

CITY OF LAKE FOREST PARK

KING COUNTY

WASHINGTON

L90 CULVERT REPLACEMENT



CITY OFFICIALS

TOM FRENCH
MAYOR

LORRI BODI
DEPUTY MAYOR

LARRY GOLDMAN

TRACY FURUTANI
CITY COUNCIL

JON LEBO

SEMRA RIDDLE

ELLYN SAUNDERS

PAULA GOODE

LORRI BODI

PHILLIP HILL
CITY ADMINISTRATOR

KATIE PHILLIPS
PROJECT MANAGER

REBECCA DICKINSON
PUBLIC WORKS DIRECTOR

REVIEWED AND
CONCURRED WITH: _____
CITY OF LAKE FOREST PARK

DATE: _____


Gray & Osborne, Inc.
CONSULTING ENGINEERS
3710 168TH STREET NE, BLDG. B, SUITE 210
ARLINGTON, WASHINGTON 98223 (360) 454-5490

**60% PLANSET
OCTOBER 2025
G&O JOB#19569**

ABBREVIATIONS

AVE	AVENUE
AC	ASBESTOS CEMENT PIPE
ADJ	ADJUST
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
ASSY	ASSEMBLY
BLDG	BUILDING
BLK	BLOCK
BOP	BEGINNING OF PROJECT
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CTR	CENTER
CB	CATCH BASIN
CI	CAST IRON
℄	CENTER LINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
C	CONDUIT
CONN	CONNECTION
CONT	CONTINUOUS
CPEP	CORRUGATED POLYETHYLENE PIPE
CPLG	COUPLING
CY	CUBIC YARD
CONT	CONTINUED
CL	CLASS
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
DC	DEGREE OF CURVATURE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DWGS	DRAWING(S)
D	DRAIN
E	EAST
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EOA	EDGE OF ASPHALT
EOP	END OF PROJECT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EXIST	EXISTING
FIN	FINISHED
FL	FLANGE
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GV	GATE VALVE
HMA	HOT MIX ASPHALT
HDPE	HIGH DENSITY POLYETHYLENE PIPE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
IN	INCH
L	LENGTH
LB	POUND
LF	LINEAR FEET
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MISC	MISCELLANEOUS
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHWM	ORDINARY HIGH WATER MARK
PI	POINT OF INTERSECTION
PP	POWER POLE
PVI	POINT OF VERTICAL INTERSECTION
PE	PLAIN END
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
QTY	QUANTITY
RR	RAILROAD
R	RADIUS
RED	REDUCER
REINF	REINFORCE
REQD	REQUIRED
RJ	RESTRAINED JOINT
R/W	RIGHT-OF-WAY
SL	SLOPE
S	SOUTH
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SP	SAMPLE POINTS
SPECS	SPECIFICATIONS
SQ	SQUARE
ST	SAMPLE TEST PIT
STA	STATION
STD	STANDARD
TB	THRUST BLOCK
TC	TOP OF CURB
TEL	TELEPHONE
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRD	THREADED
THRU	THROUGH
TYP	TYPICAL
VERT	VERTICAL
W	WEST
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

LINETYPES

EXISTING	PROPOSED	DESCRIPTION
SURFACE FEATURES		
		CURB (TYPE AS NOTED)
		CURB & GUTTER
		ASPHALT PAVEMENT
		GRAVEL SURFACING
		CONCRETE SURFACING
		CEMENT CONC. SIDEWALK
		PAVEMENT PLANING
		FENCE/RAILING (TYPE AS NOTED)
		CLEARING LIMITS / HIGH VISIBILITY SILT FENCE
SURVEY		
		RIGHT-OF-WAY LINE
		CENTERLINE OF RIGHT-OF-WAY
		CENTERLINE OF CONSTRUCTION
		PROPERTY LINE
		PERMANENT EASEMENT LINE
		TEMPORARY CONSTRUCTION EASEMENT
		CONTOUR LINE
		SAWCUT LINE (APPROXIMATE LOCATION)
UTILITIES		
		OVERHEAD UTILITIES
		BURIED ELECTRICAL
		BURIED TELEPHONE/COMMUNICATIONS
		BURIED COMMUNICATIONS
		BURIED CABLE TELEVISION
		BURIED FIBER-OPTIC LINE
		GAS MAIN (SIZE AS NOTED)
		WATER MAIN (SIZE AS NOTED)
		SANITARY SEWER MAIN (SIZE AS NOTED)
		STORM DRAIN (SIZE AS NOTED)
		CULVERT (SIZE & TYPE AS NOTED)
		SIDE SEWER
		STREAM CENTERLINE/THALWEG

GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL BE FURNISHED AND SUPPLIED IN ACCORDANCE WITH THE CURRENT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND CITY OF LAKE FOREST PARK PUBLIC WORKS STANDARDS UNLESS OTHERWISE SPECIFICALLY NOTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT AND COORDINATE WITH ALL UTILITY COMPANIES IN ORDER TO ASSURE THAT ALL LINES, PIPES, POLES AND OTHER APPURTENANCES ARE PROPERLY LOCATED, SECURED, AND/OR PROTECTED. BURIED UTILITIES (WHERE KNOWN) ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. NOTIFY THE UNDERGROUND UTILITIES LOCATE CENTER: 1-800-424-5555.
- ALL PAVEMENT MARKINGS SHALL BE INSTALLED/REINSTALLED IN CONFORMANCE TO THE REQUIREMENTS OF THESE PLANS, CONTRACT SPECIFICATIONS, AND THE M.U.T.C.D. MANUAL.
- THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND THE CONTRACT SPECIFICATIONS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN THE EVENT OR DISCOVERY OF UNSUITABLE SOILS OR HIGH GROUND WATER CONDITIONS OR DISCREPANCIES FROM THE PLANS.
- WHEREVER PLANS REFER TO "SAWCUT" OF ASPHALT CONCRETE PAVEMENT OR OIL MAT, OR CONCRETE SURFACE, THE CONTRACTOR SHALL PERFORM A "NEAT LINE CUT" PER SPECIFICATIONS.
- CATCH BASINS AND CURB INLETS HAVE BEEN SHOWN IN GENERAL WITH A RELATIVE STATION AND OFFSET. THE INTENT OF THIS PROJECT IS TO LOCATE THE CATCH BASINS AND CURB INLETS IN THE GUTTER PAN AT THEIR RESPECTIVE ELEVATIONS.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN LEGIBLE SET OF "RECORD" DRAWINGS AND PROVIDE A SET TO THE OWNER PRIOR TO DEMOBILIZATION FROM THE SITE.
- FORM AND SUBGRADE INSPECTION BY THE CONTRACTING AGENCY IS REQUIRED BEFORE PLACING CONCRETE. A MINIMUM OF 24 HOURS NOTICE IS REQUIRED TO BE PROVIDED TO THE RESIDENT INSPECTOR FOR FORM INSPECTION.
- PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		WATER SERVICE METER
		FIRE HYDRANT (2-NOZZLE)
		FIRE HYDRANT (3-NOZZLE)
		GATE VALVE
		THRUST BLOCK
		CAP/PLUG
		BEND
		COUPLING
		BLOW OFF ASSEMBLY

GAS/POWER/TELEPHONE SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		GAS VALVE
		PAD MOUNT TRANSFORMER
		POWER VAULT (SIZE VARIES)
		UTILITY POLE
		UTILITY POLE ANCHOR
		UTILITY PEDESTAL
		TELEPHONE VAULT (SIZE VARIES)

SURVEY SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		MONUMENT (IN CASE)
		MONUMENT (SURFACE)
		OWNERSHIP TIE
		SOIL BORING/TEST PIT
		SPOT ELEVATION
		TAX LOT/PARCEL NUMBER

SANITARY/STORM SEWER SYMBOLS

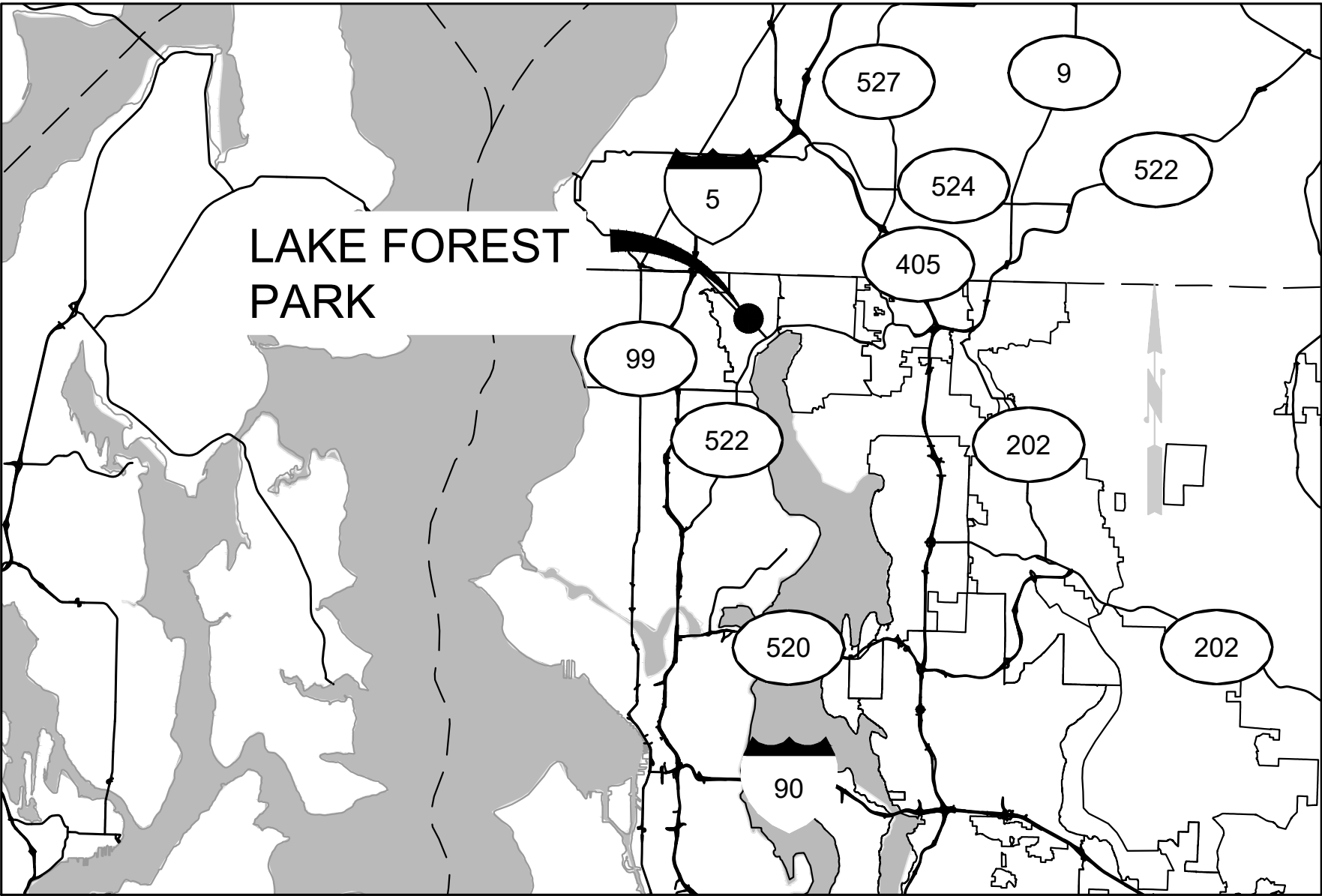
EXISTING	PROPOSED	DESCRIPTION
		CLEAN OUT (SAN. SEWER OR STORM)
		SANITARY SEWER MANHOLE
		STORM DRAIN CATCH BASIN, CONC. INLET, OR YARD/AREA DRAIN
		STORM DRAIN MANHOLE/ TYPE 2 CATCH BASIN
		TYPE 2 72" STORMFILTER CATCH BASIN

