND/OR AUTHORIZATIONS WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WSDOT HYDRAULIC PROJECT APPROVAL (HFA), WSDOT NOTICE OF INVENT (NOI), ANY CORP. OF ENGINEERS FILL PERMITS AND THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT.

BY:
 CITY ENGINEER, CITY OF ARLINGTON
 DATE: 11/21/18
 THIS APPROVAL VALID FOR 18 MONTHS

Received
 NOV 29 2018
 Pwd1547

MAC ENGINEERING, LLC
 P.O. BOX 177, SILVANA, WA 98287
 TEL: (360) 652-5820
 EMAIL: macengineering@frontier.com

DATE: 11/21/18

SURVEY & TOPOGRAPHIC INFORMATION PROVIDED BY:
 METRON AND ASSOCIATES INC.
 307 N. OLYMPIC AVENUE, SUITE 205
 ARLINGTON, WASHINGTON 98223
 360-435-3777

GRADING ESTIMATE
 CUT: 2,000 CYs
 FILL: 2,000 CYs
 THE GRADING ESTIMATE PROVIDED FOR THESE PLANS IS APPROXIMATE. ACTUAL GRADING VOLUMES MAY VARY. CALCULATIONS DO NOT ACCOUNT FOR VARIOUS VOLUMETRIC CHANGES DURING THE EARTH WORK PROCESS.

DRAWING INDEX
 (1) SITE PLAN
 (2) EXISTING CONDITIONS & SWPP
 (3) PLAN SWPPP NOTES
 (4) POND GRADING & PLAN
 (5) POND PLAN & PROFILE
 (6) SANITARY SEWER PLAN
 (7) CITY OF ARLINGTON DETAILS
 (8) CITY OF ARLINGTON DETAILS

DATE	REVISION/ISSUED
09/12/18	ISSUED
11/27/18	PER CITY COMMENTS

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

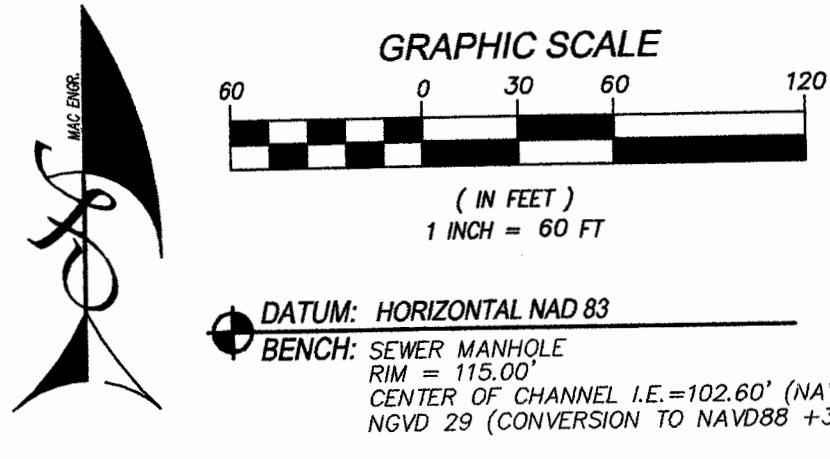
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R&B DEVELOPERS

SITE PLAN

PROJECT NO.
 150250

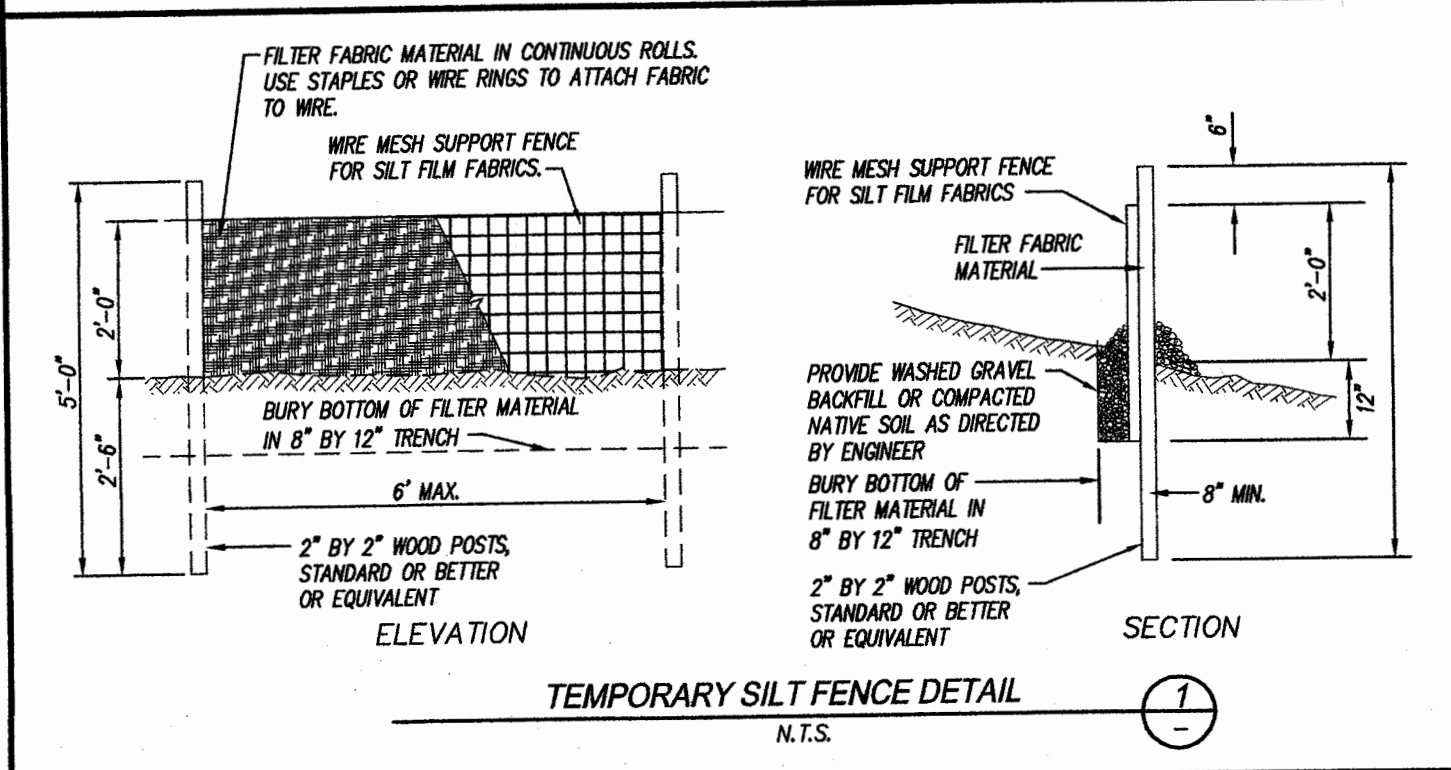
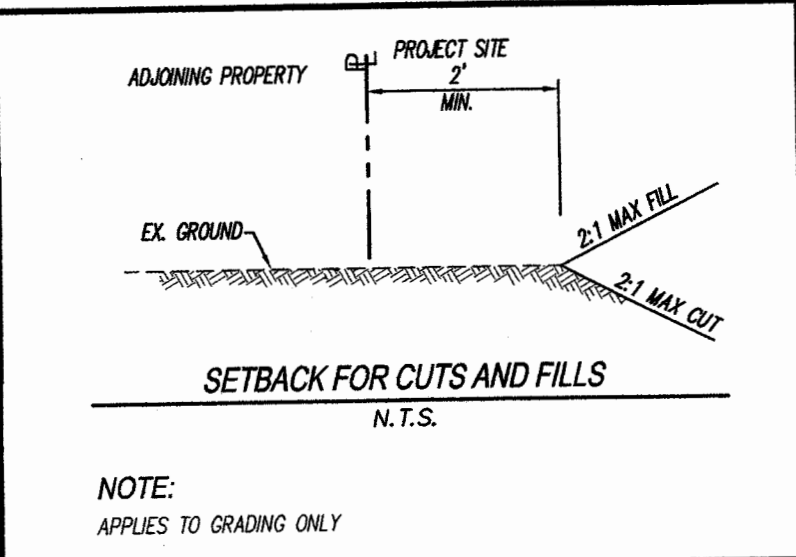
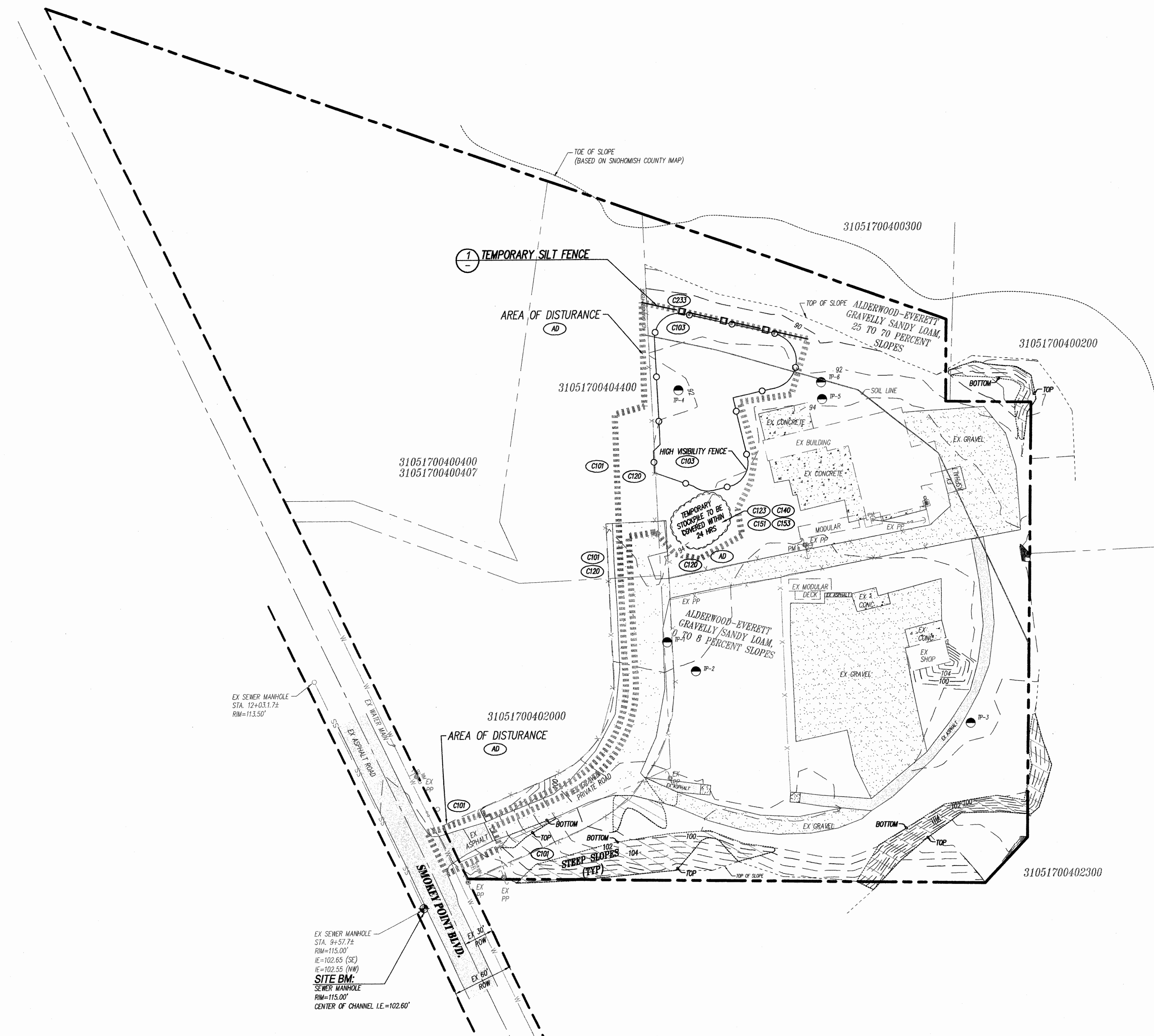
DWG
C1
 OF 8



- BMP LEGEND**
- C101 = PRESERVE NATURAL VEGETATION
 - C103 = HIGH VISIBILITY PLASTIC OR METAL FENCE
 - C120 = TEMPORARY AND PERMANENT SEEDING
 - C123 = PLASTIC COVERING
 - C140 = DUST CONTROL
 - C151 = CONCRETE HANDLING
 - C152 = SAWCUTTING AND SURFACE POLLUTION PREVENTION
 - C153 = MATERIAL DELIVERY, STORAGE AND CONTAINMENT
 - C233 = SILT FENCE
 - AD = AREA OF DISTURBANCE (CLEARING LIMITS)

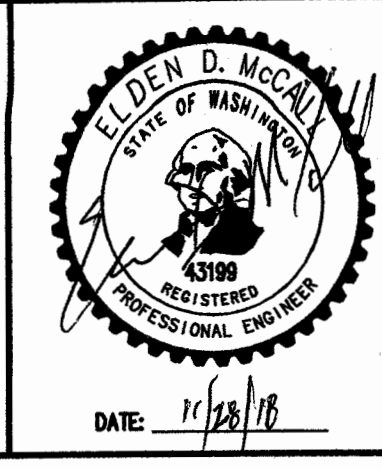
EROSION CONTROL CONCEPT
 ALL DISTURBED AREAS SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION. LEAVE VEGETATIVE BUFFER AROUND PERIMETER OF SITE AND EXISTING GROUND COVER AS LONG AS POSSIBLE.

TEMPORARY EROSION CONTROL NOTE:
 TEMPORARY EROSION CONTROL MEASURES ON THIS PLAN ARE INTENDED AS A GUIDE. ADDITIONAL BMP'S MAY BE REQUIRED FOR THIS DEVELOPMENT AS SITE & WEATHER CONDITIONS CHANGE IN THE FIELD. THE CONTRACTOR/DEVELOPER SHALL COORDINATE WITH THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) & THE PROJECT ENGINEER AS NEEDED FOR EROSION CONTROL RECOMMENDATIONS.



CONSTRUCTION DRAWING APPROVAL
 THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED PER THE CONDITIONS ON THE TITLE SHEET.
 BY: *[Signature]*
 CITY ENGINEER, CITY OF ARLINGTON
 DATE: 11/30/18
 THIS APPROVAL VALID FOR 18 MONTHS

MAC ENGINEERING, LLC
 P.O. BOX 177, SILVANA, WA 98287
 TEL: (360) 652-5820
 EMAIL: macengineering@frontier.com



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 307 N. OLYMPIC AVENUE, SUITE 205
 ARLINGTON, WASHINGTON 98223
 360-435-3777

DATE	REVISION/ISSUED
09/12/18	ISSUED
11/27/18	PER CITY COMMENTS

CALL 48 HOURS BEFORE YOU DIG
 1-800-424-5888
 THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

PFN: PWD 1547
R&B DEVELOPERS
 EXISTING CONDITIONS & SWPP PLAN

PROJECT NO.
 150250
DWG
C2
 OF 8

EROSION, SEDIMENTATION AND WATER QUALITY SITE INSPECTIONS

PRIOR TO ANY SITE DEVELOPMENT WORK TAKING PLACE, A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR, OWNER, CESCL, AND CITY INSPECTOR SHALL BE HELD.