SHEET INDEX

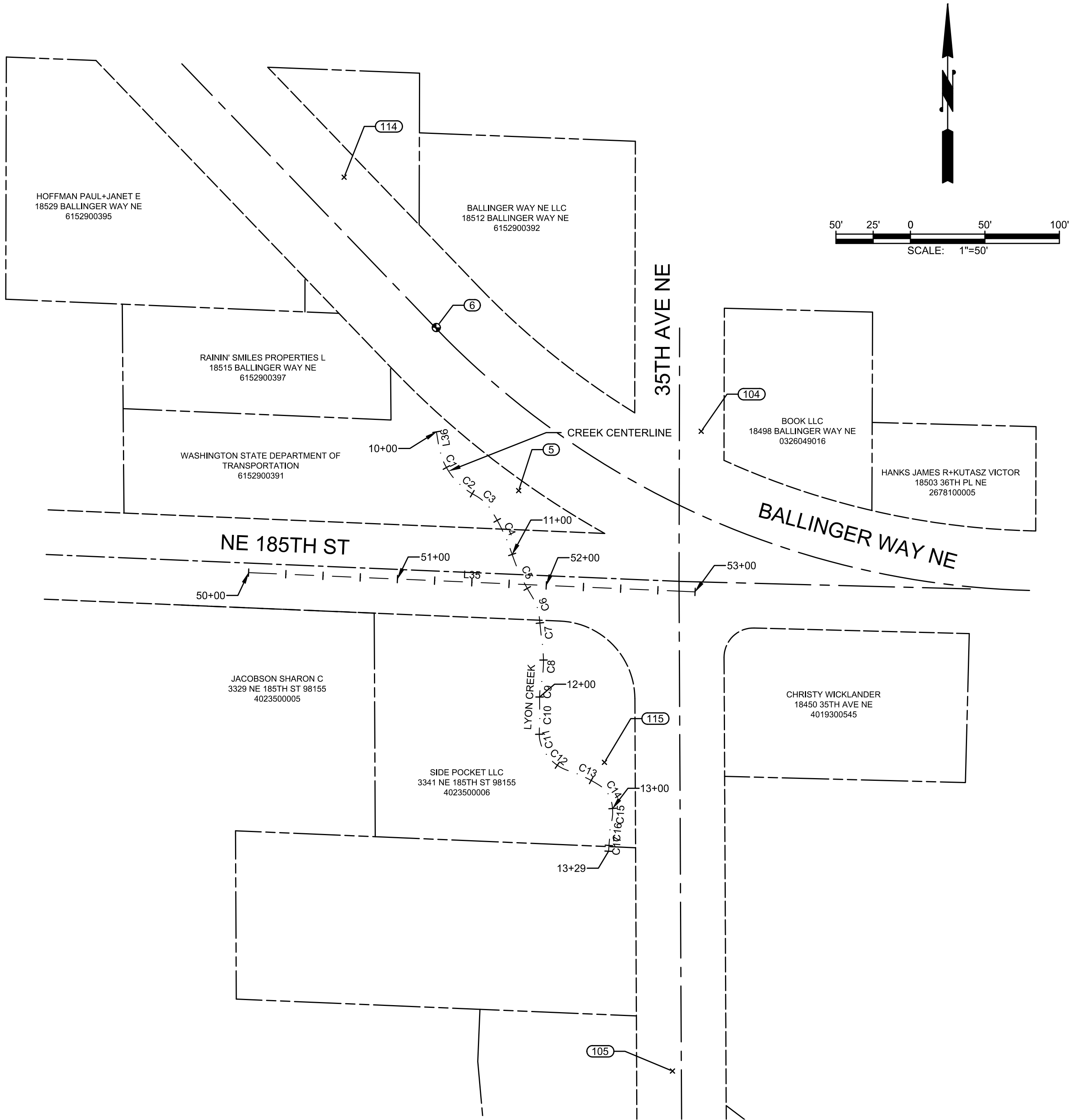
SHEET NO.	DESCRIPTION
0	COVER
1	ABBREVIATIONS, SYMBOL LEGEND, GENERAL NOTES, LOCATION AND VICINITY MAPS
2	SURVEY CONTROL & ALIGNMENT TABLES
3	EXISTING CONDITIONS & TREE INVENTORY
4	TESC & DEMO PLAN
5	TESC DETAILS
6	TESC DETAILS
7	TESC DETAILS
8	PROPOSED CULVERT PLAN & PROFILE
9	STREAM & CHANNEL SHAPING PLAN
10	CULVERT DETAILS
11	CULVERT DETAILS
12	HEADWALL RAILS
13	LWM RESTORATION PLAN
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15	FACET EXISTING CONDITIONS
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19	FACET RESTORATION DETAILS
20	FACET SOIL PREPARATION DETAILS
21	SEWER & STORM PLAN & PROFILE
22	SEWER DETAILS
23	STORMWATER & UTILITY DETAILS
24	WATER PLAN & PROFILE
25	WATER DETAILS
26	NE 185TH STREET ROAD PLAN & PROFILE
27	ROAD RESTORATION DETAILS
28	CURB RETURN
29	TRAFFIC CONTROL PLAN

SURFACE FEATURES/LANDSCAPING

EXISTING	PROPOSED	DESCRIPTION
		BUILDING
		MAIL BOX (NOTED)
		SIGN
		ROCK WALL
		MODULAR BLOCK WALL
		SHRUB
		TREE (CONIFER)
		TREE (DECIDUOUS)
		TREE (CONIFER) TO BE REMOVED
		TREE (DECIDUOUS) TO BE REMOVED
		WETLAND
		ORDINARY HIGH WATER MARK



L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\Civil\SURVEY CONTROL.dwg, 10/6/2025 5:12 PM, STEPHEN MOORE



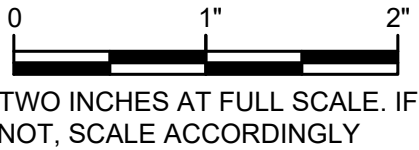
CITY OF LAKE FOREST PARK - LYON CREEK L90 CULVERT				
JOB NUMBER -19569				
HORIZONTAL DATUM: NAD83/11 WSPCS N. ZONE, GRID NORTH, MODIFIED GROUND COORD'S SCALED AT G+O 7, Avg CGF=0.99995906707				
VERTICAL DATUM: NAVD88 HOLDING WSDOT GP17522-236 (G&O #11)				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
5	281687.50	1281615.84	124.67	SFN=FOUND NAIL, LARGE MAG NAIL IN ASPHALT, SW SIDE OF NE BALLINGER WAY, SE OF AUTO SHOP SIGN.
6	281796.93	1281560.50	124.19	SFMC, CENTERLINE TURN LANE NE BALLINGER WAY, W. OF INTX. W/35TH AVE NE.
104	281727.32	1281738.37	126.06	SSNT, N. OF N'LY ADA IN ASPH. RAMP, NE COR 35TH AVE NE & NE BALLINGER WAY. 2' E. OF TBC.
105	281298.05	1281719.06	116.91	SSNT, W. SIDE OF 35TH AVE, S. OF CREEK, N. OF DRIVE WAY.
114	281897.79	1281498.64	125.98	SSNT, N SIDE BALLINGER WAY. NW OF CULVERT CROSSING IN ASPHALT PATH
115	281505.20	1281673.42	115.72	SSN=SET NAIL, 60D NAIL W/ PINK FLAGGING. 17' SW OF 30" FIR TREE, IN YARD E OF CREEK.

ALIGN - 185TH ST - CONSTRUCTION CENTERLINE ALIGNMENT												
SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING	RADIUS	TANGENT	CURVE LENGTH	DELTA
L35	50+00.00	281,632.49	1,281,434.53	53+00.00	281,619.56	1,281,734.25	300.00	S87°31'46"E				

FG CREEK CL - CONSTRUCTION CENTERLINE ALIGNMENT												
SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING	RADIUS	TANGENT	CURVE LENGTH	DELTA
L36	10+00.00	281,726.92	1,281,560.63	10+09.15	281,717.90	1,281,562.12	9.15	S9°22'24"E				
C1	10+09.15	281,717.90	1,281,562.12	10+34.94	281,694.92	1,281,573.07			45.86	13.25	25.79	32°13'21"
C2	10+34.94	281,694.92	1,281,573.07	10+51.81	281,684.55	1,281,586.26			47.27	8.53	16.87	20°26'58"
C3	10+51.81	281,684.55	1,281,586.26	10+67.80	281,673.75	1,281,597.81			30.31	8.19	15.99	30°13'49"
C4	10+67.80	281,673.75	1,281,597.81	11+00.01	281,644.66	1,281,611.45			137.75	16.18	32.21	13°23'49"
C5	11+00.01	281,644.66	1,281,611.45	11+30.55	281,617.10	1,281,624.44			128.17	15.34	30.54	13°39'14"
C6	11+30.55	281,617.10	1,281,624.44	11+47.45	281,601.23	1,281,629.82			36.25	8.61	16.90	26°43'17"
C7	11+47.45	281,601.23	1,281,629.82	11+66.59	281,582.21	1,281,631.91			595.72	9.57	19.14	1°50'26"
C8	11+66.59	281,582.21	1,281,631.91	11+91.83	281,557.12	1,281,630.74			73.42	12.75	25.24	19°41'52"
C9	11+91.83	281,557.12	1,281,630.74	12+00.31	281,548.71	1,281,629.88			36.66	4.26	8.48	13°14'56"
C10	12+00.31	281,548.71	1,281,629.88	12+24.03	281,524.99	1,281,629.65			529.01	11.86	23.72	2°34'09"
C11	12+24.03	281,524.99	1,281,629.65	12+35.96	281,513.53	1,281,632.41			22.26	6.11	11.93	30°41'49"
C12	12+35.96	281,513.53	1,281,632.41	12+58.61	281,499.47	1,281,649.48			29.95	11.90	22.65	43°20'01"
C13	12+58.61	281,499.47	1,281,649.48	12+81.50	281,489.71	1,281,670.12			87.31	11.51	22.90	15°01'28"
C14	12+81.50	281,489.71	1,281,670.12	12+97.29	281,476.89	1,281,678.52			18.89	8.39	15.78	47°52'20"
C15	12+97.29	281,476.89	1,281,678.52	13+10.50	281,463.80	1,281,677.88			31.23	6.71	13.21	24°14'23"
C16	13+10.50	281,463.80	1,281,677.88	13+20.73	281,453.69	1,281,676.82			25.84	5.18	10.23	22°41'13"
C17	13+20.73	281,453.69	1,281,676.82	13+28.90	281,445.55	1,281,676.19			112.12	4.09	8.17	4°10'30"

RIGHT-OF-WAY DISCLAIMER

THE RIGHT-OF-WAY AND/OR PROPERTY LINES SHOWN HEREON ARE BASED ON AVAILABLE INFORMATION, NOT ON A SURVEYED LOCATION AND ARE ONLY APPROXIMATE.

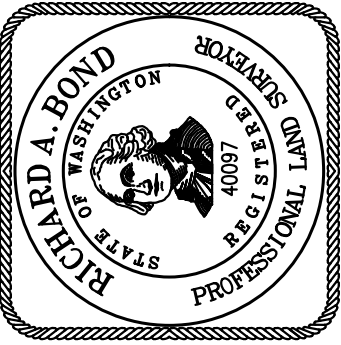




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3710 187TH STREET, NE BLDG. B, SUITE 210
ARLINGTON, WA 98223 • (360) 764-5450

DATE: OCT 2025	SCALE: NOTED	DRAWN: S.E.M.	CHECKED: R.W.K.	APPROVED: R.W.K.
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60% PLANSET		DATE	APPD
		REVISION	
		No.	



CITY OF LAKE FOREST PARK

KING COUNTY

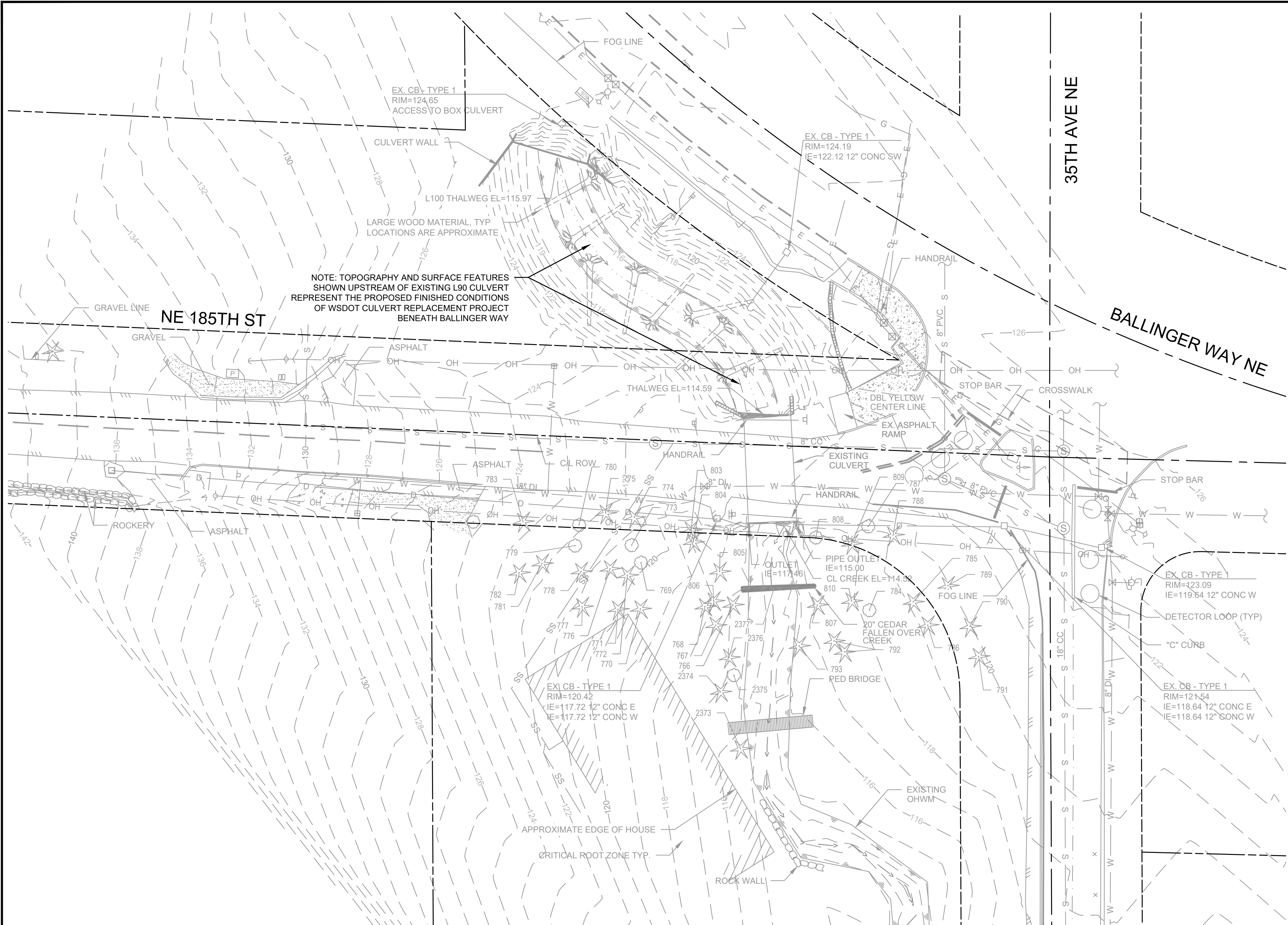
WASHINGTON

L90 CULVERT REPLACEMENT

SURVEY CONTROL & ALIGNMENT TABLES

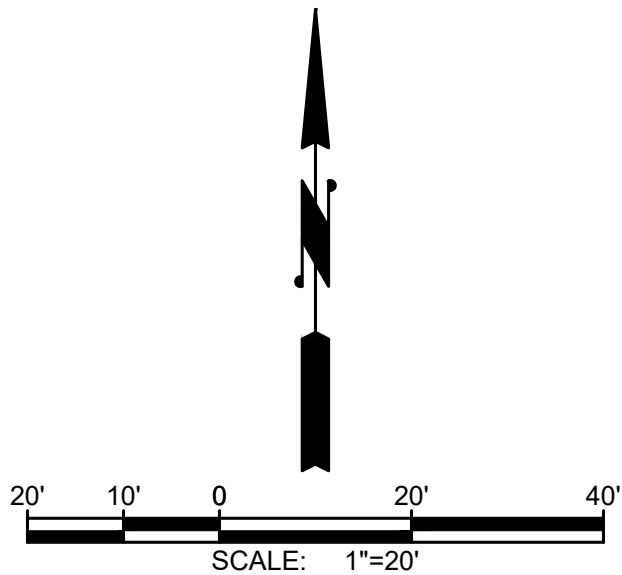
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OF: 29
JOB NO.: 19569
DWGSURVEY CONTROL

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LEGEND:

- INVENTORIED TREE
- TREE PROPOSED FOR REMOVAL
- CRITICAL ROOT ZONE (1 FOOT PER INCH TBH)

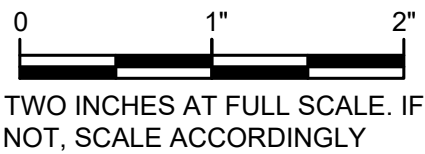


TREE INVENTORY TABLE

TAG #	TREE SPECIES	CONDITION	DBH (IN.)	REMOVAL PROPOSED
766	WESTERN RED CEDAR	3	18	REMOVE
767	WESTERN RED CEDAR	2	16	KEEP
768	WESTERN RED CEDAR	2	13	REMOVE
769	BIGLEAF MAPLE	2	30	REMOVE
770	WESTERN RED CEDAR	3	18	KEEP
771	WESTERN RED CEDAR	3	27	KEEP
772	WESTERN RED CEDAR	3	19	REMOVE
773	HORSE CHESTNUT	3	7	REMOVE
774	DOUGLAS FIR	5	10	REMOVE
775	DOUGLAS FIR	4	13	REMOVE
776	WESTERN RED CEDAR	2	25	REMOVE
777	WESTERN RED CEDAR	3	13	KEEP
778	WESTERN RED CEDAR	4	12	KEEP
779	HORSE CHESTNUT	2	7	KEEP
780	HORSE CHESTNUT	3	6	REMOVE
781	WESTERN RED CEDAR	2	30	KEEP
782	WESTERN RED CEDAR	2	26	KEEP
783	DOUGLAS FIR	4	11	KEEP
784	BIGLEAF MAPLE	2	15	REMOVE
785	WESTERN RED CEDAR	2	13	KEEP
786	WESTERN RED CEDAR	2	21	KEEP
787	HORSE CHESTNUT	3	22	REMOVE
788	WESTERN RED CEDAR	2	24	REMOVE
789	DOUGLAS FIR	3	22	KEEP
790	DOUGLAS FIR	4	11	KEEP
791	DOUGLAS FIR	2	31	KEEP
792	BLACK LOCUST (DOUBLE)	5	22	TOPPED - KEEP
793	WESTERN RED CEDAR	6	24	TOPPED - KEEP
803	DOUGLAS FIR	4	16	REMOVE
804	DOUGLAS FIR	4	11	REMOVE
805	WESTERN RED CEDAR	2	14	REMOVE
806	WESTERN RED CEDAR	3	41	LEAVE STUMP
807	WESTERN RED CEDAR	3	39	LEAVE STUMP
808	DOUGLAS FIR	4	10	REMOVE
809	DOUGLAS FIR	4	9	REMOVE
810	WESTERN HEMLOCK	3	34	REMOVE
2373	WESTERN RED CEDAR	2	35	KEEP
2374	WESTERN RED CEDAR	4	14	KEEP
2375	HORSE CHESTNUT	2	5	KEEP
2376	WESTERN RED CEDAR	2	20	KEEP
2377	WESTERN RED CEDAR	FALLEN	20	REMOVE

TREE PROTECTION MEASURES:

- TREE PROTECTION ZONE (TPZ) FENCING SHALL BE INSTALLED PER PLANS AND MUST REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT. LAMINATED SIGNS SHALL BE INSTALLED AT MINIMUM 10FT INTERVALS ALONG TPZ FENCING AND SHALL STATE "TREE PROTECTION ZONE - FENCING SHALL NOT BE MOVED WITHOUT APPROVAL FROM CITY ARBORIST AND SHALL REMAIN FOR THE DURATION OF THE PROJECT. NO HEAVY EQUIPMENT, PARKING, MATERIALS STORAGE, OR DUMPING OF SOIL OR OTHER MATERIALS IS ALLOWED WITHIN THE TPZ." TPZ FENCING SHALL BE 6FT TALL CHAIN LINK ON PIER BLOCKS UNLESS THIS IS NOT POSSIBLE DUE TO UNFAVORABLE SITE CONDITIONS, WITH APPROVAL BY CITY ARBORIST. THEN MINIMUM 4' TALL ORANGE POLYETHYLENE SHALL BE USED. INSPECTION OF TREE PROTECTION FENCING BY CITY ARBORIST SHALL BE REQUIRED PRIOR TO TREE REMOVAL AND LAND DISTURBANCE. APPLICANT SHALL CALL IN FOR INSPECTION AT (206) 957-2804.
- TRUNK WRAP: TRUNK WRAP SHALL BE INSTALLED ON ALL TREES LOCATED WITHIN 10 FEET OF PROPOSED CONSTRUCTION ACTIVITIES. WRAP SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES AND SHALL REMAIN INTACT UNTIL PROJECT COMPLETION. IF THE DURATION OF CONSTRUCTION EXTENDS BEYOND 6 MONTHS, TRUNK WRAP SHOULD BE MAINTAINED BY PROJECT ARBORIST BI-ANNUALLY.
- ALTERNATIVE EXCAVATION METHODS: THE FOLLOWING ARE CONSIDERED ALTERNATIVE METHODS OF EXCAVATION THAT SHALL BE USED, INSTEAD OF HEAVY EQUIPMENT, WITHIN THE ROOTZONES OF PROTECTED TREES: AIR EXCAVATION (AIR-SPADE OR AIR-KNIFE), HYDRO EXCAVATION (WATER JET), HAND EXCAVATION.
- APPLY ARBORIST WOOD CHIP MULCH: WHERE CONSTRUCTION ACCESS IS REQUIRED WITHIN DRIPLINES (CRITICAL ROOT ZONES), 5/8" PLYWOOD SHEETS SHALL BE PLACED ON TOP OF 6-INCHES OF WOOD CHIP MULCH TO PROTECT ROOT ZONE AREAS FROM EXCESSIVE COMPACTION. PRIOR TO PLANTING PREPARATION, THIS MULCH SHOULD BE REMOVED.
- MINIMIZE INJURY: WHEN TREE ROOTS MUST BE REMOVED, CUT ROOTS CLEANLY USING A SHARP SAW OR PRUNERS. DO NOT RIP OR CUT TREE ROOTS WITH HEAVY EQUIPMENT. ROOTS EXPOSED FOR MORE THAN 12 HOUR SHALL BE COVERED WITH SOIL OR MOIST BURLAP.
- PRE AND POST CONSTRUCTION MONITORING: THE PROJECT ARBORIST SHALL BE PRESENT ON-SITE DURING CONSTRUCTION ACTIVITIES WITHIN THE CRITICAL ROOT ZONES OF RETAINED TREES TO MONITOR TREE PROTECTION, ASSIST WITH CHANGES IN THE FIELD, AND DOCUMENT CONSTRUCTION IMPACTS. ALL TO ENSURE THE PROPOSED DEVELOPMENT ACTIVITIES COMPLY WITH THE LFPMC. THIS WILL BE DOCUMENTED IN WEEKLY MEMOS PROVIDED TO THE CITY OF LAKE FOREST PARK ARBORIST.



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DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

60% PLANSET

REVISION

DATE

No.