THE DEPARTMENT OF ECOLOGY REQUIRES THAT LAND DISTURBANCE CONSTRUCTION PROJECTS ONE ACRE OR LARGER RETAIN A CESCL TO ENSURE THAT THE PROJECT IS IN COMPLIANCE WITH THE CURRENT EROSION, SEDIMENTATION AND WATER QUALITY STANDARDS. FOR EMERGENCY PURPOSES, THE CESCL CONTACT FOR THIS PROJECT TO BE DETERMINED AT OR BEFORE PROJECT PRE-CONSTRUCTION MEETING WITH THE CITY.

- A. INSPECTING THE CONSTRUCTION SITE TO ENSURE THAT ALL CONSTRUCTION SWPPP MEASURES ARE FUNCTIONING AS INTENDED.
- B. ALLOCATING RESOURCES TO REPAIR ALL EROSION CONTROL STRUCTURES THAT ARE IN NEED OF MAINTENANCE.
- C. MONITORING WATER QUALITY FOR ANY STORM DRAINAGE THAT LEAVES THE SITE.
- D. AND HAVE THE AUTHORITY TO STOP AND/OR REDIRECT CONSTRUCTION ACTIVITIES DEEMED NECESSARY TO PROTECT THE ENVIRONMENT.

SHOULD BMP PERFORMANCE GOALS NOT BE ACHIEVED, THE ONLY CONSTRUCTION ACTIVITIES THAT SHALL BE ALLOWED ARE THE REPAIR OF EXISTING EROSION CONTROL STRUCTURES, INSTALLATION OF ADDITIONAL BMP'S TO MINIMIZE THE TRANSPORT OF SEDIMENT OFFSITE, OR THOSE ACTIVITIES THAT DO NOT DISTURB EXPOSED EARTH AND DO NOT HAVE THE POTENTIAL TO GENERATE ADDITIONAL SEDIMENT.

THE THIRTEEN ELEMENTS OF A CONSTRUCTION SWPPP

ALL NEW DEVELOPMENT AND REDEVELOPMENT PROJECTS WILL COMPLY WITH THE SWPPP ELEMENTS HIGH LIGHTED BELOW. FOR ADDITIONAL INFORMATION TO THE RELEVANT BMP'S INDICATED BELOW REFER TO THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (2012), VOLUME II, CHAPTER 4. THE ADDITIONAL IDENTIFIED BMP'S ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR OR CESCL SHOULD SITE CONDITIONS CHANGE THIS REQUIRING USE ON ALTERNATIVE BMP MEASURES.

1. MARK CLEARING LIMITS:
LAND DISTURBING ACTIVITIES ARE DELINEATED AND QUANTIFIED IN THE SWPPP NARRATIVE AND SWPP PLANS PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES WITHIN THE CONSTRUCTION AREA THE CLEARING LIMITS ARE INDICATED ON THE SWPPP SHEET WILL BE DELINEATED. FURTHERMORE, CLEARING AND GRADING WILL BE LIMITED TO ONLY AREAS THAT NEED TO BE DISTURBED FOR GRADING, PLACING OR STOCK PILING FILL AND TO PRESERVE AS MUCH NATURAL VEGETATION AND THE DUFF LAYER AS POSSIBLE.

- BMP'S: C101 PRESERVING NATURAL VEGETATION
- C102 BUFFER ZONES
- C103 HIGH VISIBILITY PLASTIC OR METAL FENCE
- C233 SILT FENCE

2. ESTABLISH CONSTRUCTION ACCESS:
ACCESS TO THE CONSTRUCTION SITE SHALL BE LIMITED TO ONE ROUTE IF POSSIBLE. STREET CLEANING SHALL BE REQUIRED WHEN SEDIMENT IS TRACKED OFF SITE.

- BMP'S: C105 STABILIZED CONSTRUCTION ENTRANCE
- C106 WHEEL WASH
- C107 CONSTRUCTION ROAD/PARKING AREA STABILIZATION

3. CONTROL FLOW RATES:
WATERWAYS DOWNSTREAM FROM THE PROJECT SITE SHALL BE PROTECTED FROM SOIL EROSION DUE TO INCREASES IN THE VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.

- BMP'S: C203 WATER BARS
- C207 CHECK DAMS
- C209 OUTLET PROTECTION
- C235 WATILES
- C240 SEDIMENT TRAP
- C241 TEMPORARY SEDIMENT POND

4. INSTALL SEDIMENT CONTROLS:
IF THERE IS RUNOFF FROM THE CONSTRUCTION SITE, SEDIMENT SHALL BE REMOVED FROM THE RUNOFF.

- BMP'S: C231 BRUSH BARRIER
- C232 GRAVEL FILTER BERM
- C233 SILT FENCE
- C234 VEGETATED STRIP
- C235 STRAW WATILES
- C240 SEDIMENT TRAP
- C241 TEMPORARY SEDIMENT TRAP
- C250 CONSTRUCTION STORMWATER CHEMICAL TREATMENT
- C251 CONSTRUCTION STORMWATER FILTRATION

5. STABILIZED SOILS:
PROVIDE TEMPORARY AND PERMANENT SOIL STABILIZATION TO ALL EXPOSED AND UNWORKED SOILS WITHIN THE PROJECT SITE FROM OCTOBER 1 UNTIL APRIL 30, NO EXPOSED SOIL MAY REMAIN EXPOSED AND UNWORKED FOR MORE THAN TWO DAYS AFTER MAY 1, NO EXPOSED SOIL MAY REMAIN EXPOSED AND UNWORKED FOR MORE THAN SEVEN DAYS.

- BMP'S: C120 TEMPORARY AND PERMANENT SEEDING
- C121 MULCHING
- C122 NETS AND BLANKETS
- C123 PLASTIC COVERING
- C124 SODDING
- C125 TOPSOILING/COMPOSTING
- C126 POLYPROPYLENE FOR SOIL EROSION PROTECTION
- C130 SURFACE ROUGHENING
- C131 GRADIENT TERRACES
- C140 DUST CONTROL

6. PROTECT SLOPES:
CUT AND FILL SLOPES SHALL BE PROTECTED FROM EROSION AND CONCENTRATED FLOWS UNTIL PERMANENT COVER AND DRAINAGE CONTAINANCE SYSTEM ARE IN PLACE.

- BMP'S: C120 TEMPORARY AND PERMANENT SEEDING
- C121 MULCHING
- C122 NETS AND BLANKETS
- C123 PLASTIC COVERING
- C124 SODDING
- C130 SURFACE ROUGHENING
- C131 GRADIENT TERRACES
- C200 INTERCEPTOR DIKE AND SWALE
- C201 GRASS-LINED CHANNELS
- C203 WATER BARS
- C204 PIPE SLOPE DRAINS
- C205 SUBSURFACE DRAINS
- C206 LEVEL SPREADER
- C207 CHECK DAMS
- C208 TRIANGULAR SILT DIKE (GEOTEXTILE-ENCASED CHECK DAM)

7. PROTECT PERMANENT DRAIN INLETS:
ALL PERMANENT STORM DRAIN INLETS WILL BE PROTECTED FROM SEDIMENT AND SILT-LADEN WATER.

- BMP'S: C220 STORM DRAIN INLET PROTECTION

8. STABILIZE CHANNELS AND OUTLETS:
TEMPORARY AND PERMANENT CONTAINANCE SYSTEMS SHALL BE STABILIZED TO PREVENT EROSION DURING AND AFTER CONSTRUCTION.

- BMP'S: C122 NETS AND BLANKETS
- C202 CHANNEL LINING
- C207 CHECK DAMS
- C208 OUTLET PROTECTION

9. CONTROL POLLUTANTS:
ALL POLLUTANTS INCLUDING WASTE MATERIAL, FERTILIZERS/CHEMICALS, ON-SITE FUELING TANKS AND DEMOLITION DEBRIS SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CONTAMINATE STORMWATER.

- BMP'S: C151 CONCRETE HANDLING
- C152 SAWCUTTING AND SURFACE POLLUTION PREVENTION
- C153 MATERIAL DELIVERY, STORAGE AND CONTAINMENT
- C154 CONCRETE WASHOUT AREA
- C250 CONSTRUCTION STORMWATER CHEMICAL TREATMENT
- C251 CONSTRUCTION STORMWATER FILTRATION
- C252 HIGH PH NEUTRALIZATION USING CO2
- C253 PH CONTROL FOR HIGH PH WATER

10. CONTROL DEWATERING:
CLEAN, NON-TURBID DE-WATERING WATER CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO OR DIRECTLY INTO SURFACE WATERS OF THE STATE, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING TO RECEIVING WATERS. HIGHLY TURBID OR CONTAMINATED DE-WATERING WATER SHALL BE HANDLED SEPARATELY FROM STORMWATER.

- BMP'S: C203 WATER BARS
- C236 VEGETATIVE FILTRATION

11. MAINTAIN BMP'S:
THE CONTRACTOR WILL PROVIDE INSPECTION AND MAINTENANCE OF THE CONSTRUCTED BMP'S AND WILL COMPLY WITH THEIR REMOVAL AT THE END OF THE PROJECT.

- BMP'S: C150 MATERIALS ON HAND
- C160 CERTIFIED EROSION AND SEDIMENT CONTROL LEAD

12. MANAGE THE PROJECT:
THE PROJECT SHALL BE MANAGED BY A COOPERATIVE EFFORT BY THE PROJECT MANAGER, CONTRACTOR, ENGINEER, AND THE CITY INSPECTOR. SWPPP'S SHALL BE MODIFIED WHENEVER THERE IS A CHANGE AT THE CONSTRUCTION SITE THAT HAS OR COULD HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO WATERS OF THE STATE DURING THE CONSTRUCTION PROCESS. IF SWPPP MAINTENANCE ISSUES ARISE THAT CANNOT BE RESOLVED ON SITE, CONSTRUCTION ACTIVITY (OTHER THAN SWPPP MAINTENANCE) SHALL BE HALTED AND THE CITY INSPECTOR AND THE PROJECT ENGINEER ARE TO BE CONTACTED AND INFORMED OF THE SITUATION.

- BMP'S: C150 MATERIALS ON HAND
- C160 CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
- C162 SCHEDULING

13. PROTECT ON-SITE BMP'S:
ON-SITE STORMWATER MANAGEMENT BMP'S USED FOR RUNOFF FROM ROOFS AND OTHER HARD SURFACES INCLUDE: FULL PERIMETER, ROOF DOWNSPOUT FULL INFILTRATION OR DISPERSION SYSTEMS, PERFORATED STUBOUT CONNECTIONS, BAIT GARDENS, BIORETENTION SYSTEMS, PERMEABLE PAVEMENT, SLOTTED PLOW DISPERSION, AND CONCENTRATED FLOW DISPERSION. THE AREAS ON THE SITE TO BE USED FOR THESE BMP'S SHALL BE PROTECTED FROM SILTATION AND COMPACTION DURING CONSTRUCTION BY SEQUENCING THE CONSTRUCTION IN A FASHION TO INSTALL THESE BMP'S AT THE LATTER PART OF THE CONSTRUCTION GRADING OPERATIONS, BY EXCLUDING EQUIPMENT FROM THE BMP'S AND THE ASSOCIATED AREAS, AND BY USING THE EROSION AND SEDIMENTATION CONTROL BMP'S LISTED BELOW. ADDITIONAL REQUIREMENTS FOR PROTECTING THESE BMP'S DURING THE CONSTRUCTION PROCESS, TESTING FUNCTIONALITY, AND RESTORING FUNCTIONALITY, AND RESTORING FUNCTIONALITY ARE NEEDED AT THE FINAL STAGE OF THE CONSTRUCTION PROCESS AND ARE INCLUDED IN THE SPECIFIC BMP SECTIONS IN VOLUME V OF THIS MANUAL.

- BMP'S: C102 BUFFER ZONE
- C103: HIGH VISIBILITY FENCE
- C200: INTERCEPTOR DIKE AND SWALE
- C201: GRASS LINED CHANNELS
- C207: CHECK DAMS
- C208: TRIANGULAR SILT DIKE (TSD) (GEOTEXTILE-ENCASED CHECK DAM)
- C231: BRUSH BARRIER
- C233: SILT FENCE
- C234: VEGETATED STRIP

CITY OF ARLINGTON TESC NOTES

1. APPROVAL OF THE TEMPORARY EROSION/SEDIMENT CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR STORM DRAINAGE DESIGN.
2. A TESC PLAN MEETING THE DOE STORM WATER MANAGEMENT MANUAL ADOPTED BY THE CITY SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO ANY WORK ON THE SITE. AN APPROVED COPY MUST BE MAINTAINED ON-SITE AND BE READILY AVAILABLE TO THE CITY INSPECTOR AT THEIR REQUEST.
3. THE TESC BMP'S SHOWN ON THE PLAN MUST BE INSTALLED PRIOR TO ALL OTHER CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, LEAVE THE SITE, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS. MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE TESC PLAN IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETE AND APPROVED BY THE CITY.
4. THE BOUNDARIES OF THE CLEARING LIMITS, SHOWN ON THE TESC PLAN, SHALL BE CLEARLY FENCED OR FLAGGED IN THE FIELD PRIOR TO STARTING CONSTRUCTION. NO DISTURBANCE BEYOND THE FENCED OR FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FENCING AND/OR FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE CONSTRUCTION PROJECT.
5. THE TESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AND ADDED TO AS NEEDED, FOR UNEXPECTED STORM EVENTS AND TO REFLECT CHANGED CONDITIONS, AS REQUIRED BY THE CITY.
6. THE CONTRACTOR SHALL PROVIDE THE CITY A 24-HOUR EMERGENCY CONTACT PHONE NUMBER OF THE CONTRACTOR'S CERTIFIED EROSION CONTROL SUPERVISOR PRIOR TO STARTING CONSTRUCTION.
7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE CONTINUED FUNCTION AND OPERATION.
8. BETWEEN OCTOBER 1 AND APRIL 30, DISTURBED AREAS THAT ARE TO BE LEFT UNWORKED FOR MORE THAN TWO (2) DAYS SHALL BE IMMEDIATELY COVERED BY MULCH, SOIL OR PLASTIC COVERING BETWEEN MAY 1 AND SEPTEMBER 30, DISTURBED AREAS THAT ARE TO BE LEFT UNWORKED FOR MORE THAN SEVEN (7) DAYS SHALL BE IMMEDIATELY COVERED BY SEEDING OR OTHER APPROVED METHODS.
9. SEDIMENT DEPOSITS SHALL BE REMOVED FROM ALL CATCH BASINS, PRE-TREATMENT/SEDIMENT POND, AND SEDIMENT TRAPS UPON REACHING A DEPTH OF 12 INCHES.
10. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES, SHALL PROVIDE ADEQUATE STORAGE CAPACITY, AND SHALL BE CLEANED OUT ENTIRELY ONCE THE SITE IS STABILIZED. IF THE PERMANENT FACILITY IS TO ULTIMATELY FUNCTION AS AN INFILTRATION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN.
11. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROXIMATE RATE OF 120 LBS PER ACRE.
12. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 3 INCHES, OR 3,000 POUNDS PER ACRE.
13. SOIL STOCKPILES SHALL BE STABILIZED WITHIN 24 HOURS, WHEN ACTIVELY WORKING WITH THE SOIL STOCKPILE, STABILIZATION BY GROUND COVER BMP'S SHALL OCCUR AT THE END OF EACH WORK DAY.
14. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
15. MAINTENANCE AND REPAIR OF TESC FACILITIES AND STRUCTURES SHALL BE CONDUCTED IMMEDIATELY UPON RECOGNITION OF A PROBLEM OR WHEN THE TESC MEASURES BECOME DAMAGED.
16. UPON COMPLETION OF THE PROJECT, ALL BMP'S SHALL BE REMOVED FROM THE SITE AND RIGHT OF WAY. IF BMP'S ARE REQUIRED TO REMAIN IN PLACE FOR FURTHER PROTECTION, ARRANGEMENTS FOR REMOVAL SHALL BE MADE WITH THE CITY INSPECTOR.
17. THE DUFF LAYER AND NATIVE TOPSOIL SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT WILL NOT BE COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT THE PROJECT COMPLETION, DEMONSTRATE THE REQUIREMENTS ESTABLISHED IN TS.13 OF THE 2014 SWMM/WX POST CONSTRUCTION SOIL QUALITY AND DEPTH.