CITY OF LAKE FOREST PARK
KING COUNTY
WASHINGTON

L90 CULVERT REPLACEMENT
EXISTING CONDITIONS AND TREE INVENTORY

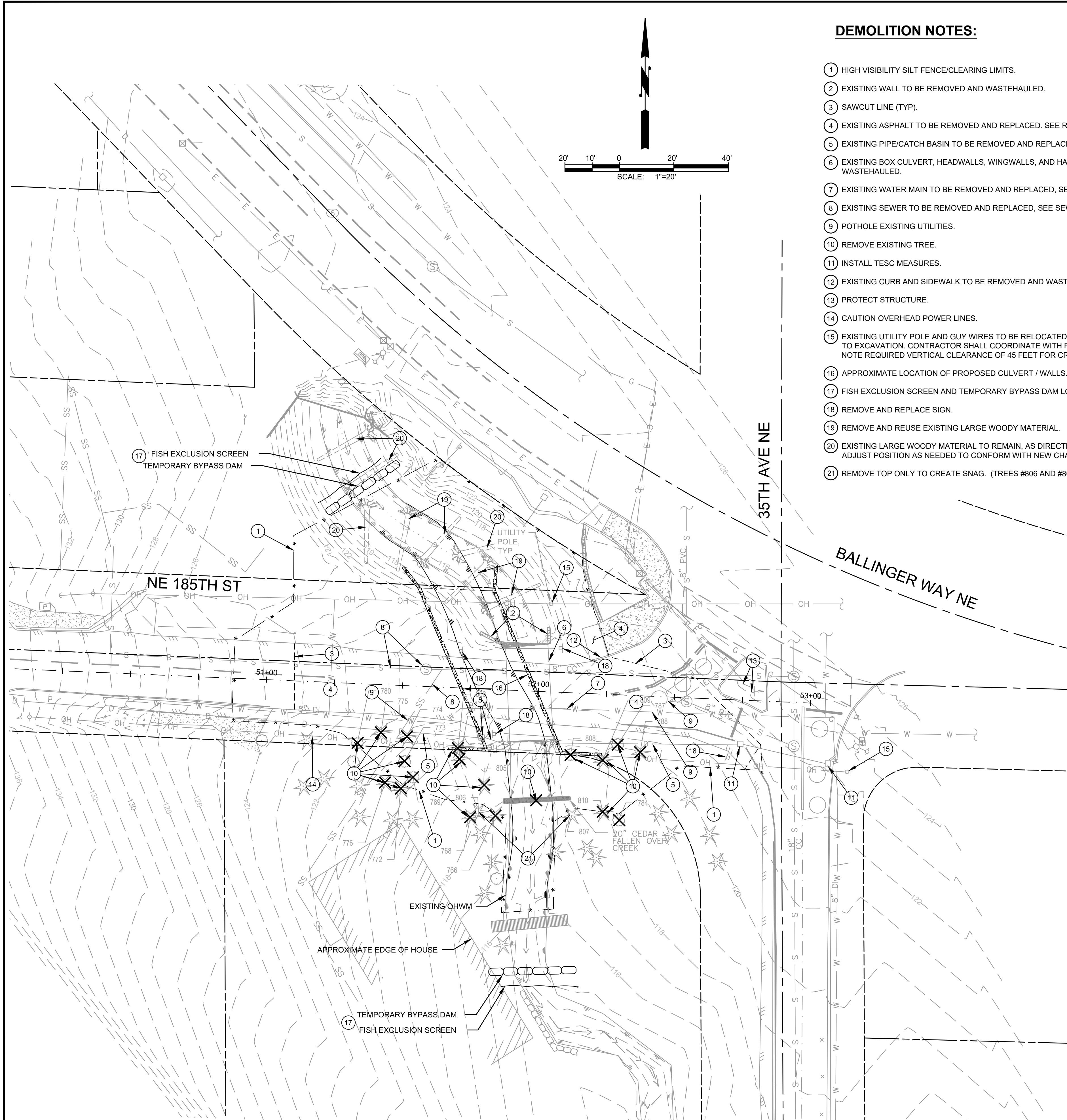
SHEET: **3**

OF: **29**

JOB NO.: 19569

DWG: TREE INVENTORY

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\02 PLANSET\Civil\TESC.dwg, 10/6/2025 5:12 PM, STEPHEN MOORE



DEMOLITION NOTES:

- 1 HIGH VISIBILITY SILT FENCE/CLEARING LIMITS.
- 2 EXISTING WALL TO BE REMOVED AND WASTEHAULED.
- 3 SAWCUT LINE (TYP).
- 4 EXISTING ASPHALT TO BE REMOVED AND REPLACED. SEE RESTORATION PLANS.
- 5 EXISTING PIPE/CATCH BASIN TO BE REMOVED AND REPLACED. SEE STORM PLAN.
- 6 EXISTING BOX CULVERT, HEADWALLS, WINGWALLS, AND HANDRAILS TO BE REMOVED AND WASTEHAULED.
- 7 EXISTING WATER MAIN TO BE REMOVED AND REPLACED, SEE WATER PLAN.
- 8 EXISTING SEWER TO BE REMOVED AND REPLACED, SEE SEWER PLAN.
- 9 POTHOLE EXISTING UTILITIES.
- 10 REMOVE EXISTING TREE.
- 11 INSTALL TESC MEASURES.
- 12 EXISTING CURB AND SIDEWALK TO BE REMOVED AND WASTEHAULED.
- 13 PROTECT STRUCTURE.
- 14 CAUTION OVERHEAD POWER LINES.
- 15 EXISTING UTILITY POLE AND GUY WIRES TO BE RELOCATED BY OTHERS PRIOR TO EXCAVATION. CONTRACTOR SHALL COORDINATE WITH POWER AND PHONE UTILITIES. NOTE REQUIRED VERTICAL CLEARANCE OF 45 FEET FOR CRANE ACCESS/OPERATION.
- 16 APPROXIMATE LOCATION OF PROPOSED CULVERT / WALLS.
- 17 FISH EXCLUSION SCREEN AND TEMPORARY BYPASS DAM LOCATIONS ARE APPROXIMATE.
- 18 REMOVE AND REPLACE SIGN.
- 19 REMOVE AND REUSE EXISTING LARGE WOODY MATERIAL.
- 20 EXISTING LARGE WOODY MATERIAL TO REMAIN, AS DIRECTED BY ENGINEER. ADJUST POSITION AS NEEDED TO CONFORM WITH NEW CHANNEL.
- 21 REMOVE TOP ONLY TO CREATE SNAG. (TREES #806 AND #807).

EROSION/SEDIMENTATION CONTROL NOTES

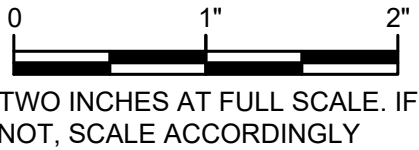
- 1. CONTRACTOR SHALL SUBMIT TEMPORARY WATER POLLUTION/EROSION CONTROL PLAN PER THE CONTRACT SPECIFICATIONS.
- 2. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION SHALL BE OBSERVED DURING CONSTRUCTION. TREE PROTECTION MUST BE INSTALLED PRIOR TO CLEARING.
- 3. ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES MUST BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES. OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND THE WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.
- 5. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF THE SEDIMENT. ALL CATCH BASINS, CONVEYANCE LINES AND DITCHES SHALL BE CLEANED PRIOR TO PAVING.
- 6. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE TOWN RIGHT-OF-WAY OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.
- 7. TEMPORARY EROSION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND MAINTAINED WITHIN 24 HOURS FOLLOWING A STORM EVENT. SEDIMENT SHALL BE REMOVED TO INSURE THE FACILITIES WILL FUNCTION PROPERLY. THE FACILITIES SHALL BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- 8. DISTURBED SOIL SHALL BE STABILIZED PER THE SPECIFICATIONS.

FISH EXCLUSION NOTES

- 1. IF PRACTICABLE, ALLOW LISTED FISH SPECIES TO MIGRATE OUT OF THE WORK AREA OR REMOVE FISH BEFORE DEWATERING; OTHERWISE REMOVE FISH FROM AN EXCLUSION AREA AS IT IS SLOWLY DEWATERED WITH METHODS SUCH AS HAND OR DIP-NETS, SEINING, OR TRAPPING WITH MINNOW TRAPS (OR GEE-MINNOW TRAPS).
- 2. FISH CAPTURE WILL BE SUPERVISED BY A QUALIFIED FISHERIES BIOLOGIST, WITH EXPERIENCE IN WORK AREA ISOLATION AND COMPETENT TO ENSURE THE SAFE HANDLING OF ALL FISH.
- 3. CONDUCT FISH CAPTURE ACTIVITIES DURING PERIODS OF THE DAY WITH THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE, NORMALLY EARLY IN THE MORNING TO MINIMIZE STRESS AND INJURY OF SPECIES PRESENT.
- 4. MONITOR THE NETS FREQUENTLY ENOUGH TO ENSURE THEY STAY SECURED TO THE BANKS AND FREE OF ORGANIC ACCUMULATION.
- 5. ELECTROFISHING WILL BE USED DURING THE COOLEST TIME OF DAY, ONLY AFTER OTHER MEANS OF FISH CAPTURE ARE DETERMINED TO BE NOT FEASIBLE OR INEFFECTIVE.

TEMPORARY STREAM BYPASS NOTES

- 1. DEWATER THE SHORTEST LINEAR EXTENT OF WORK AREA PRACTICABLE, UNLESS WETTED IN- STREAM WORK IS DEEMED TO BE MINIMALLY HARMFUL TO FISH, AND IS BENEFICIAL TO OTHER AQUATIC SPECIES.
- 2. USE A COFFER DAM AND A BY-PASS CULVERT OR PIPE, OR A LINED, NON-ERODIBLE DIVERSION DITCH TO DIVERT FLOW AROUND THE DEWATERED AREA. DISSIPATE FLOW ENERGY TO PREVENT DAMAGE TO RIPARIAN VEGETATION OR STREAM CHANNEL AND PROVIDE FOR SAFE DOWNSTREAM REENTRY OF FISH, PREFERABLY INTO POOL HABITAT WITH COVER.
- 3. WHERE GRAVITY FEED IS NOT POSSIBLE, PUMP WATER FROM THE WORK SITE TO AVOID REWATERING AND TO SUSTAIN STREAM FLOW. MAINTAIN A FISH SCREEN ON THE PUMP INTAKE TO AVOID JUVENILE FISH ENTRAINMENT.
- 4. PUMP SEEPAGE WATER TO A TEMPORARY STORAGE AND TREATMENT SITE, OR INTO UPLAND AREAS, TO ALLOW WATER TO PERCOLATE THROUGH SOIL OR TO FILTER THROUGH VEGETATION BEFORE REENTERING THE STREAM CHANNEL WITH A TREATMENT SYSTEM COMPRISED OF EITHER A HAY BALE BASIN OR OTHER SEDIMENT CONTROL DEVICE.
- 5. MONITOR BELOW THE CONSTRUCTION SITE TO PREVENT STRANDING OF AQUATIC ORGANISMS.
- 6. WHEN CONSTRUCTION IS COMPLETE, RE-WATER THE CONSTRUCTION SITE SLOWLY TO PREVENT LOSS OF SURFACE FLOW AND TO PREVENT A SUDDEN INCREASE IN STREAM TURBIDITY.
- 7. WHEN A PUMP IS USED TO DEWATER THE ISOLATION AREA AND ESA-LISTED FISH MAY BE PRESENT, A FISH SCREEN WILL BE USED THAT MEET THE MOST CURRENT VERSION OF NMFS'S FISH SCREEN CRITERIA (NMFS 2011A)

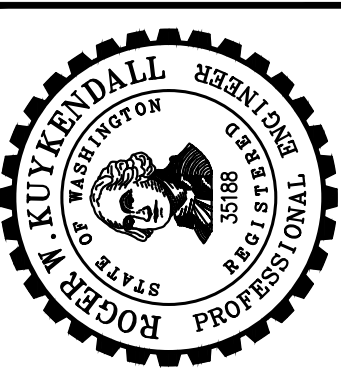




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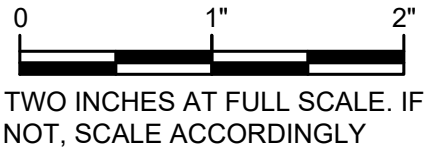
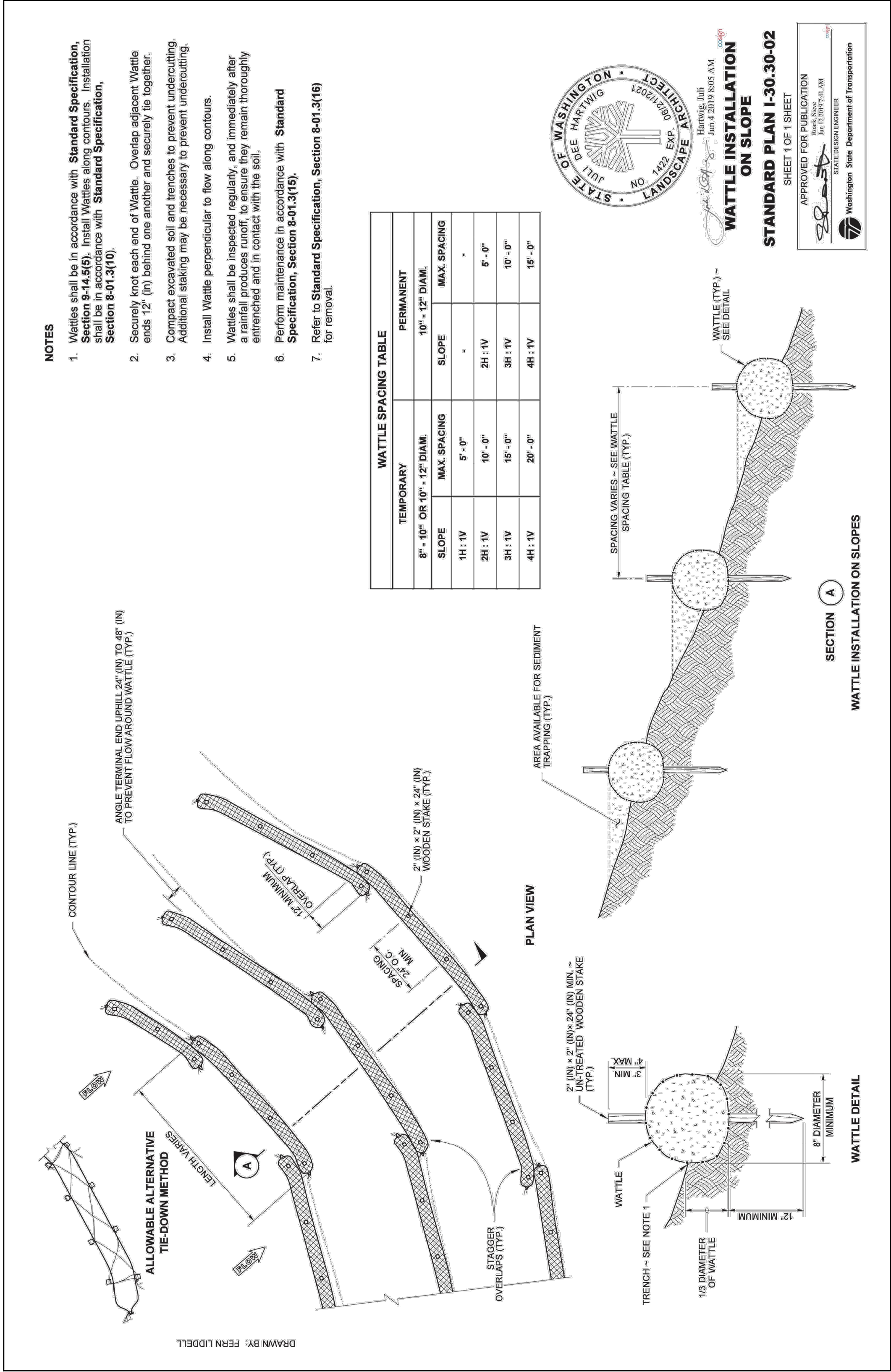
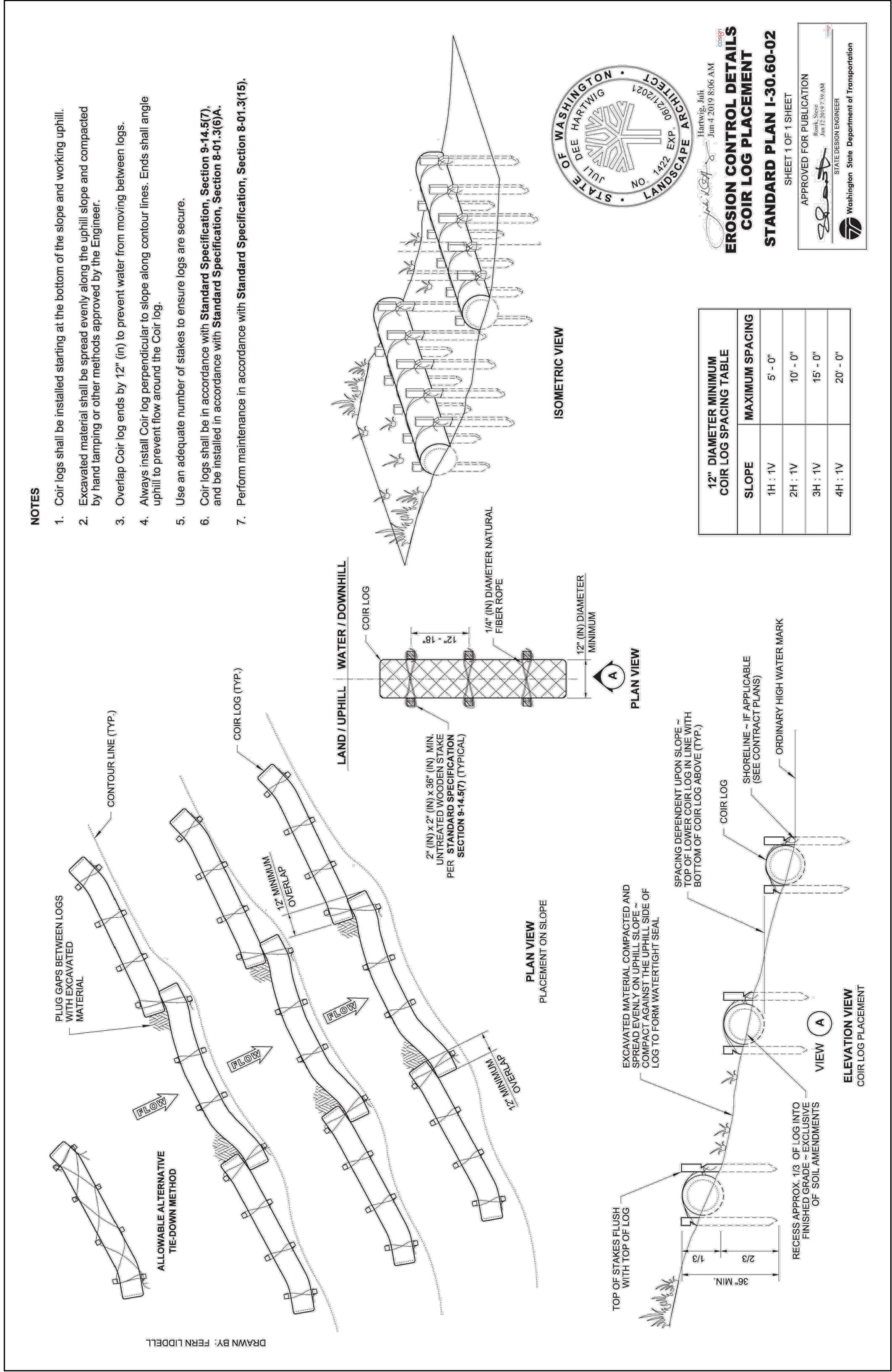
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CHECKED:	R.W.K.
APPROVED:	R.W.K.

	APPD
	DATE
60% PLANSET	REVISION
	No.



CITY OF LAKE FOREST PARK
KING COUNTY
WASHINGTON
L90 CULVERT REPLACEMENT
TESC & DEMO PLAN

SHEET:	4
OF:	29
JOB NO.:	19569
DWG:TESC	



TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
TESC DETAILS



No.	REVISION	DATE	APPD
60% PLANSET			

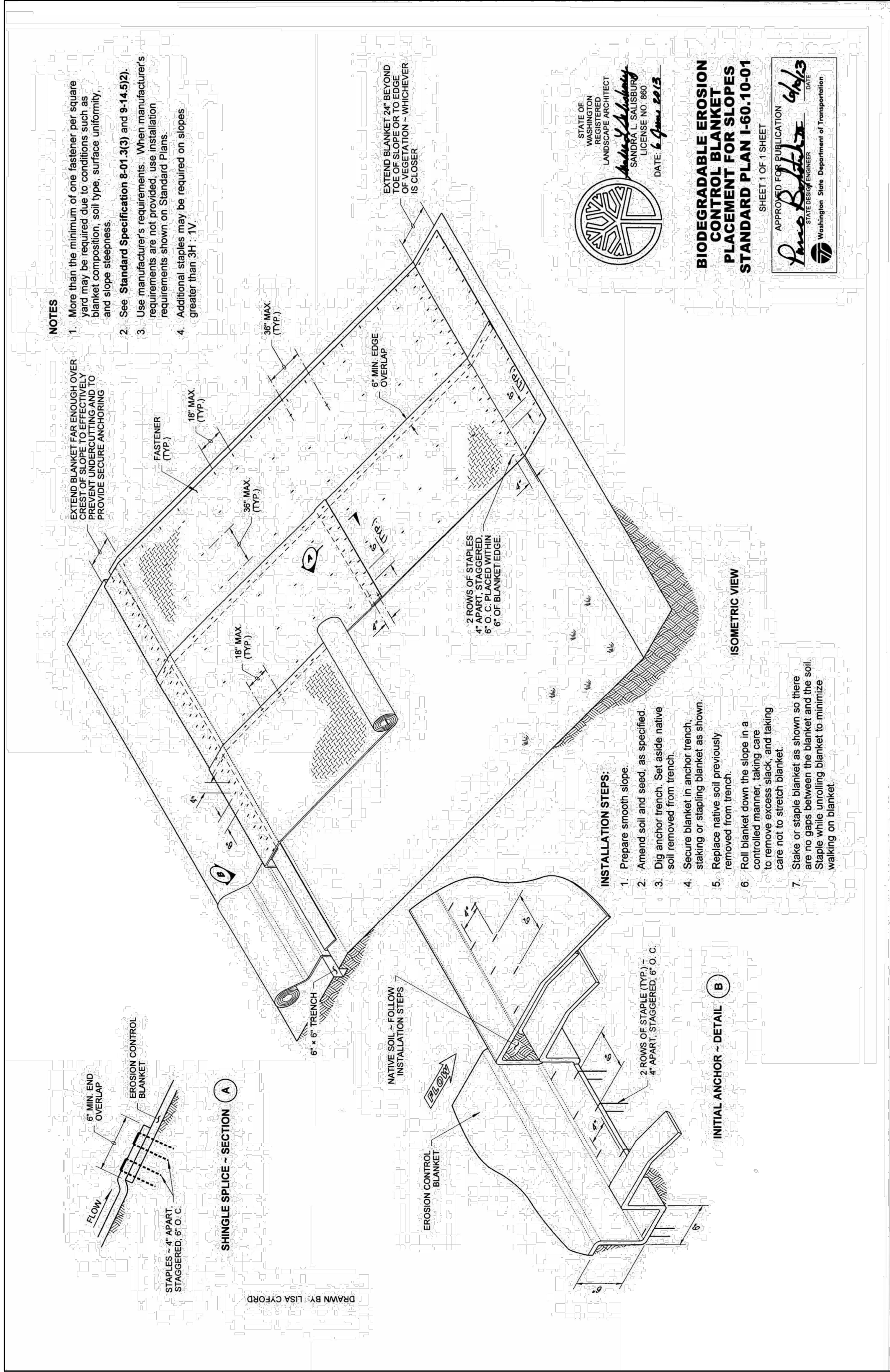
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DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