WET WEATHER GRADING NOTES

1. THE CONSTRUCTION SEQUENCE SHALL BE MODIFIED TO MINIMIZE THE AREA OF SOIL EXPOSED.
2. EARTHEN AREAS THAT ARE SUBJECT TO CONTRIBUTING SEDIMENTS DURING STORM EVENTS AND WHERE EARTH MOVEMENT IS NOT ANTICIPATED FOR PERIODS SHALL BE STABILIZED USING THE FOLLOWING BMP'S: HYDROSEEDING & MULCHING (4" THICK STRAW) OR COVERING DISTURBED AREAS AND STOCK PILES WITH PLASTIC SHEETING.
3. WET WEATHER TESC MEASURES WILL BE EXPANDED TO INCLUDE CONSTRUCTION AREA STABILIZATION, (EXTEND CONSTRUCTION ENTRANCE), SEDIMENT TRAPS, AND ADDITIONAL SILT FENCES, IF NECESSARY. WINTER CONDITIONS TEMPORARY EROSION & SEDIMENT CONTROL BMP'S FROM OCTOBER 1 TO APRIL 30, NO SOIL MAY REMAIN EXPOSED FOR MORE THAN 2 DAYS, OTHERWISE NO SOIL MAY REMAIN EXPOSED FOR MORE THAN 7 DAYS. COVER PRACTICES: THE EXISTING VEGETATION SHOULD BE LEFT UNDISTURBED WHERE POSSIBLE TO LIMIT EROSION. DISTURBED AREAS SHALL BE COVERED WITH MULCH, SOIL, PLASTIC OR MATING STOCKPILES OR SLOPES STEEPER THAN 2:1 SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT RETENTION BMP'S WITHIN 24 HOURS OF FORMATION. STRUCTURAL PRACTICES: SILT FENCES AROUND THE PERIMETER WILL PREVENT SEDIMENT LAZEN WHERE ACTIVE GRADING IS IN PROGRESS. THE DIRECTOR MAY EXTEND THE DEADLINE FOR SOIL STABILIZATION UPON DETERMINING THAT THE LIKELIHOOD OF EROSION IMPACTS IS LOW BASED ON THE TYPE AND AMOUNT OF SOIL EXPOSED, SITE TOPOGRAPHY, THE POTENTIAL FOR DISCHARGE TO CRITICAL AREAS AND LAKES, AND OTHER FACTORS. DISTURBED AREAS SHALL BE COVERED WITH MULCH, SOIL, PLASTIC OR MATING. GRADING CONSTRUCTION SHALL BE TIMED AND CONDUCTED IN STAGES TO MINIMIZE SOIL EXPOSURE.
4. SOILS SHALL NOT BE DISTURBED EXCEPT FOR ACTUAL CONSTRUCTION ACTIVITIES. PARKING IS ALLOWED ONLY ON PAVED AND/OR GRAVEL SURFACES.
5. SLOPES 8% AND GREATER WITHOUT ESTABLISHED GROUND COVER WILL BE STABILIZED WITH PLASTIC SHEETING, 6-MIL (MINIMUM). THE SHEETING SHALL BE ANCHORED WITH SAND BAGS LOCATED 5-FEET APART ON THE PERIMETER AND 10-FEET ON CENTER ON THE REMAINDER OF THE SHEETING. A MINIMUM OF 2-FEET OVERLAP IS REQUIRED FOR OVERLAPPING SHEETS.
6. WATER DISCHARGED FROM THE SITE WILL BE MONITORED FOR TURBIDITY. THE MAXIMUM ALLOWABLE TURBIDITY OF DISCHARGED WATER WILL BE 5 NTU OVER BACKGROUND.
7. WHEN RAINFALL IS HEAVY (DEFINED AS RAINFALL HARD ENOUGH TO PRODUCE SEDIMENT RUN-OFF FROM EXPOSED DIRT), ALL EXPOSED EARTHWORK SHALL BE COVERED. NO OTHER CONSTRUCTION ACTIVITY SHALL OCCUR ON PERVIOUS SURFACES DURING THESE PERIODS OF HEAVY RAIN.
8. ALL DRAINAGE SWALES SHALL BE FULLY VEGETATED. SWALES SHALL BE SODDED IF THE VEGETATION GROWING IN THE SWALE IS INSUFFICIENT TO PROVIDE WATER QUALITY AND TO PREVENT EROSION OF THE SWALE.
9. FILTER FABRIC (GEOTEXTILE FABRIC) SHALL BE INSTALLED BENEATH THE ENTIRE CONSTRUCTION ENTRANCE.
10. IF THERE IS A MEASURABLE INCREASE IN THE TURBIDITY OF THE RECEIVING WATER GREATER THAN 5 NTU'S, THE WATER IN THE TEMPORARY SEDIMENTATION POND SHALL BE PUMPED TO UNDISTURBED VEGETATION ON SITE.

BMP NOTES:

1. COVER PRACTICES:
THE EXISTING VEGETATION SHOULD BE LEFT UNDISTURBED WHERE POSSIBLE TO LIMIT EROSION. DISTURBED AREAS SHALL BE COVERED WITH MULCH AND/OR MATING. STOCKPILES OR SLOPES STEEPER THAN 2:1 SHALL BE COVERED WITH PLASTIC SHEETING HELD IN PLACE WITH SAND BAGS.

HAZARDOUS CHEMICALS

HAZARDOUS CHEMICALS, SUCH AS CLEANING AGENTS AND SOLVENTS, SHALL BE STORED IN AN APPROVED CHEMICAL STORAGE FACILITY(IES), LOCATED IN THE EQUIPMENT STAGING AREA. WHEN USING CHEMICALS DURING CONSTRUCTION ACTIVITY, CARE SHALL BE TAKEN TO GUARD AGAINST SPILLAGE. IN THE EVENT OF A CHEMICAL RELEASE, THE APPROPRIATE AUTHORITIES ARE TO BE NOTIFIED AND THE SPILL IS TO BE CLEANED UP IMMEDIATELY.

PETROLEUM PRODUCTS

THE CONSTRUCTION SITE IS TO BE PROTECTED AGAINST EXCESSIVE PETROLEUM POLLUTION. ALL CONSTRUCTION EQUIPMENT AND VEHICLES SHALL HAVE A REGULAR MAINTENANCE SCHEDULE, AS RECOMMENDED BY THE PRODUCT MANUFACTURER, WITH PARTICULAR ATTENTION/CARE BEING PAID TO LOCATIONS THAT ARE COMMONLY KNOWN TO LEAK LUBRICANTS. UPON DISCOVERY OF AN UNSATISFACTORY PART, THAT VEHICLE/EQUIPMENT SHALL NOT BE OPERATED UNTIL IT HAS BEEN FIXED. ADDITIONALLY, ALL OIL AND FUELING OPERATIONS ARE TO BE CONDUCTED IN A DESIGNATED AREA THAT HAS BEEN PREPARED TO PREVENT THE LOSS OF SPILLED OIL/FUEL TO THE ENVIRONMENT THROUGH THE USE OF A LINER, SPILL TRAP OR OTHER MEANS.

PERMANENT COVER BMP (HYDROSEEDING GENERAL NOTES)

CONSTRUCTION ACCEPTANCE WILL BE SUBJECT TO WELL ESTABLISHED GROUND COVER THAT FULFILLS:

1. WESTERN WASHINGTON STORMWATER MANAGEMENT MANUAL, VOLUME V, CHAPTER 5, BMP TS.13, POST-CONSTRUCTION SOIL QUALITY AND DEPTH. ALL AREAS SUBJECT TO CLEARING AND GRADING, THAT HAVE NOT BEEN COVERED WITH IMPERVIOUS SURFACE OR OTHER MEASURES CALLED OUT, WILL HAVE A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER OF 10% DRY WEIGHT IN PLANTING BEDS, AND SIX ORGANIC MATTER CONTENT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE UNDISTURBED SOIL. TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF 8 INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH. SUBSOIL BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES. COMPOST WITH ORGANIC CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1 (THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO PUGET SOUND LOWLANDS REGION) MAYBE USED FOR "PRE-APPROVED" AMENDMENT RATES (35% COMPOST TO TOPSOIL).
2. ALL LAND DISTURBANCE AREAS SUCH AS DETENTION FACILITIES, ROADWAY BACK-SLOPES, ETC. SHALL BE SEEDED WITH A PERENNIAL GROUND COVER GRASS TO MINIMIZE EROSION. GRASS SEEDING WILL BE DONE USING AN APPROVED HYDROSEEDER OR AS OTHERWISE APPROVED BY CITY OF ARLINGTON.
3. PREPARATION OF SURFACE: ALL AREAS TO BE SEEDED SHALL BE CULTIVATED TO THE SATISFACTION OF THE CITY INSPECTOR. THIS MAY BE ACCOMPLISHED BY DISCING, RAKING, HARROWING OR OTHER ACCEPTABLE MEANS.
4. IMMEDIATELY FOLLOWING FINISH GRADING, PERMANENT VEGETATION (CONSISTING OF RAPID, PERSISTENT AND LEGUME) WILL BE APPLIED. (MINIMUM 80# PER ACRE). THIS IS TO INCLUDE THE FOLLOWING: 40% PERENNIAL RYE, 40% RED FESCUE, 10% WHITE DUTCH CLOVER, 10% COLONIAL BENTGRASS. HYDROSEED REQUIRED.
5. FERTILIZER: SHALL BE APPLIED AT 400# PER ACRE OF 10-20-20 (10 lb. PER 1,100 SQUARE FEET) OR EQUIVALENT.

POTENTIAL POLLUTANTS

THERE ARE THREE TYPES OF POTENTIAL POLLUTANTS THAT THIS SWPPP IS INTENDED TO ADDRESS:

- 1. HAZARDOUS CHEMICALS
- 2. PETROLEUM PRODUCTS
- 3. SEDIMENT

REASONABLE CARE AND DISCRETION SHALL BE EXERCISED TO PREVENT DAMAGING THE ENVIRONMENT THROUGH A RELEASE OF ANY OF THE THREE TYPES OF POLLUTION. THIS SWPPP IS TO BE CONSIDERED A GUIDE, AND REPRESENTS ONLY THE MINIMUM STANDARD OF CARE TO BE PRACTICED DURING THE CONSTRUCTION PHASE OF THIS PROJECT. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) SHALL BE RESPONSIBLE FOR EVALUATING THE CONDITIONS AND POLLUTION POTENTIAL ON THE PROJECT SITE AT ALL TIMES AND DETERMINING WHAT ADDITIONAL MEASURES NEED TO BE ENACTED TO PROTECT THE ENVIRONMENT. THIS MAY INCLUDE STOPPING CONSTRUCTION UNTIL CONDITIONS CHANGE SUCH THAT THE DANGER TO THE ENVIRONMENT HAS BEEN MINIMIZED.

SEDIMENT

THE RELEASE OF SEDIMENT TO THE ENVIRONMENT SHALL BE PREVENTED AT ALL TIMES. THE FOLLOWING BMP'S ARE TO BE CONSIDERED THE MINIMUM PROTECTION MEASURES:

1. THE DISTRIBUTION/TRACKING OF MUD/SEDIMENT ONTO ROADS FROM CONSTRUCTION EQUIPMENT/VEHICLES SHALL BE PREVENTED. THE CONSTRUCTION SITE SHALL BE ACCESSED VIA A ROCK CONSTRUCTION ENTRANCE UNDERLAIN BY A GEO-TEXTILE FABRIC. THE CONSTRUCTION ENTRANCE SHALL BE EXTENDED IF NECESSARY TO PROVIDE ACCESS TO THE EMPLOYEE PARKING AND EQUIPMENT STAGING AREAS. PRIOR TO LEAVING THE CONSTRUCTION SITE, CONSTRUCTION EQUIPMENT/VEHICLES SHALL BE INSPECTED FOR MUD/SEDIMENT AND ALL WHEELS AND SURFACES ARE TO BE BRUSHED/CLEANED/WASHED AS NECESSARY PRIOR TO LEAVING THE CONSTRUCTION SITE. ADDITIONALLY, THE EXISTING PAVEMENT OF ROAD SYSTEMS ADJACENT TO THE PROJECT SITE WILL BE SHEPT DAILY WHEN SEDIMENT IS TRACKED OFF SITE.
2. COVER MATERIALS (I.E. STRAW, MULCH OR PLASTIC SHEETING) SHALL BE STORED ON SITE IN SUFFICIENT QUANTITIES SUCH THAT ALL PORTIONS OF EXPOSED EARTH CAN BE COMPLETELY COVERED TO PREVENT EROSION. RUNOFF FROM THE AREA THAT IS PROPOSED TO BE DISTURBED SHALL BE INTERCEPTED BY INTERCEPTOR CHANNELS, AND CONVEYED TO A TEMPORARY SEDIMENTATION POND. DISCHARGE FROM THE TEMPORARY POND WILL BE THROUGH A GRAVEL FILTER CONE TO THE EXISTING STORM SYSTEM.
3. THE PLANNED CONSTRUCTION ACTIVITIES SHALL BE EVALUATED ON A DAILY BASIS, TAKING INTO CONSIDERATION THE LATEST WEATHER FORECAST. THE WEATHER FORECAST SHALL DICTATE WHETHER LARGE-SCALE EARTH MOVING OPERATIONS SHALL COMMENCE OR CONTINUE. IF PRECIPITATION OCCURS DURING CONSTRUCTION ACTIVITY, AND IS INTENSE ENOUGH TO GENERATE RUNOFF, ALL EARTH MOVING ACTIVITIES SHALL CEASE AND EXPOSED EARTH SHALL BE COVERED TO PREVENT EROSION. WHILE PRECIPITATION PERSISTS, THE ONLY CONSTRUCTION ACTIVITY THAT SHALL BE ALLOWED ARE THOSE ACTIVITIES REQUIRED TO MAINTAIN EXISTING EROSION CONTROL MEASURES. INSTALL NEW EROSION CONTROL BMP'S AS NECESSARY AND NON-EROSION/SEDIMENT GENERATING ACTIVITIES.
4. CONSTRUCTION ACTIVITIES SHALL BE PHASED TO MINIMIZE THE SURFACE AREA OF EXPOSED EARTH AT ANY GIVEN TIME. THE CLEARING/GRADING LIMITS ARE IDENTIFIED ON THE PLAN SHEET.
5. SPECIFY BMP FOR CLEANING PAVEMENT SURFACES AT THE END OF EACH WORKING DAY.