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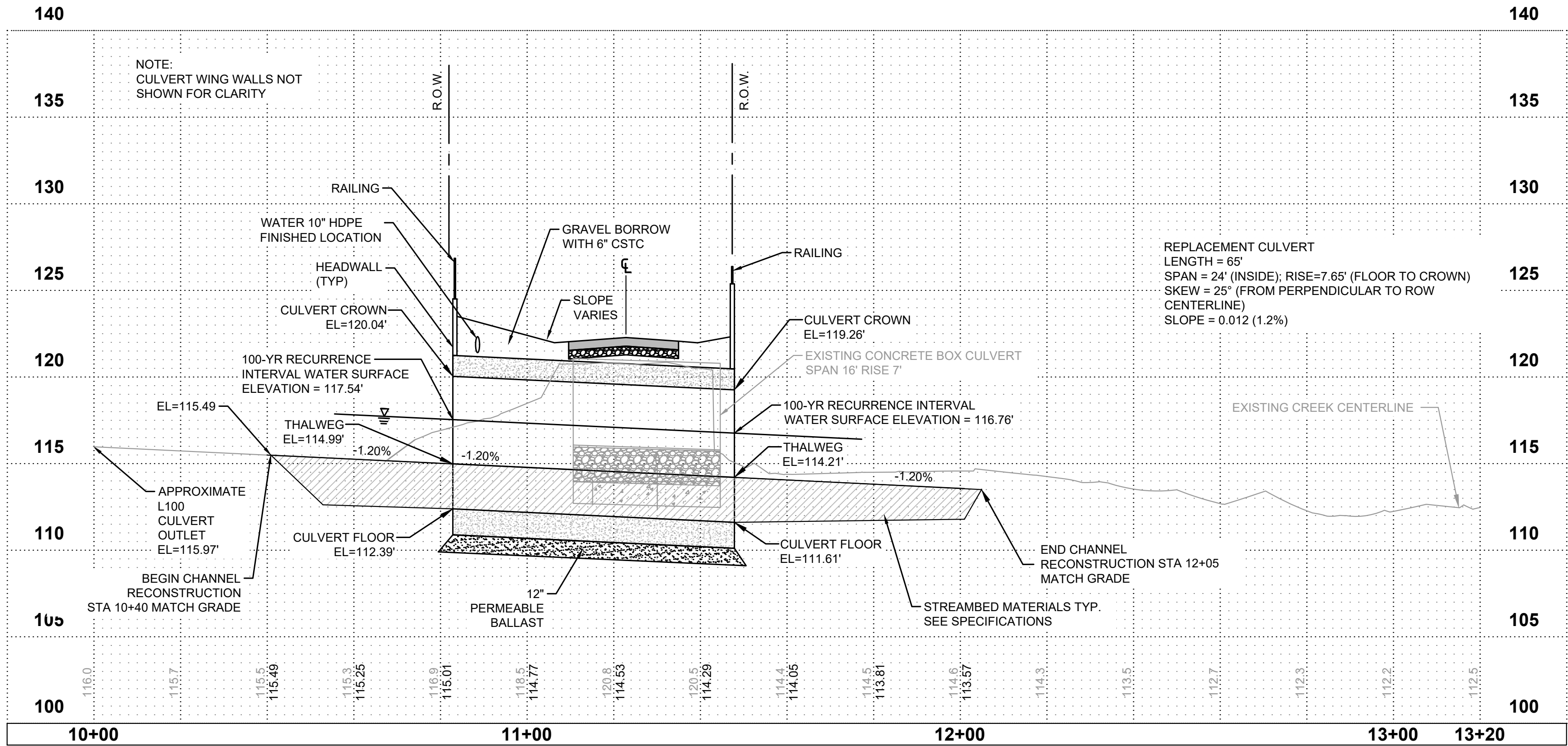
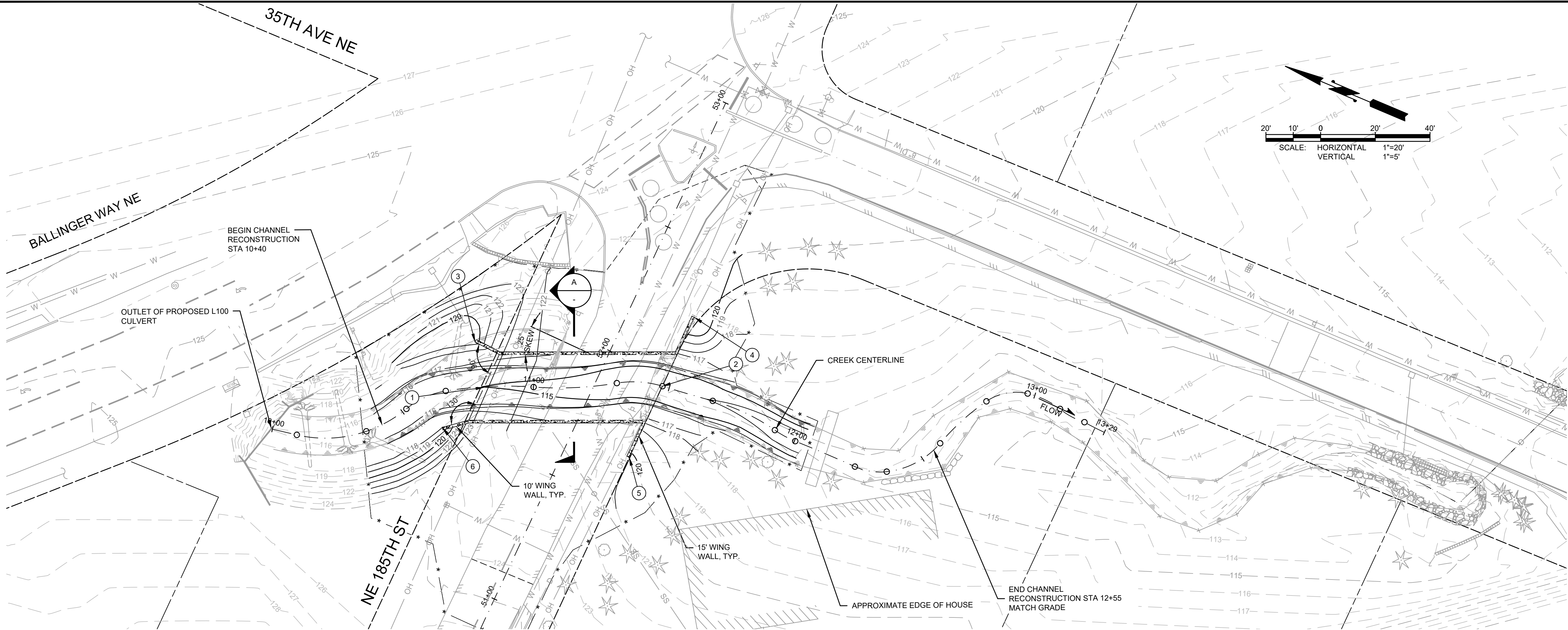
SHEET: **6**
OF: **29**

JOB NO.: 19569
DWG:TESC DETAILS



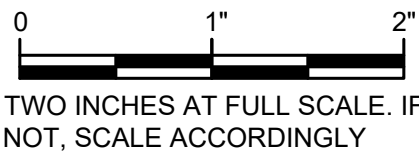
CITY OF LAKE FOREST PARK KING COUNTY WASHINGTON L90 CULVERT REPLACEMENT TESC DETAILS		60% PLANSET		DATE: OCT 2025 SCALE: NOTED DRAWN: S.E.M. CHECKED: R.W.K. APPROVED: R.W.K.		Gray & Osborne, Inc. CONSULTING ENGINEERS 3710 183TH STREET, NE BLDG. B, SUITE 210 ARLINGTON, WA 98223 • (360) 654-5450	
SHEET: 7 OF: 29		No.		REVISION		DATE	
JOB NO.: 19569		DATE		APPD			
DWG:TESC DETAILS							

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CULVERT LOCATION TABLE

NUMBER	NORTHING	EASTING	NOTES
①	N=281661.336	E=1281604.386	MIDPOINT OF CULVERT INLET
②	N=281601.310	E=1281629.326	MIDPOINT OF CULVERT OUTLET
③	N=281670.734	E=1281618.478	INSIDE CORNER OF WING WALL
④	N=281600.104	E=1281657.527	INSIDE CORNER OF WING WALL
⑤	N=281602.475	E=1281601.147	INSIDE CORNER OF WING WALL
⑥	N=281669.829	E=1281585.076	INSIDE CORNER OF WING WALL



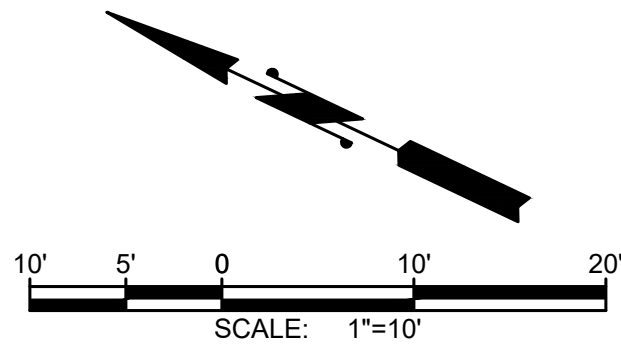
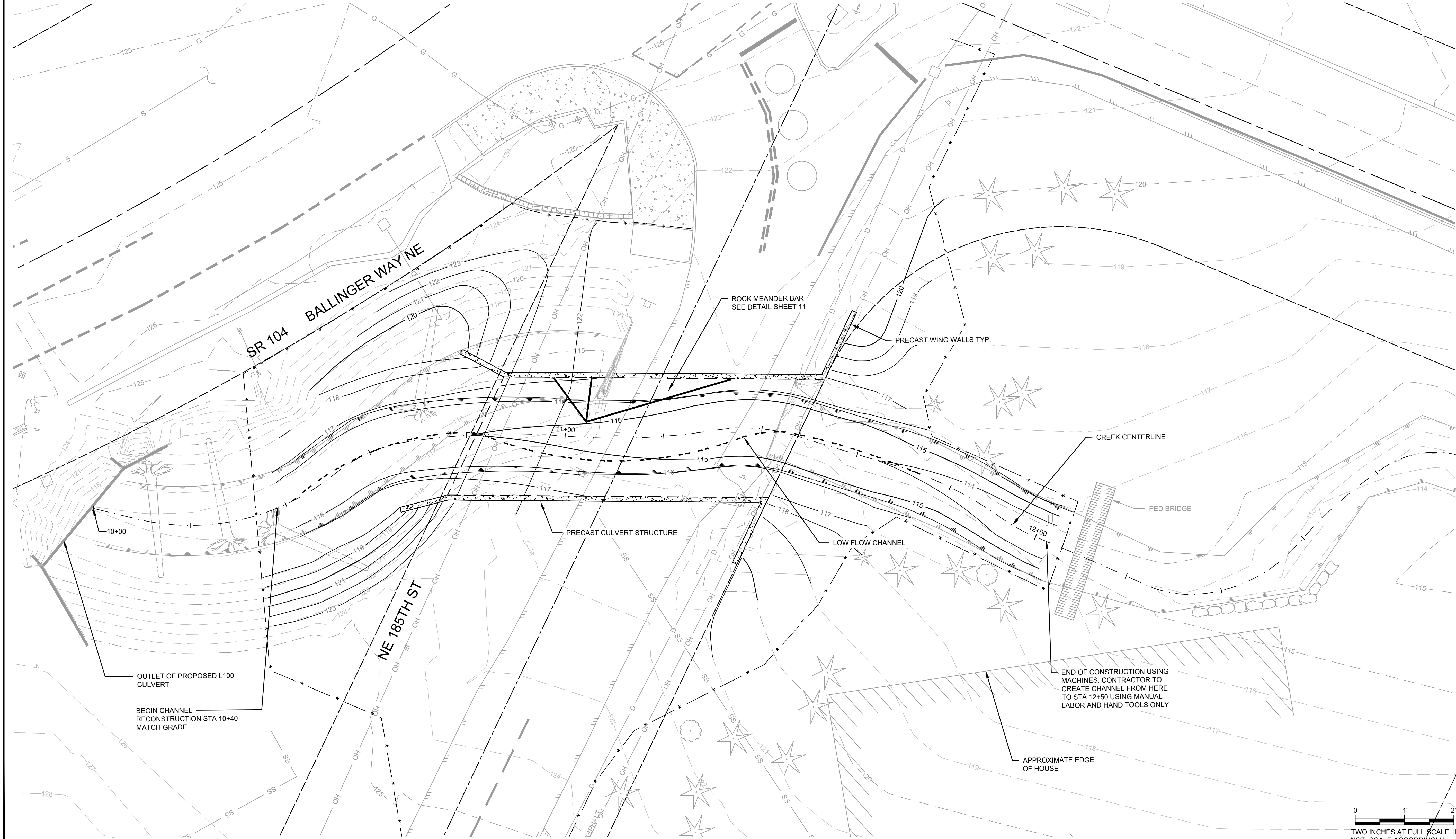
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60% PLANSET				DATE APPD
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60% PLANSET				No.

CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
PROPOSED CULVERT PLAN & PROFILE

SHEET: 8
OF: 29
JOB NO.: 19569
DWGPRO PLN & PROFILE

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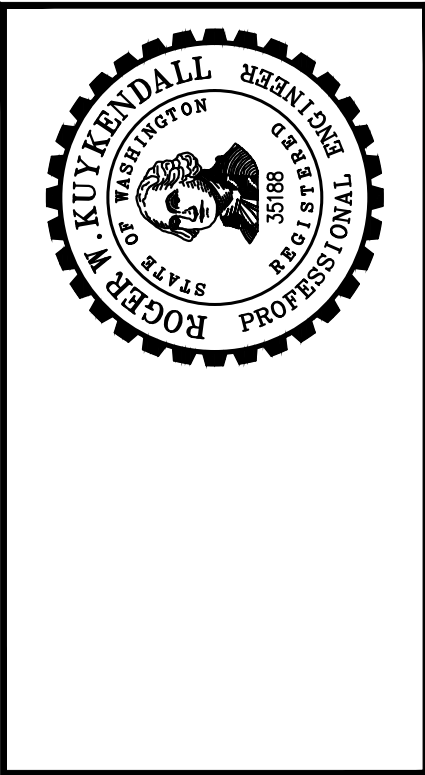
- NOTES:**
1. CONSTRUCT AS SHOWN ON PLAN SHEETS.
 2. .



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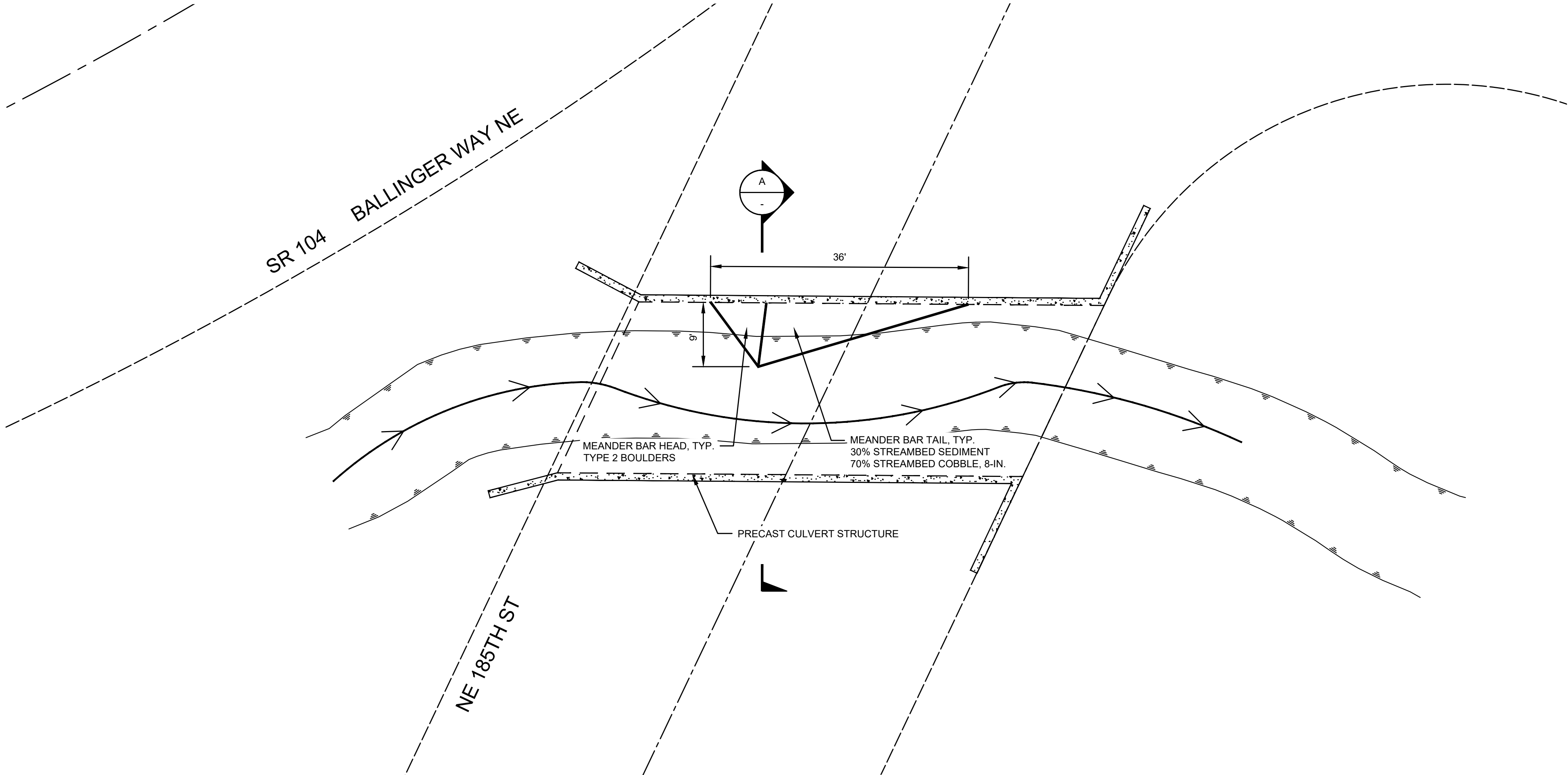
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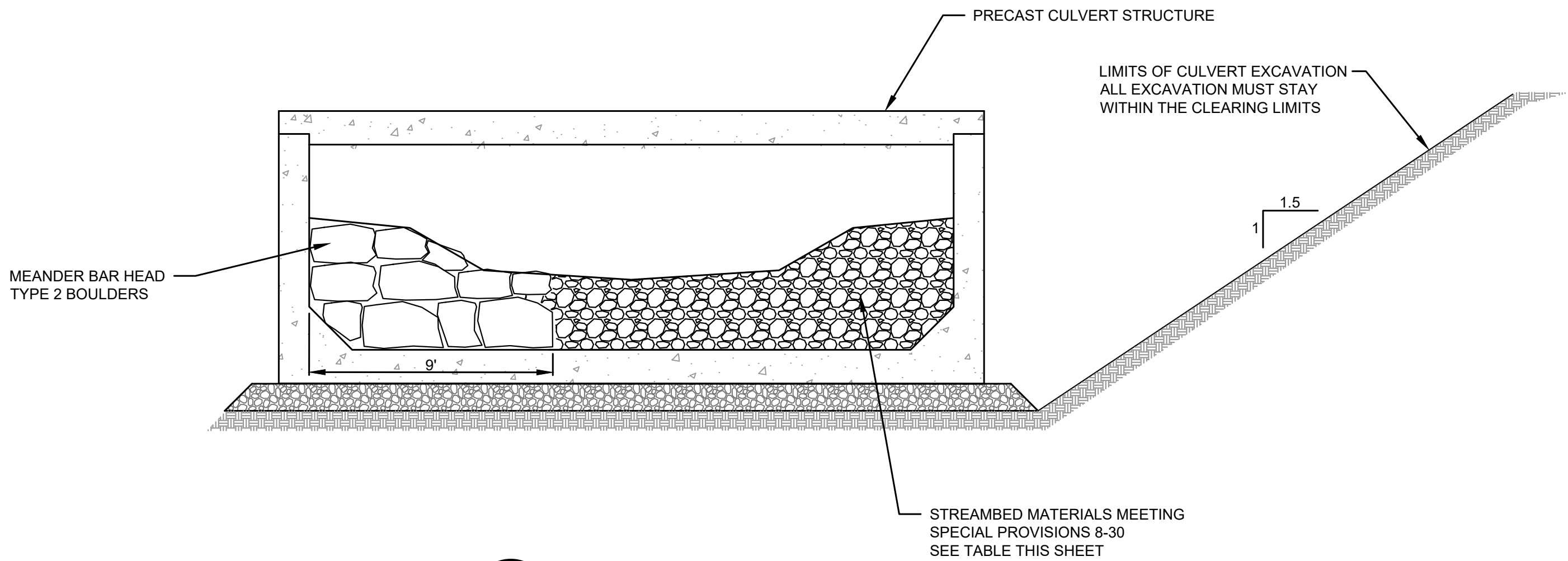
CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
STREAM & CHANNEL SHAPING PLAN

SHEET: 9
OF: 29
JOB NO.: 19569
DWG: SHAPING PLAN

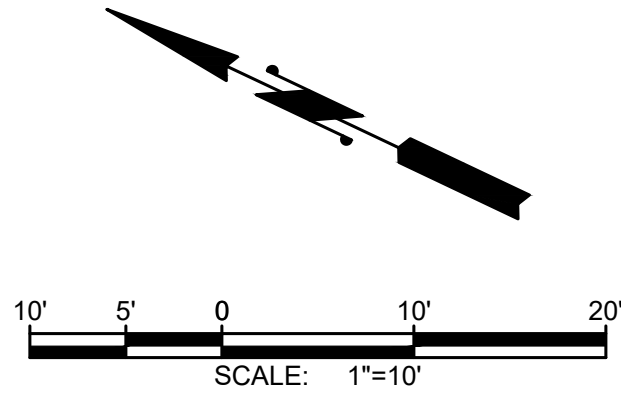
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MEANDER BAR DETAIL PLAN VIEW



SECTION A
SCALE: NTS



NOTES:

BURIED ROCK MEANDER BARS

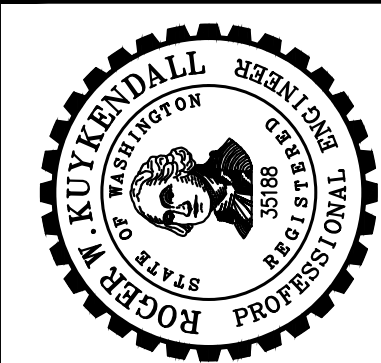
1. CONSTRUCT AS SHOWN ON PLAN SHEETS.
2. BAR SECTION TO BE ORIENTED AS SHOWN
3. BAR LENGTH SHALL BE 36 FT MEASURED ALONG ITS CENTER LINE.
4. BAR WIDTH ON TOP SHALL BE 9 FEET.
5. BAR PROFILE TO BE NO GREATER THAN 6" BELOW DESIGN CHANNEL SECTION IN HEIGHT AND SHALL NOT EXTEND HIGHER THAN THE CHANNEL PROFILE.
6. BAR MATERIAL COMPOSITION SHALL BE WELL-GRADED STREAM BED SEDIMENT, 8" COBBLES, TYPE 2 BOULDERS. HAND PLACE BOULDERS TO FORM SPINE. BED, FILL AND COMPACT WITH STREAMBED SEDIMENT. SHAPE WITH 1 PART STREAMBED SEDIMENT AND 1 PART 8" COBBLES.
7. STREAMBED MATERIALS TO BE WELL BLENDED AND PLACED IN LAYERS, SANDED AND WATERED IN ACCORDANCE WITH SPECIFICATIONS 8-30.