CONSTRUCTION DRAWING APPROVAL

THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED FOR THE CONDITIONS ON THE TITLE SHEET.

BY: *[Signature]*
CITY ENGINEER, CITY OF ARLINGTON
DATE: 11/28/19
THIS APPROVAL VALID FOR 18 MONTHS



P.O. BOX 177, SILVANA, WA 98287
TEL: (360) 652-5820
EMAIL: macengineering@frontier.com



DATE: 11/28/19

DATE	REVISION/ISSUED
09/12/18	ISSUED
11/27/18	PER CITY COMMENTS

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5888
THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

PFN: PWD 1547



PROJECT NO.

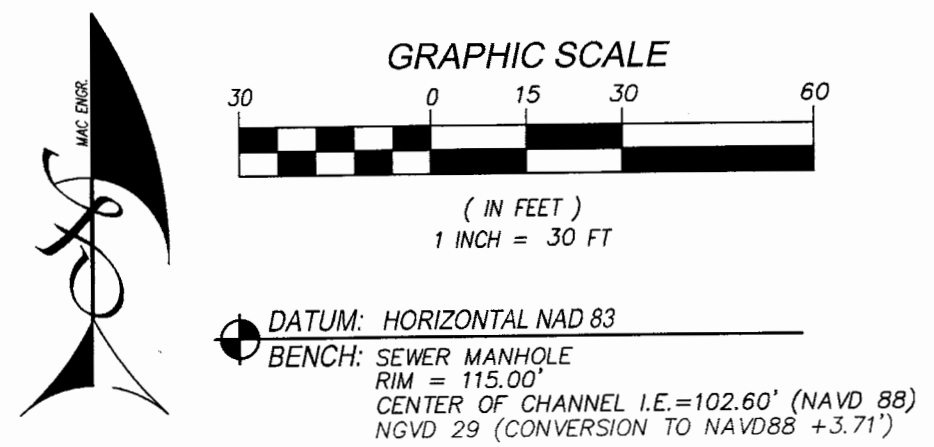
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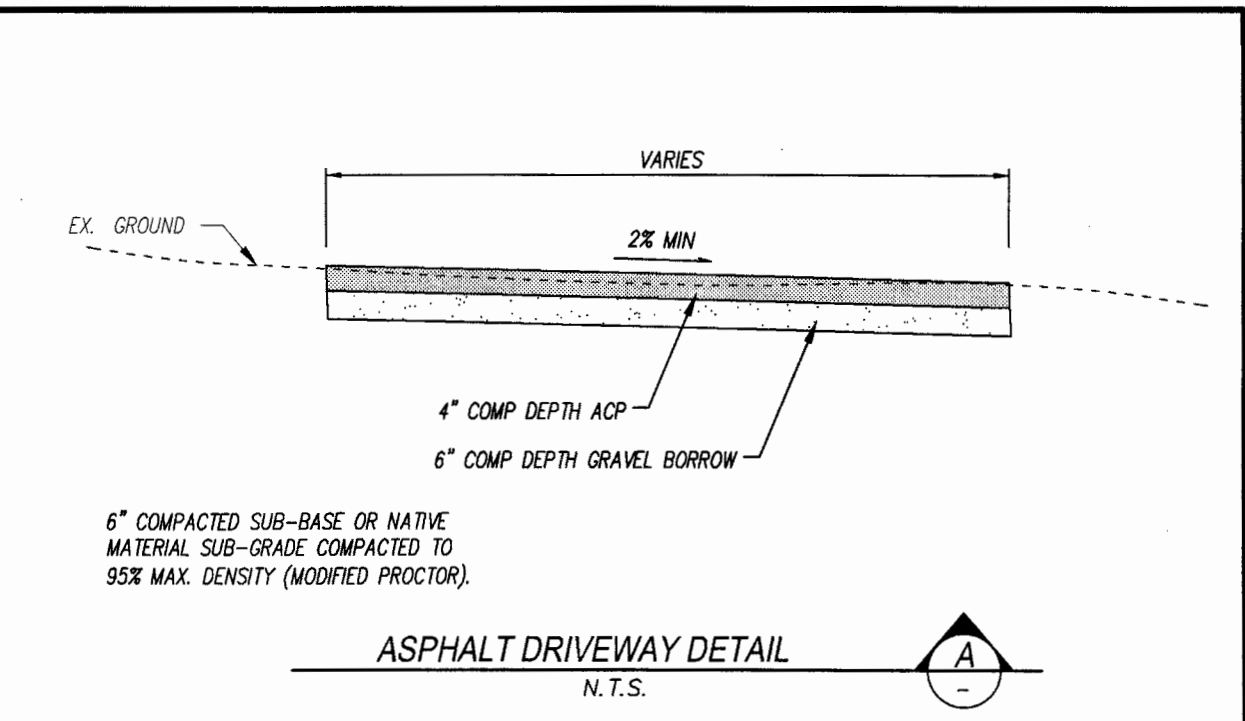
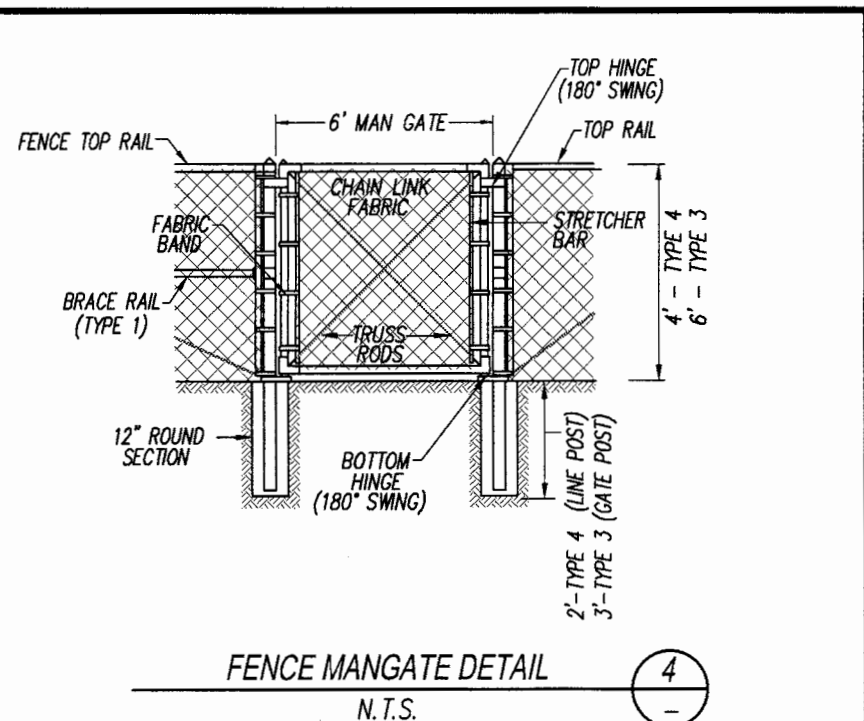
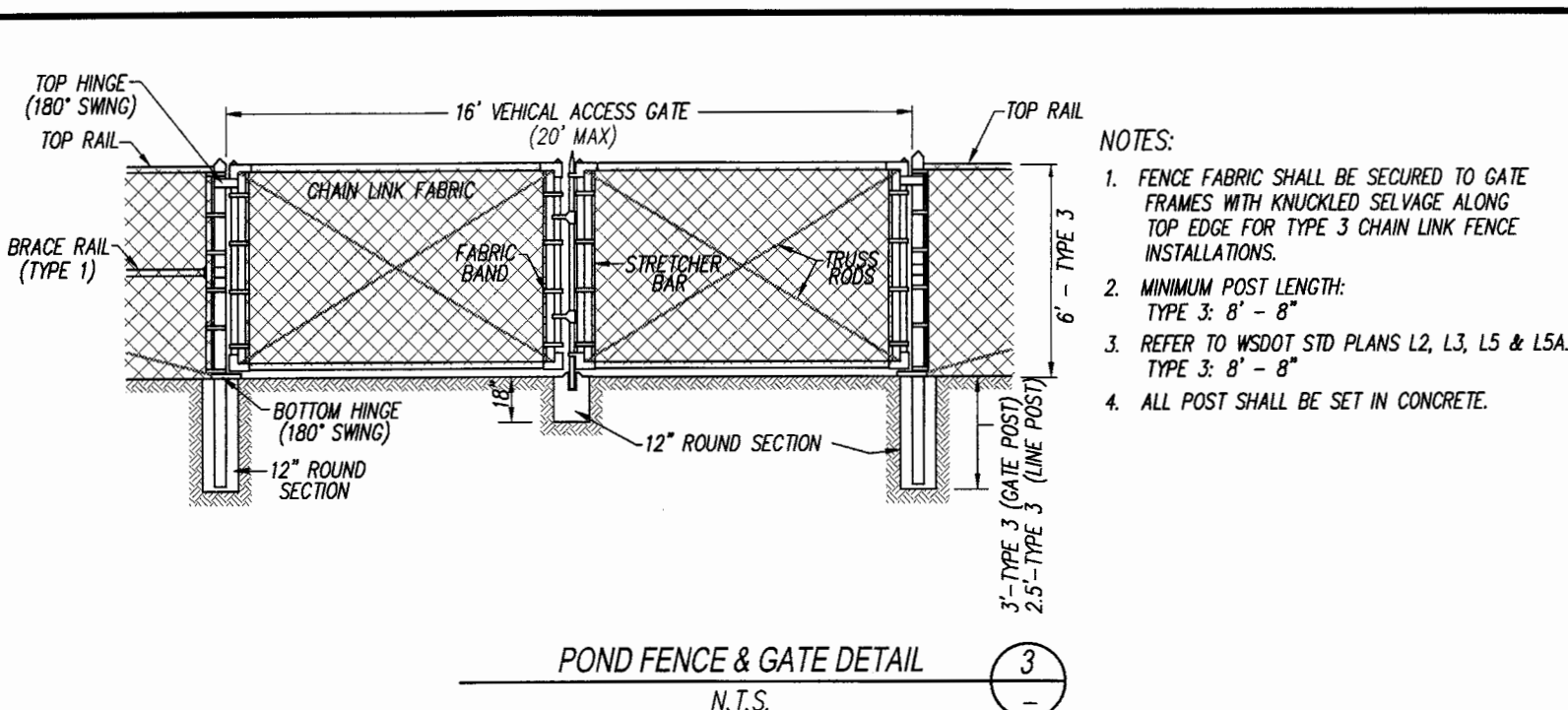
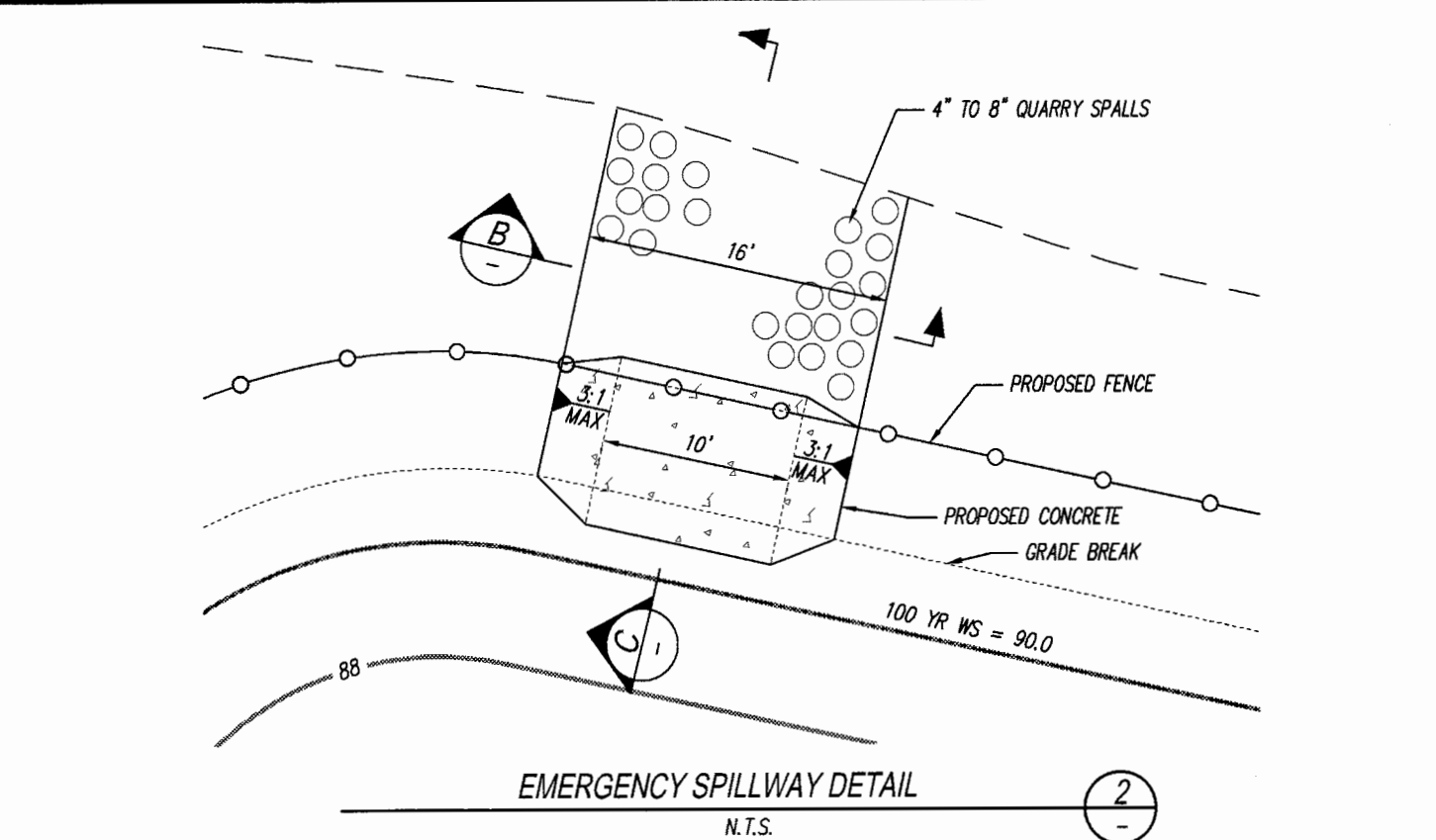
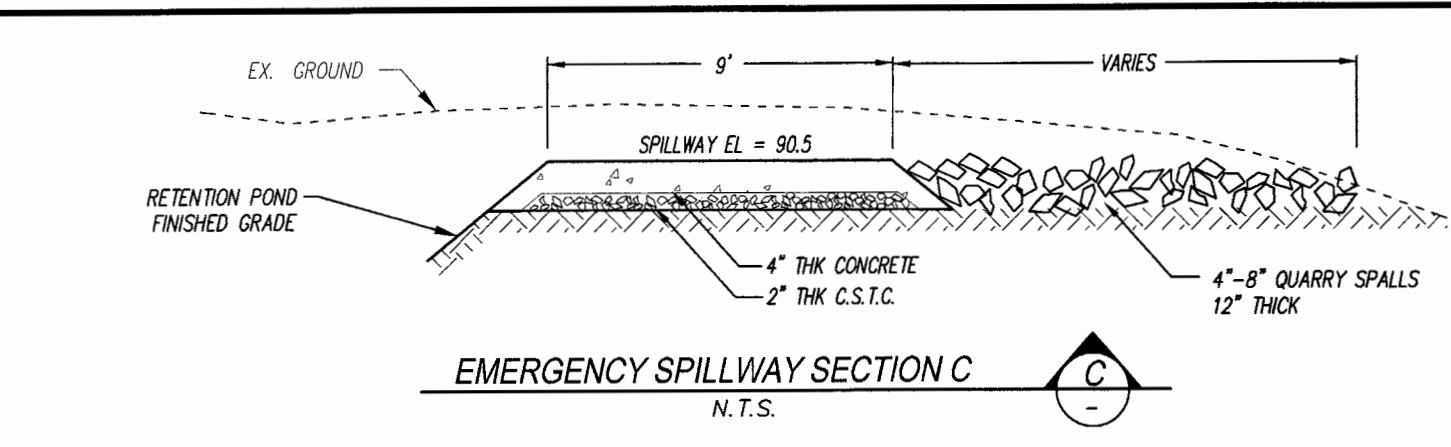
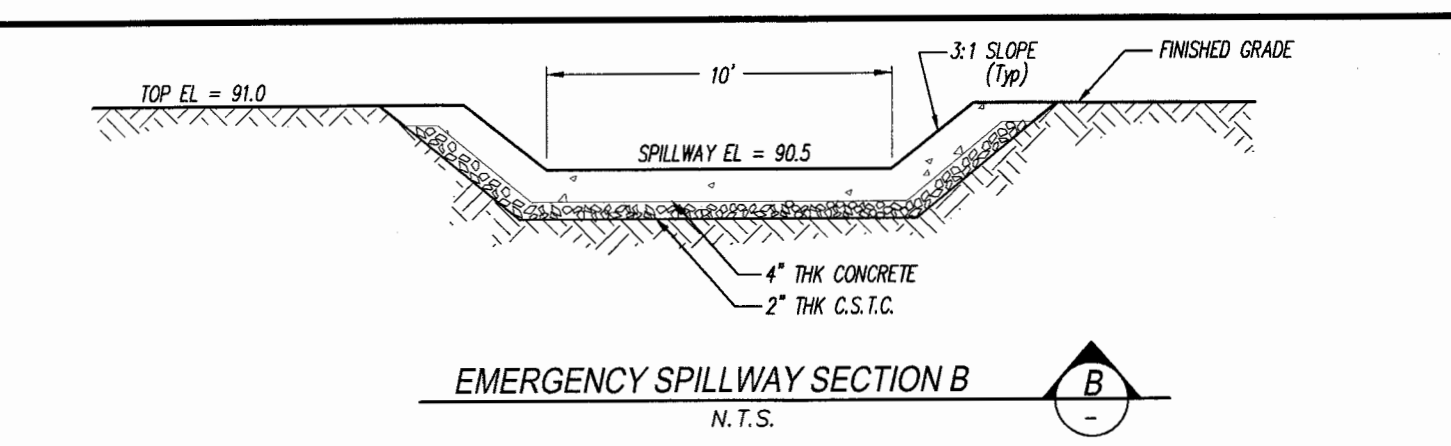
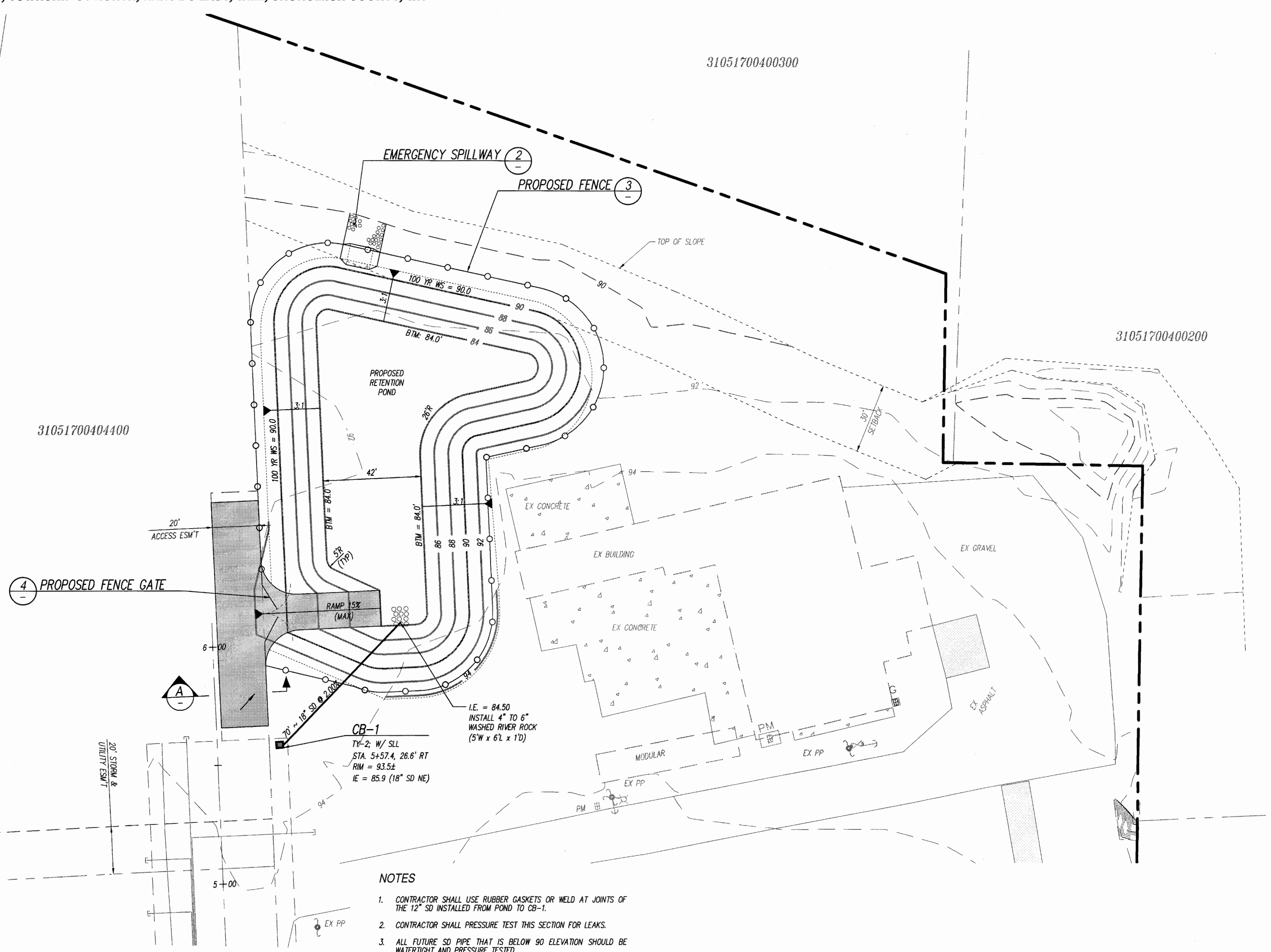
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OF 8

SWPPP NOTES



- CITY OF ARLINGTON DRAINAGE NOTES**
- ALL STORM DRAINAGE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS AND CITY STANDARDS AND SPECIFICATIONS. ANY DEVIATION FROM THESE PLANS WILL REQUIRE PRIOR APPROVAL FROM THE OWNER, THE CITY ENGINEER, AND OTHER APPROPRIATE PUBLIC AGENCIES.
 - ALL PIPE MATERIALS SHALL MEET THE REQUIREMENTS OF THE CITY STANDARDS AND SPECIFICATIONS. ACCEPTABLE STORM DRAINAGE PIPE MATERIALS INCLUDE CONCRETE, PVC, HDPE, AND DUCTILE IRON. CORRUGATED METAL PIPES (GALVANIZED ALUMINUM OR STEEL) ARE NOT ACCEPTED BY THE CITY. ALL PIPE JOINTS MUST HAVE GASKETS AND SHALL BE WATER TIGHT UNLESS OTHERWISE DIRECTED BY THE CITY.
 - PIPE BEDDING MATERIAL SHALL BE 5/8-INCH MINUS CRUSHED GRAVEL FOR ALL PIPE TYPES, EXCEPT DUCTILE IRON. BEDDING MATERIAL FOR DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF THE CITY'S STANDARDS AND SPECIFICATIONS (CHAPTER 4).
 - ALL TRENCH BACKFILL IN AREAS OF PAVEMENT OR STRUCTURAL LOADING SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY. ALL OTHER AREAS SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DRY DENSITY.
 - ALL PIPE SHALL BE PLACED ON STABLE EARTH. IF IN THE OPINION OF THE CITY INSPECTOR, THE EXISTING TRENCH FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH GRAVEL BEDDING MATERIAL TO SUPPORT THE PIPE.
 - LOT DRAINAGE SYSTEMS, STUB-OUTS AND ANY DRAINS BEHIND THE SIDEWALK MUST BE INSTALLED AS REQUIRED PRIOR TO SIDEWALK CONSTRUCTION. STUB-OUTS SHALL BE MARKED WITH A 2"x4" WITH 3 FEET VISIBLE ABOVE GRADE AND MARKED "STORM". LOCATION AND DEPTH OF THESE INSTALLATIONS SHALL BE SHOWN ON THE AS-BUILT PLANS SUBMITTED TO THE CITY.
 - ALL CATCH BASINS SHALL BE TYPE 1 UNLESS OTHERWISE SHOWN ON THE PLANS AND APPROVED BY THE CITY. THE USE AND INSTALLATION OF INLETS IS DISCOURAGED.
 - ALL CATCH BASINS WITH A DEPTH OF 5 FEET (RIM TO INVERT) OR GREATER SHALL BE TYPE 2 CATCH BASINS EQUIPPED WITH 3/4-INCH DIAMETER SAFETY MANHOLE STEPS OR A MANHOLE LADDER PER CITY STANDARD DETAILS.
 - ALL GRATES SHALL BE MARKED "OUTFALL TO STREAM - DUMP NO POLLUTANTS". ALL SOLID COVER SHALL BE MARKED "DRAIN". ALL CATCH BASINS AND MANHOLES SHALL BE EQUIPPED WITH LOCKING FRAMES AND LIDS OR GRATES PER CITY STANDARD DETAILS.
 - ALL GRATES LOCATED IN THE GUTTER FLOW LINE (INLET AND CATCH BASIN) SHALL BE DEPRESSURED 0.1 FOOT BELOW PAVEMENT LEVEL.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES/COVERS TO GRADE JUST PRIOR TO CURB INSTALLATION AND PAVING.
 - ALL RETENTION/DETENTION FACILITIES SHALL BE INSTALLED AND IN OPERATION PRIOR TO, OR IN CONJUNCTION WITH, ALL CONSTRUCTION ACTIVITY, UNLESS OTHERWISE APPROVED BY THE CITY.
 - DETENTION/RETENTION PONDS WITH SIDE SLOPES STEEPER THAN 3:1 OR WITH A MAXIMUM WATER DEPTH GREATER THAN 3 FEET SHALL BE ENCLOSED WITH A VINYL COATED CHAIN LINK FENCE.
 - BIO-FILTRATION SWALES AND/OR FILTER STRIPS SHALL BE CONSTRUCTED, BEDDED OR SEEDDED AND IN OPERATION PRIOR TO, OR SEEDDED IN CONJUNCTION WITH, ASPHALT PAVING. THE VEGETATION IN THE BIO-SWALE MUST BE WELL ESTABLISHED BEFORE PAVING BEGINS.
 - STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED BY THE DEVELOPER PRIOR TO THE CITY'S ACCEPTANCE OF THE PROJECT.
 - WHEN INFILTRATION FACILITIES ARE CONSTRUCTED, COMPACTION OF SOIL IS NOT ALLOWED, AS THE DESIGN IS BASED ON NATURAL SOIL IN THE ORIGINAL LOCATION. VEHICLES SHALL NOT BE DRIVEN OVER THE INFILTRATION AREA DURING CONSTRUCTION.
 - IF THE CONTRACTOR ENCOUNTERS GROUNDWATER OR SOIL CONDITIONS DIFFERENT FROM THAT SHOWN IN THE PLANS DURING INFILTRATION SYSTEM INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR.

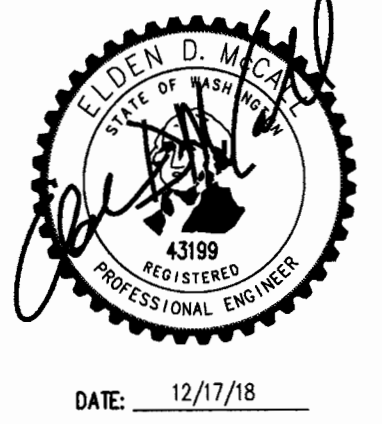


- NOTES**
- CONTRACTOR SHALL USE RUBBER GASKETS OR WELD AT JOINTS OF THE 12" SD INSTALLED FROM POND TO CB-1.
 - CONTRACTOR SHALL PRESSURE TEST THIS SECTION FOR LEAKS.
 - ALL FUTURE SD PIPE THAT IS BELOW 90 ELEVATION SHOULD BE WATER TIGHT AND PRESSURE TESTED.

Received
DEC 17 2018

CONSTRUCTION DRAWING APPROVAL
THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED PER THE CONDITIONS ON THE TITLE SHEET.
BY: *[Signature]*
CITY ENGINEER, CITY OF ARLINGTON
DATE: 12/17/18
THIS APPROVAL VALID FOR 18 MONTHS

MAC ENGINEERING, LLC
P.O. BOX 177, SILVANA, WA 98287
TEL: (360) 652-5820
EMAIL: macengineering@frontier.com



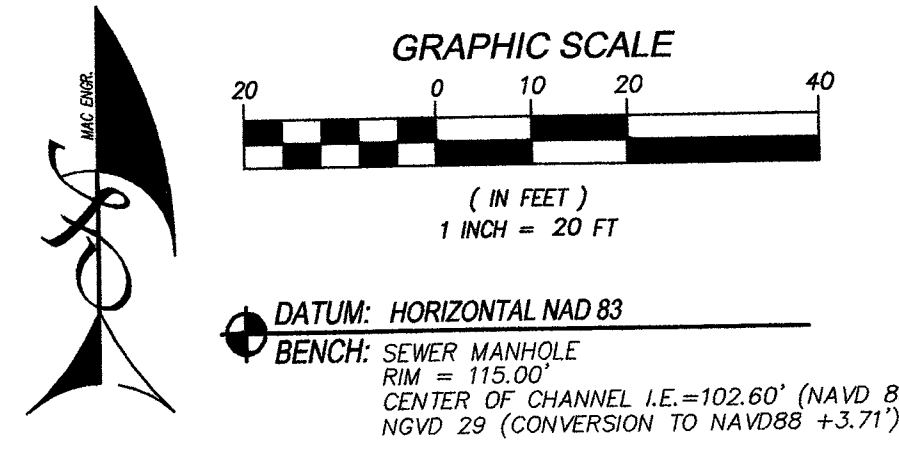
SURVEY & TOPOGRAPHIC INFORMATION PROVIDED BY:
METRON AND ASSOCIATES INC.
307 N. OLYMPIC AVENUE, SUITE 205
ARLINGTON, WASHINGTON 98223
360-435-3777

DATE	REVISION/ISSUED
09/12/18	ISSUED
11/27/18	PER CITY COMMENTS
12/17/18	PER CALCULATIONS

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555
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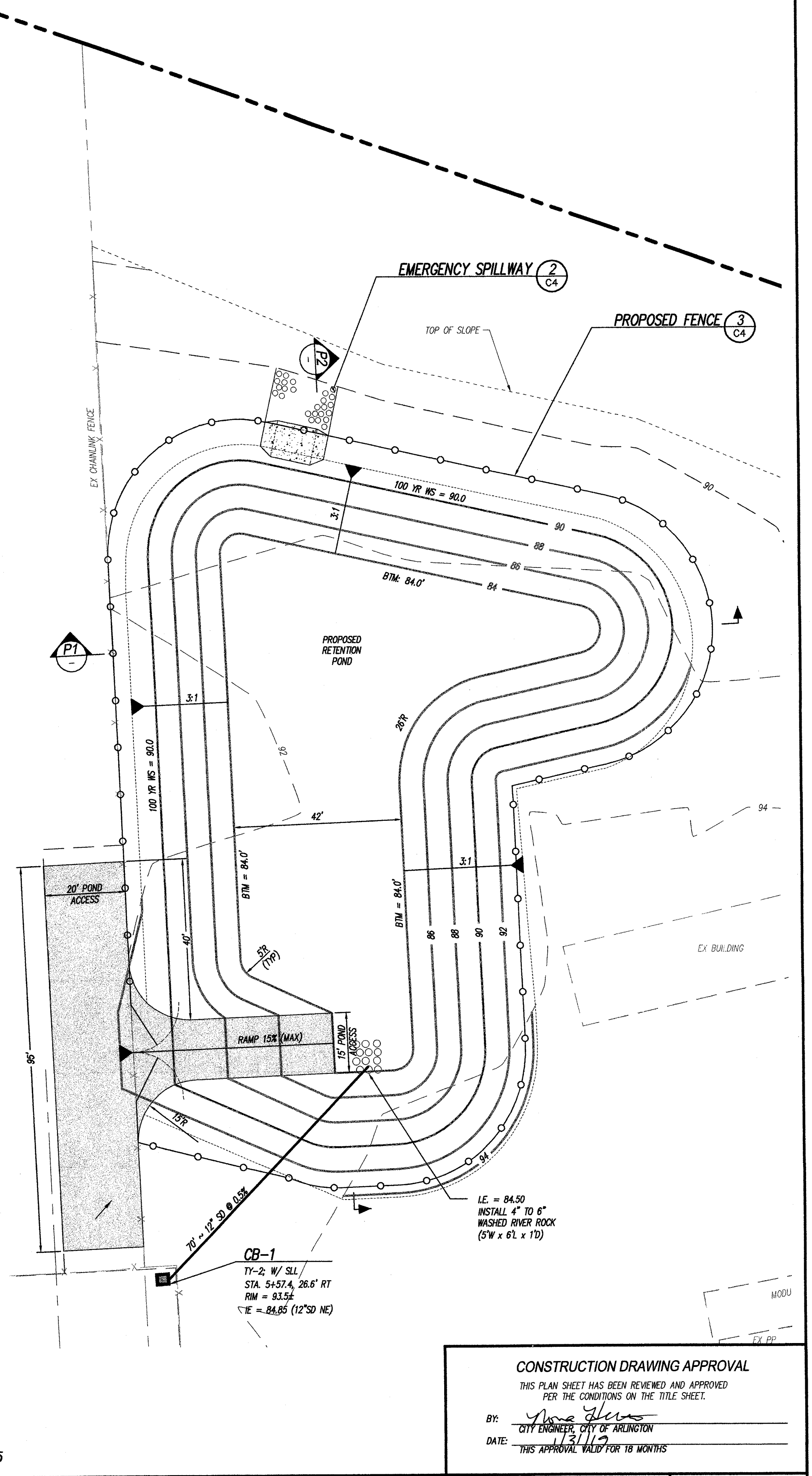
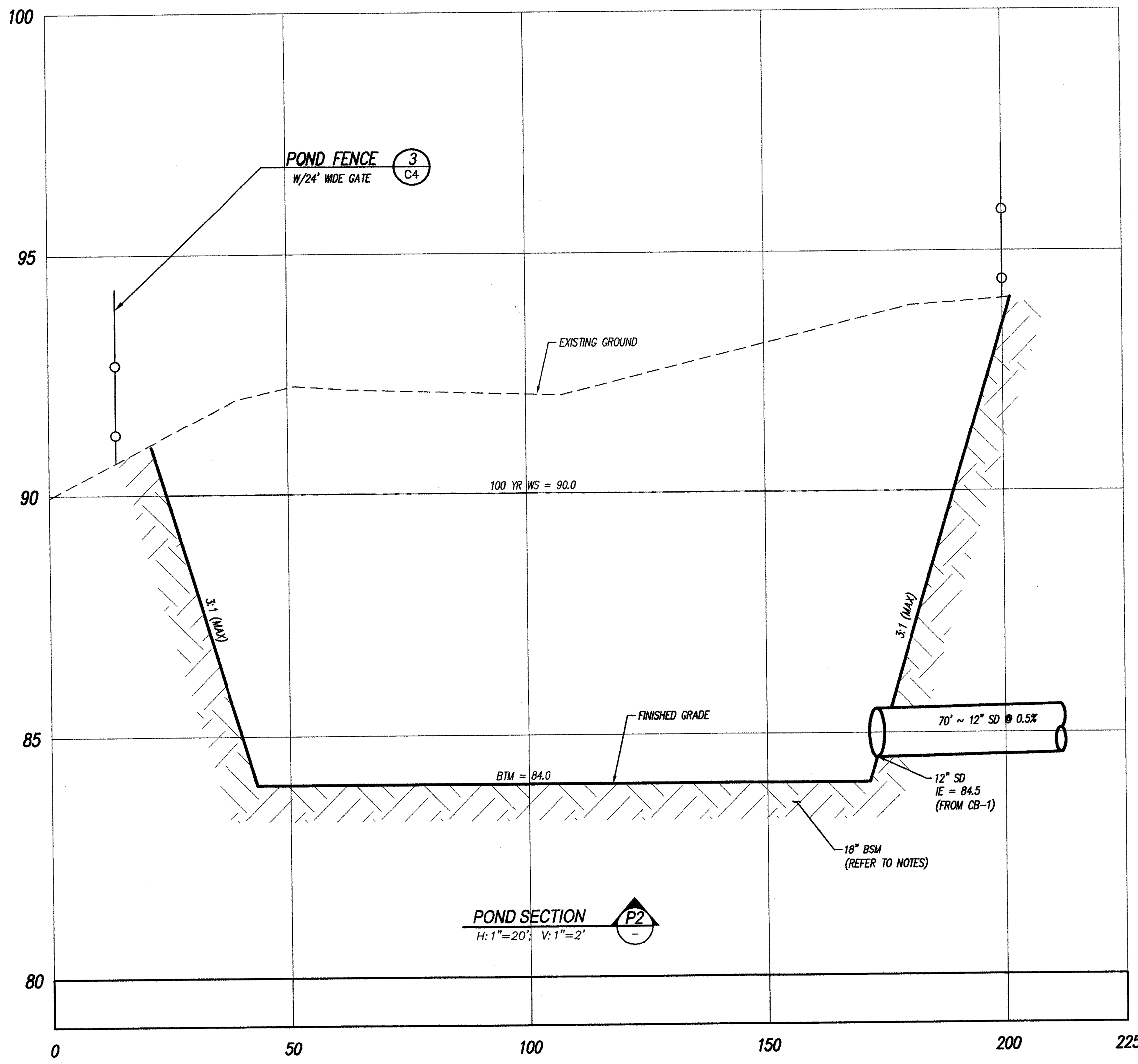
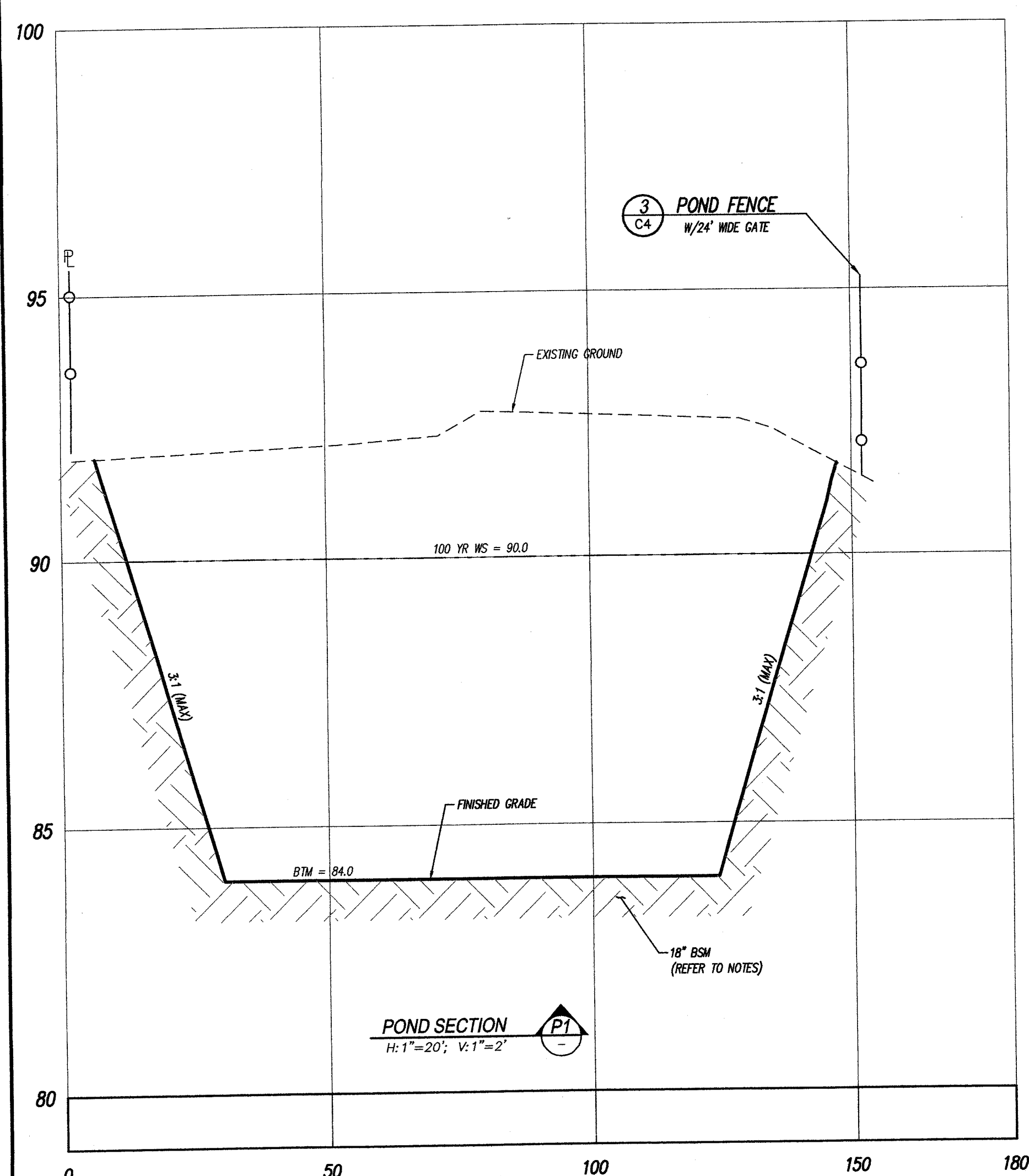
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R&B DEVELOPERS
POND GRADING & PLAN

PROJECT NO.
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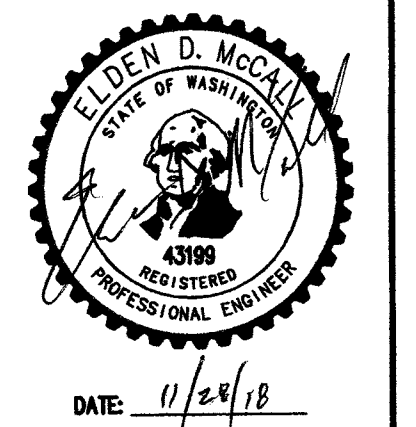
DEFAULT BIO-RETENTION SOIL MEDIA (BSM) NOTES:

- MINERAL AGGREGATE**
PERCENT FINES: A RANGE OF 2 TO 4 PERCENT PASSING THE #200 SIEVE IS IDEAL AND FINES SHOULD NOT BE ABOVE 5 PERCENT FOR A PROPER FUNCTIONING SPECIFICATION ACCORDING TO ASTM D422.
- AGGREGATE GRADATION**
THE AGGREGATE PORTION OF THE BSM SHOULD BE WELL-GRADED, ACCORDING TO ASTM D 2487-98 (CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)). WELL-GRADED SAND SHOULD HAVE THE FOLLOWING GRADATION COEFFICIENTS:
 - COEFFICIENT OF UNIFORMITY (CU = D60/D10) EQUAL TO OR GREATER THAN 4, AND
 - COEFFICIENT OF CURVE (CC = (D30)²/D60 X D10) GREATER THAN OR EQUAL TO 1 AND LESS THAN OR EQUAL TO 3.
- COMPOST TO AGGREGATE RATIO, ORGANIC MATTER CONTENT, CATION EXCHANGE CAPACITY**
 - COMPOST TO AGGREGATE RATIO: 60-65 PERCENT MINERAL AGGREGATE, 35 - 40 PERCENT COMPOST BY VOLUME.
 - ORGANIC MATTER CONTENT: 5 - 8 PERCENT BY WEIGHT.
 - CATION EXCHANGE CAPACITY (CEC) MUST BE ≥ 5 MILLEQUIVALENTS/100 G DRY SOIL. NOTE: SOIL MIXES MEETING THE ABOVE SPECIFICATIONS DO NOT HAVE TO BE TESTED FOR CEC; THEY WILL READILY MEET THE MINIMUM CEC.
- COMPOST**
 - MEETS THE DEFINITION OF "COMPOSTED MATERIAL" IN WAC 173-350-100 AND COMPLIES WITH TESTING STANDARDS AND OTHER PARAMETERS IN WAC 173-350-220
 - THE COMPOST PRODUCT MUST ORIGINATE A MINIMUM OF 65 PERCENT BY VOLUME FROM RECYCLED PLANT WASTE COMPOSED OF "YARD DEBRIS," "OROP RESIDUES," AND "BULKING AGENTS" AS THOSE TERMS ARE DEFINED IN WAC 173-350-100. A MAXIMUM OF 35 PERCENT BY VOLUME OF "POST-CONSUMER FOOD WASTE" AS DEFINED IN WAC 173-350-100, BUT NOT INCLUDING BROSOLIDS, MAY BE SUBSTITUTED FOR RECYCLED PLANT WASTE.
 - STABLE (LOW OXYGEN USE AND CO2 GENERATION) AND MATURE (CAPABLE OF SUPPORTING PLANT GROWTH) BY TESTS SHOWN BELOW. THIS IS CRITICAL TO PLANT SUCCESS IN A BIORETENTION SOIL MIXES.
 - MOISTURE CONTENT RANGE: NO VISIBLE FREE WATER OR DUST PRODUCED WHEN HANDLING THE MATERIAL.
 - TESTED IN ACCORDANCE WITH THE U.S. COMPOSTING COUNCIL TEST METHOD FOR THE EXAMINATION OF COMPOST AND COMPOSTING* (TMECC), AS ESTABLISHED IN THE COMPOSTING COUNCIL'S "SEAL OF TESTING ASSURANCE" (STA) PROGRAM. MOST WASHINGTON COMPOST FACILITIES NOW USE THESE TESTS.
 - SCREENED TO THE FOLLOWING SIZE GRADATIONS FOR FINE COMPOST WHEN TESTED IN ACCORDANCE WITH TMECC TEST METHOD 02.02-B SAMPLE SIEVING FOR AGGREGATE SIZE CLASSIFICATION.
 - FINE COMPOST SHALL MEET THE FOLLOWING GRADATION BY DRY WEIGHT:
 - MINIMUM PERCENT PASSING # 100#
 - MINIMUM PERCENT PASSING # 20#
 - MINIMUM PERCENT PASSING 5/8" 90% MINIMUM PERCENT PASSING 1 1/4" 75%
 - PH BETWEEN 6.0 AND 8.5 (TMECC 04.11-A).
 - "PHYSICAL CONTAMINANTS" (AS DEFINED IN WAC 173-350-100) CONTENT LESS THAN 1% BY WEIGHT (TMECC 03.08-A), NOT TO EXCEED 0.25% PLM PLASTIC BY DRY WEIGHT.
 - MINIMUM ORGANIC MATTER CONTENT OF 40% (TMECC 05.07-A LOSS ON IGNITION)
 - SOLUBLE SALT CONTENT LESS THAN 4.0 DS/M (MMHOS/CM) (TMECC 04.10-A ELECTRICAL CONDUCTIVITY, 1:5 SLURRY METHOD, MASS BASIS)
 - MATURITY INDICATORS FROM A CUCUMBER BIOMASS (TMECC 05.05-A SEEDLING EMERGENCE AND RELATIVE GROWTH) MUST BE GREATER THAN BOX FOR BOTH EMERGENCE AND MOOR.
 - STABILITY OF 7 MG CO2-C/DAY OR BELOW (TMECC 05.08-B "CARBON DIOXIDE EVOLUTION RATE")
 - CARBON TO NITROGEN RATIO OF LESS THAN 25:1 BASED ON TMECC 05.02A CARBON TO NITROGEN RATIO (WHICH USES 04.01 ORGANIC CARBON AND 04.02D TOTAL NITROGEN BY OXIDATION).



CONSTRUCTION DRAWING APPROVAL
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 BY: *[Signature]*
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 THIS APPROVAL VALID FOR 18 MONTHS

MAC ENGINEERING, LLC
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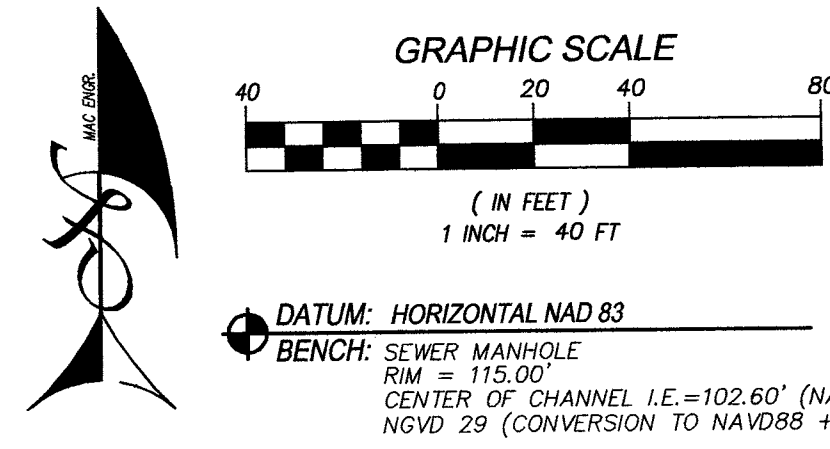
SURVEY & TOPOGRAPHIC INFORMATION PROVIDED BY:
 METRON AND ASSOCIATES INC.
 307 N. OLYMPIC AVENUE, SUITE 205
 ARLINGTON, WASHINGTON 98223
 360-435-3777

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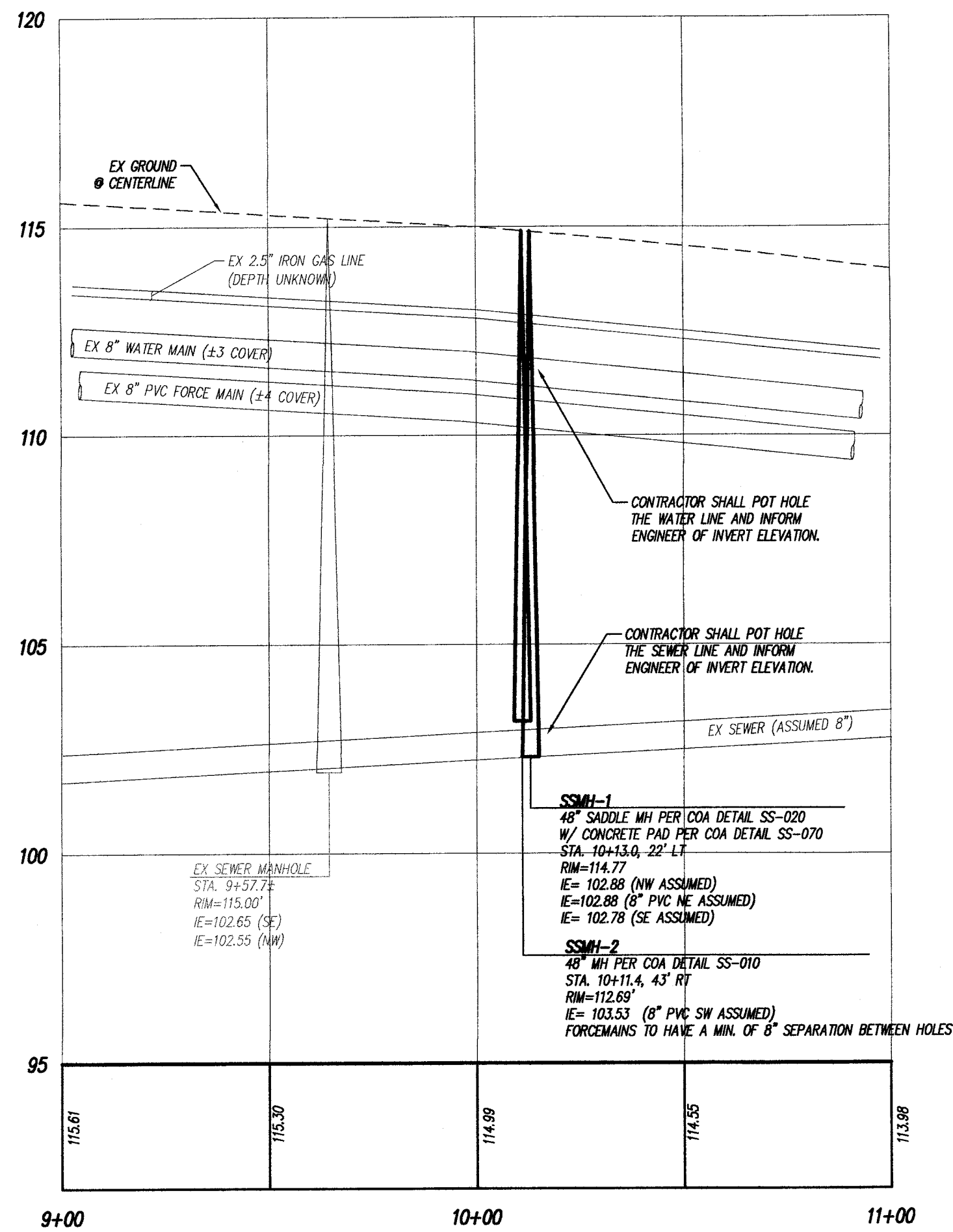
R&B DEVELOPERS
 POND PLAN & PROFILE

PROJECT NO.
 150250
DWG
C5
 OF 8



CITY OF ARLINGTON SEWER NOTES

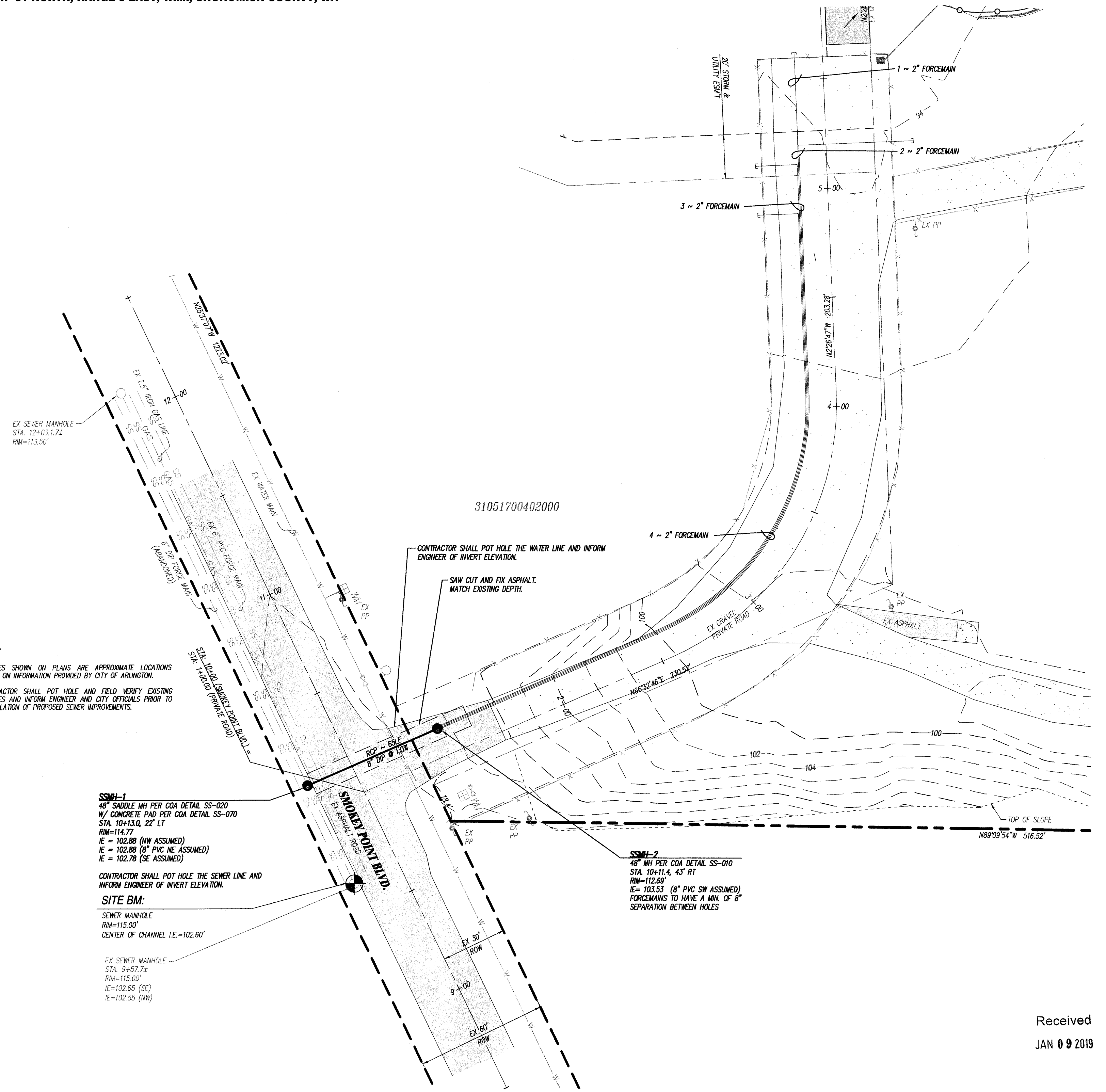
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT EDITION OF THE CITY OF ARLINGTON STANDARDS AND SPECIFICATIONS. ANY CHANGES TO THE DESIGN REQUIRES CITY APPROVAL.
2. ALL MATERIALS SHALL CONFORM TO THE CITY OF ARLINGTON STANDARDS AND SPECIFICATIONS AND THE MATERIAL SUBMITTALS SHALL BE APPROVED BY THE CITY BEFORE SCHEDULING THE PRECONSTRUCTION CONFERENCE AND BEFORE THE MATERIALS ARE DELIVERED TO THE JOB SITE. ONCE THE MATERIALS ARE DELIVERED TO THE JOB SITE THE INSPECTOR WILL DETERMINE IF THE MATERIALS MEET THE REQUIREMENTS OF THE CITY OF ARLINGTON STANDARDS AND SPECIFICATIONS BEFORE THE MATERIALS CAN BE INSTALLED.
3. ALL SEWER MAINS AND SIDE SEWER STUBS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT BY A SURVEYOR PRIOR TO CONSTRUCTION. THE CONSTRUCTION STAKES MUST SHOW THE STATION AND OFFSET TO THE ALIGNMENT.
4. THE CITY OF ARLINGTON WASTEWATER DIVISION SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF A TAP OR CONNECTION TO AN EXISTING SANITARY SEWER MAIN. THE INSPECTOR SHALL BE PRESENT AT THE TIME OF THE TAP OR CONNECTION.
5. GRAVITY SEWERS, INCLUDING SIDE SEWERS, WITH 5 TO 14 FEET OF COVER SHALL BE PVC ASTM D 3034 SDR 35. GRAVITY SEWER MAINS WITH LESS THAN 5 FEET OR GREATER THAN 14 FEET OF COVER SHALL BE DUCTILE IRON PIPE CLASS 52, OR C-900 PVC. IF DUCTILE IRON PIPE IS USED FOR SEWER, THE PIPE INTERIOR SHALL BE EPOXY COATED (NOT CEMENT-LINED).
6. PRE-CAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C-478. JOINTS SHALL BE RUBBER GASKETED AND GROUTED BOTH INSIDE AND OUTSIDE OF THE MANHOLE PER CITY OF ARLINGTON STANDARDS AND SPECIFICATIONS. ALL LIFT HOLES CUT THROUGH THE WALLS OF THE MANHOLE SHALL BE GROUTED FROM THE INSIDE AND OUTSIDE OF THE MANHOLE TO BE WATER-TIGHT. ADDITIONAL WATERPROOFING MAY BE REQUIRED.
7. SIDE SEWER SERVICES SHALL BE PVC ASTM D 3034 SDR 35 WITH FLEXIBLE GASKETED JOINTS. SIDE SEWER CONNECTIONS SHALL BE MADE BY A TAP TO AN EXISTING MAIN OR A TEE FROM A NEW MAIN CONNECTED ABOVE THE SPRING LINE OF THE PIPE. WYES ARE NOT ALLOWED ON LINES 8" OR LARGER. SIDE SEWERS CAN NOT BE INSTALLED UNDER DRIVEWAYS UNLESS APPROVED BY THE CITY INSPECTOR.
8. ALL SEWER PIPE SHALL BE INSTALLED WITH A CONTINUOUS TRACER TAPE 24" - 48" UNDER THE PROPOSED FINISHED SUBGRADE, OR AS DIRECTED BY THE CITY INSPECTOR. THE MARKER SHALL BE PLASTIC, NON-Biodegradable, METAL CORE, AND DETECTABLE, WITH BACKING MARKED "SEWER".
9. SIDE SEWERS SHALL BE INSTALLED BY THE DEVELOPER AND COORDINATED FOR CLEARANCE WITH POWER, GAS, TELEPHONE, CABLE, AND OTHER UTILITIES. SIDE SEWERS SHALL BE A MINIMUM OF 10 FEET BEYOND PROPERTY LINES AND 5' BEYOND ANY EASEMENT.
10. THE SEWER PIPE SHALL BE INSTALLED STARTING FROM DOWNSTREAM OF THE POINT OF CONNECTION ON THE EXISTING SEWER OR FROM A DESIGNATED STARTING POINT. THE SEWER PIPE SHALL BE INSTALLED WITH THE BELL END UPSTREAM.
11. ADEQUATE TRENCH SHEETING AND/OR SHORING SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED BY OSHA AND WSHA.
12. TO PREVENT WATER OR DEBRIS FROM DISCHARGING INTO THE CITY'S EXISTING SEWER SYSTEM, THE CONTRACTOR SHALL INSTALL A PLUG IN THE CONNECTION MANHOLE OR AS DIRECTED BY THE CITY INSPECTOR. THE PLUG SHALL NOT BE REMOVED UNTIL THE SEWER IS ACCEPTED BY THE CITY.
13. ALL SEWER LINES SHALL MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL CLEARANCE AND A MINIMUM OF 18 INCHES VERTICAL CLEARANCE FROM WATER LINES. SEE STANDARDS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND ALTERNATIVES.
14. PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE CITY OF ARLINGTON STANDARD AND WSDOT STANDARD SPECIFICATIONS. 3/8-INCH MINUS MANUFACTURED CLEAN PEA GRAVEL IS THE REQUIRED BEDDING MATERIAL. ALL PIPE SHALL BE LAD ON A PROPERLY PREPARED FOUNDATION. THIS SHALL INCLUDE NECESSARY LEVING OF THE TRENCH BOTTOM OR THE TOP OF THE FOUNDATION MATERIALS AS WELL AS PLACEMENT AND COMPACTION OF REQUIRED BEDDING MATERIAL TO UNIFORM GRADE SO THAT THE ENTIRE LENGTH OF THE PIPE WILL BE SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
15. THE CONTRACTOR SHALL COMPACT TRENCH BACKFILL WITHIN THE CITY RIGHT-OF-WAY TO AT LEAST 90% MAXIMUM DRY DENSITY FROM THE BOTTOM OF THE TRENCH TO A DEPTH OF 3' BELOW THE SURFACE. THE TRENCH BACKFILL MUST BE COMPACTED TO AT LEAST 90% MAXIMUM DENSITY WITHIN 3' OF THE SURFACE. ASPHALT MUST BE COMPACTED TO MEET THE REQUIREMENTS ON THE PLANS. ALL COMPACTION TESTS ARE AT THE DEVELOPER'S EXPENSE.



PROFILE - SMOKEY POINT BLVD
SCALE: 1" = 3' V., 1" = 30' H.

NOTES:

1. UTILITIES SHOWN ON PLANS ARE APPROXIMATE LOCATIONS BASED ON INFORMATION PROVIDED BY CITY OF ARLINGTON.
2. CONTRACTOR SHALL POT HOLE AND FIELD VERIFY EXISTING UTILITIES AND INFORM ENGINEER AND CITY OFFICIALS PRIOR TO INSTALLATION OF PROPOSED SEWER IMPROVEMENTS.



SSMH-1
48" SADDLE MH PER COA DETAIL SS-020
W/ CONCRETE PAD PER COA DETAIL SS-070
STA. 10+13.0, 22' LT
RIM=114.77
IE = 102.88 (NW ASSUMED)
IE = 102.88 (8" PVC NE ASSUMED)
IE = 102.78 (SE ASSUMED)

SSMH-2
48" MH PER COA DETAIL SS-010
STA. 10+11.4, 43' RT
RIM=112.89
IE = 103.53 (8" PVC SW ASSUMED)
FORCEMANS TO HAVE A MIN. OF 8" SEPARATION BETWEEN HOLES

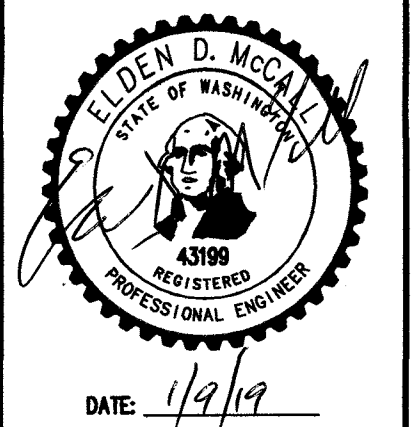
SITE BM:
SEWER MANHOLE
RIM=115.00'
CENTER OF CHANNEL I.E.=102.60'

EX SEWER MANHOLE
STA. 9+57.7±
RIM=115.00'
IE=102.65 (SE)
IE=102.55 (NW)

Received
JAN 09 2019

CONSTRUCTION DRAWING APPROVAL
THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED PER THE CONDITIONS ON THE TITLE SHEET.
BY: *[Signature]*
CITY ENGINEER, CITY OF ARLINGTON
DATE: 1/31/19
THIS APPROVAL VALID FOR 18 MONTHS

MAC ENGINEERING, LLC
P.O. BOX 177, SILVANA, WA 98287
TEL: (360) 652-5820
EMAIL: macengineering@frontier.com



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PFN: PWD 1547
R&B DEVELOPERS
SANITARY SEWER PLAN

PROJECT NO.
150250
DWG
C6
OF 8

NOTES:

- SADDLE MANHOLE MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING SEWER LINE. SIZE, LOCATION, AND ANGLE MUST BE AS REQUIRED BY PLANS.
- OPENINGS IN PRECAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE PROPOSED PIPE.
- CONSTRUCT BENCH AND INVERT TO ALLOW SMOOTH TRANSITION OF FLOW FROM NEW SEWER TO EXISTING SEWER.
- ALL NOTES ON SS-010 AND SS-015 ALSO APPLY TO THIS DETAIL.

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-020
SADDLE MANHOLE

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-030
MANHOLE COVER

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-040
MANHOLE LADDER

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-050
MANHOLE LADDER STEP

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-070
MANHOLE PAD AND ADJUSTMENT

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-120
TRENCH SECTION

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAIL
SS-130
MONITORING MANHOLE

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PFN:
R&B DEVELOPERS
150250
DWG
C7
OF 8
CITY OF ARLINGTON DETAILS

FRAME AND GRATE (OR SOLID COVER), SEE APPLICABLE STANDARD DETAILS

2"x4"x8" SOLID BRICK USED FOR FINAL ADJUSTMENT TO GRADE, 6" HIGH MAX.

NOTES:

- CONCRETE INLET TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS OTHERWISE SHOWN ON THE PLANS OR NOTED IN THE STANDARD SPECIFICATIONS. ALL CONCRETE SHALL BE CLASS 4000.
- REINFORCING SHALL BE EQUIVALENT TO WELDED WIRE FABRIC (WWF) HAVING A MINIMUM AREA OF 0.12 SQUARE INCH PER FOOT. WWF SHALL CONFORM TO ASTM A675. WWF SHALL NOT BE PLACED IN KNOCKOUTS.
- THE BOTTOM OF THE PRE-CAST BASE SECTION MAY BE ROUNDED.
- PRE-CAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUDED IF WALL IS LEFT INTACT.
- KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTSIDE DIAMETER PLUS CATCH-BASIN WALL THICKNESS. KNOCKOUTS MAY BE ROUND OR "D" SHAPED AND MAY BE ON ALL 4 SIDES WITH MAXIMUM DIAMETER OF 20".
- THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
- THE TAPER ON THE SIDES OF THE PRE-CAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FOOT.
- FRAME AND GRATE SHALL BE IN ACCORDANCE WITH WSDOT/APWA SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
- FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
- EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.

PRE-CAST BASE SECTION (MEASUREMENT AT THE TOP OF THE BASE)

APPROVED BY	L. NAME	DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL NUMBER
DATE	07/01/2008	STANDARD DETAIL	SD-020
REF. DIM. SPEC.		CATCH BASIN TYPE 1	

TOP VIEW

SECTION B-B

SECTION A-A

SECTION C-C

NOTE:

- MATERIAL USED SHALL BE DUCTILE IRON PER ASTM-A536, GRADE 80-55-06, WITH BITUMINOUS COATING.
- LOCKING HOLES TO BE PROVIDED IN CASTING TO ALLOW FOR TWO 5/8" DIA STAINLESS STEEL SOCKET HEAD CAP SCREWS. NO PART OF SCREW WILL PROTRUDE ABOVE GRATE.
- GRATE TO BE USED WITH FRAME SHOWN IN STD DETAIL SD-090.
- GRATE SEATING: 8 INTEGRALLY CAST PADS.
- CAST POCKET LIFT HANDLE.
- NON-SKID DIAMOND PATTERN APPROX 2-1/2"x1-1/8" HIGH.

APPROVED BY	L. NAME	DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL NUMBER
DATE	07/01/2008	STANDARD DETAIL	SD-080
REF. DIM. SPEC.		SOLID COVER	

INLET

OUTLET

6" OR 8" PVC FACTORY TEE

1" VENT HOLE WHEN NOT CONNECTED TO SS

6" OR 8" PVC PLUG

MIN COVER

ADAPTOR OR PIPE JOINT

6" OR 8" PVC PIPE

AC COLLAR

6" OR 8" PVC PIPE AS REQUIRED

TYPE 1L CB

APPROVED BY	L. NAME	DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL NUMBER
DATE	07/01/2008	STANDARD DETAIL	SD-120
REF. DIM. SPEC.		STANDARD OIL/WATER SEPARATOR	

PLAN

FRAME PLAN

SECTION A-A

SECTION B-B

COVER NOTES:

- USE WITH THREE LOCKING BOLTS 5/8" DIA STAINLESS STEEL TYPE 304 SOCKET HEAD (ALLEN HEAD) BOLTS, 2" LONG. DRILL HOLES SPACED 120° TO MATCH HOLES IN RING.
- COVER MATERIAL IS DUCTILE IRON ASTM A536 GRADE 80-55-06.
- APPROXIMATE WEIGHT OF COVER IS 150 LBS.
- TRAFFIC RATING: H-20.

RING NOTES:

- DRILL THREE 5/8" HOLES THROUGH RING SPACED AT 120°.
- RING MATERIAL IS GREY IRON, ASTM A-48 CLASS 30.
- APPROXIMATE WEIGHT OF RING IS 215 LBS.
- TRAFFIC RATING: H-20.

APPROVED BY	L. NAME	DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL NUMBER
DATE	07/01/2008	STANDARD DETAIL	SD-110
REF. DIM. SPEC.		24" BOLT-LOCKING MANHOLE RING & COVER	

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