WSDOT 9-03.11 STREAMBED AGGREGATES SPEC	PROPOSED GRADATION (PERCENT OF TOTAL)
STREAMBED SEDIMENT	15
STREAMBED FINE SEDIMENT	0
STREAMBED SAND	5
4" COBBLES	60
6" COBBLES	10
8" COBBLES	10
10" COBBLES	0
12" COBBLES	0
STREAMBED BOULDER, TYPE 1	0
STREAMBED BOULDER, TYPE 1	0

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

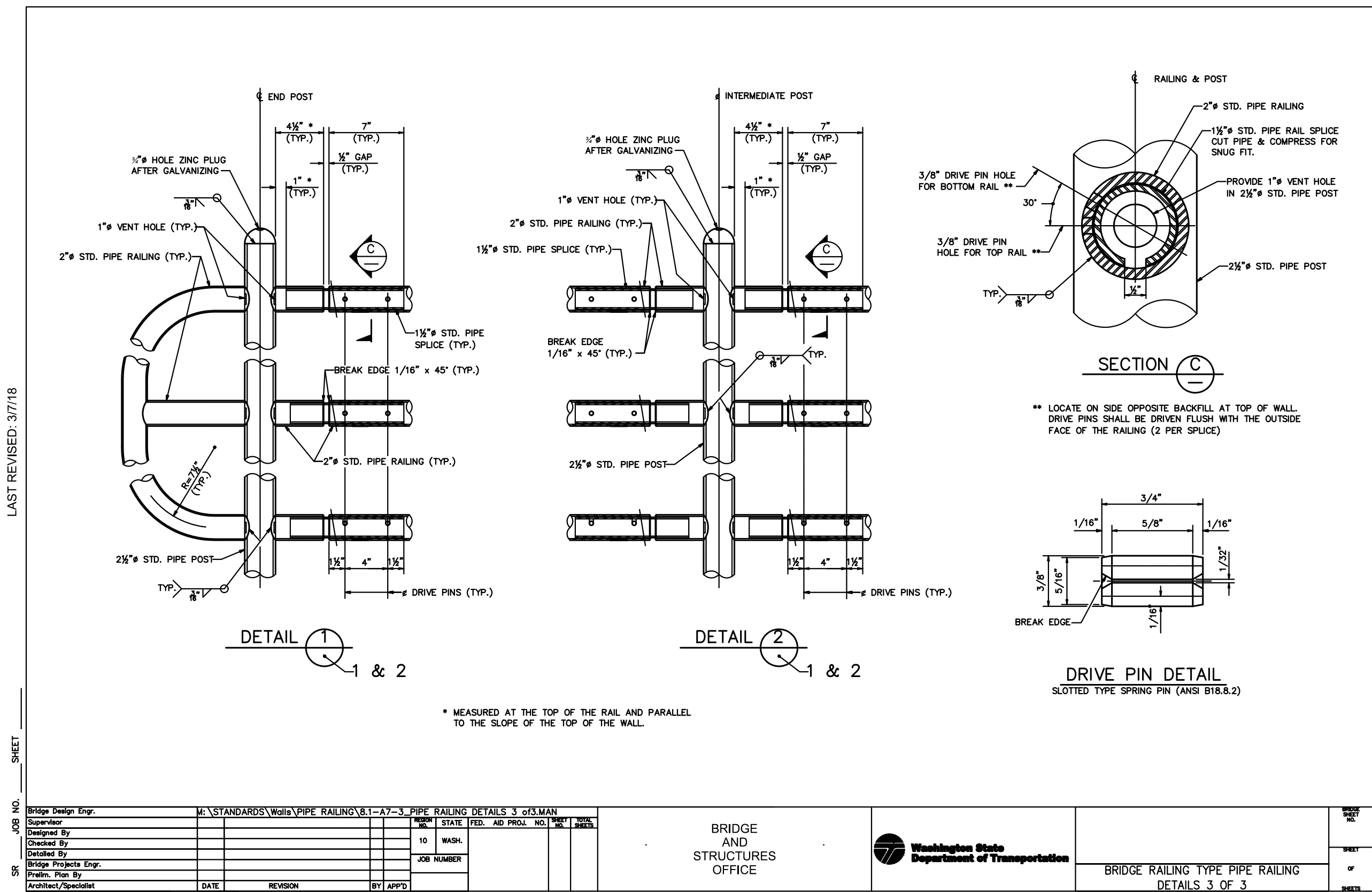
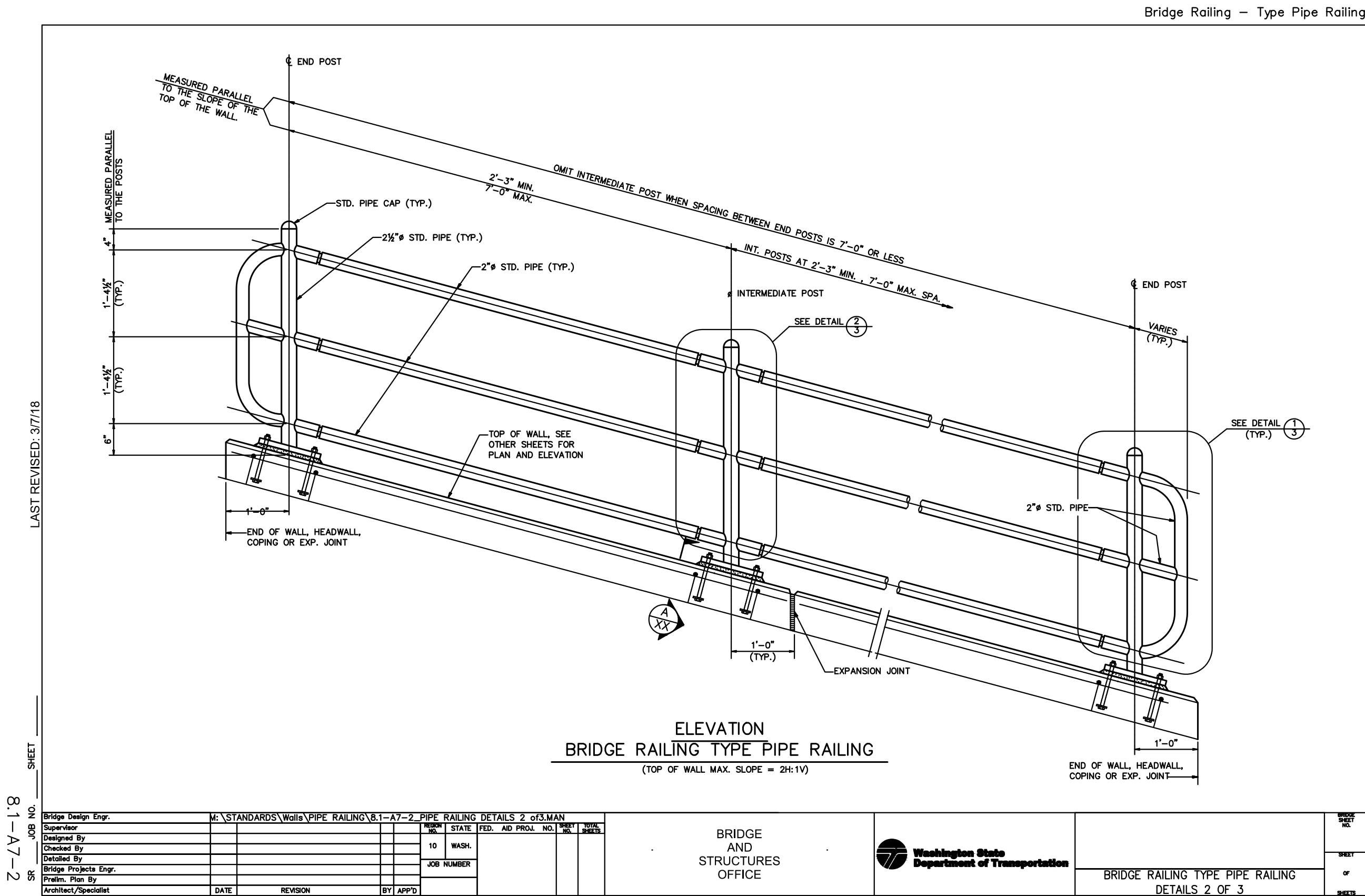
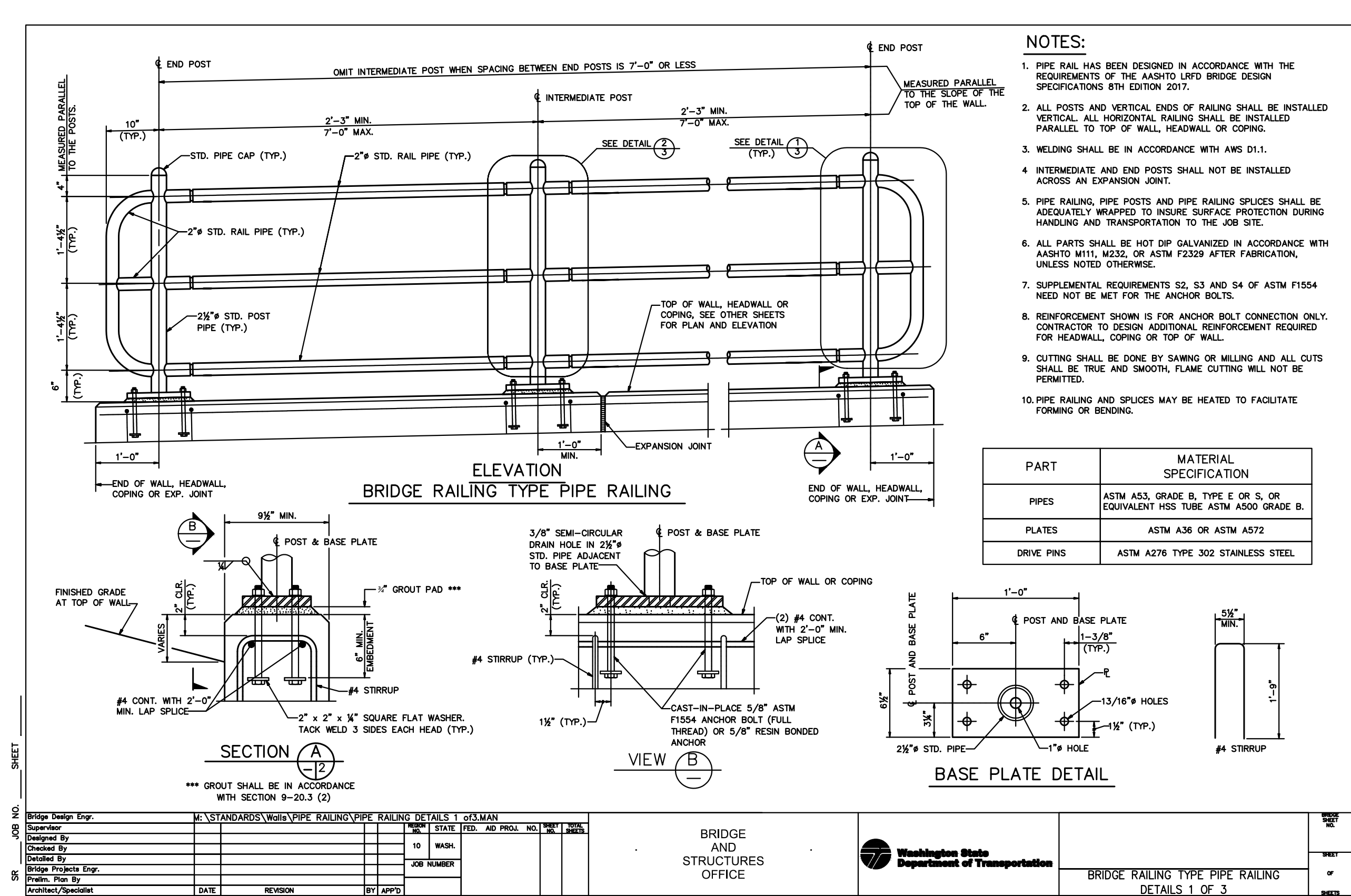
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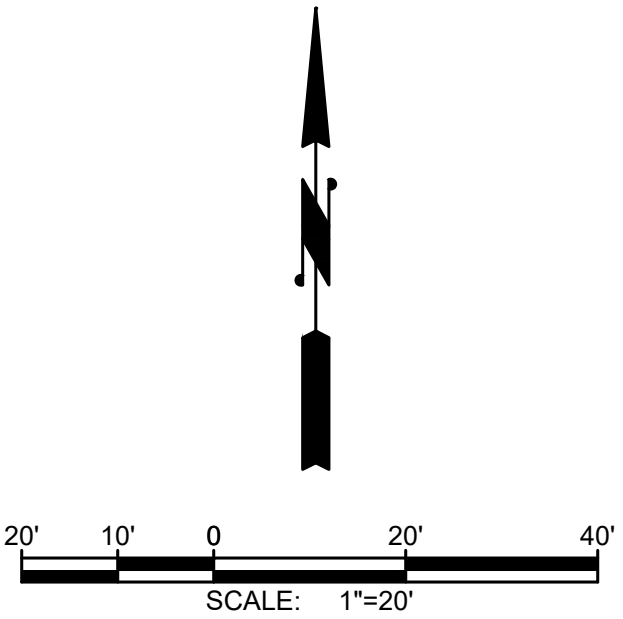
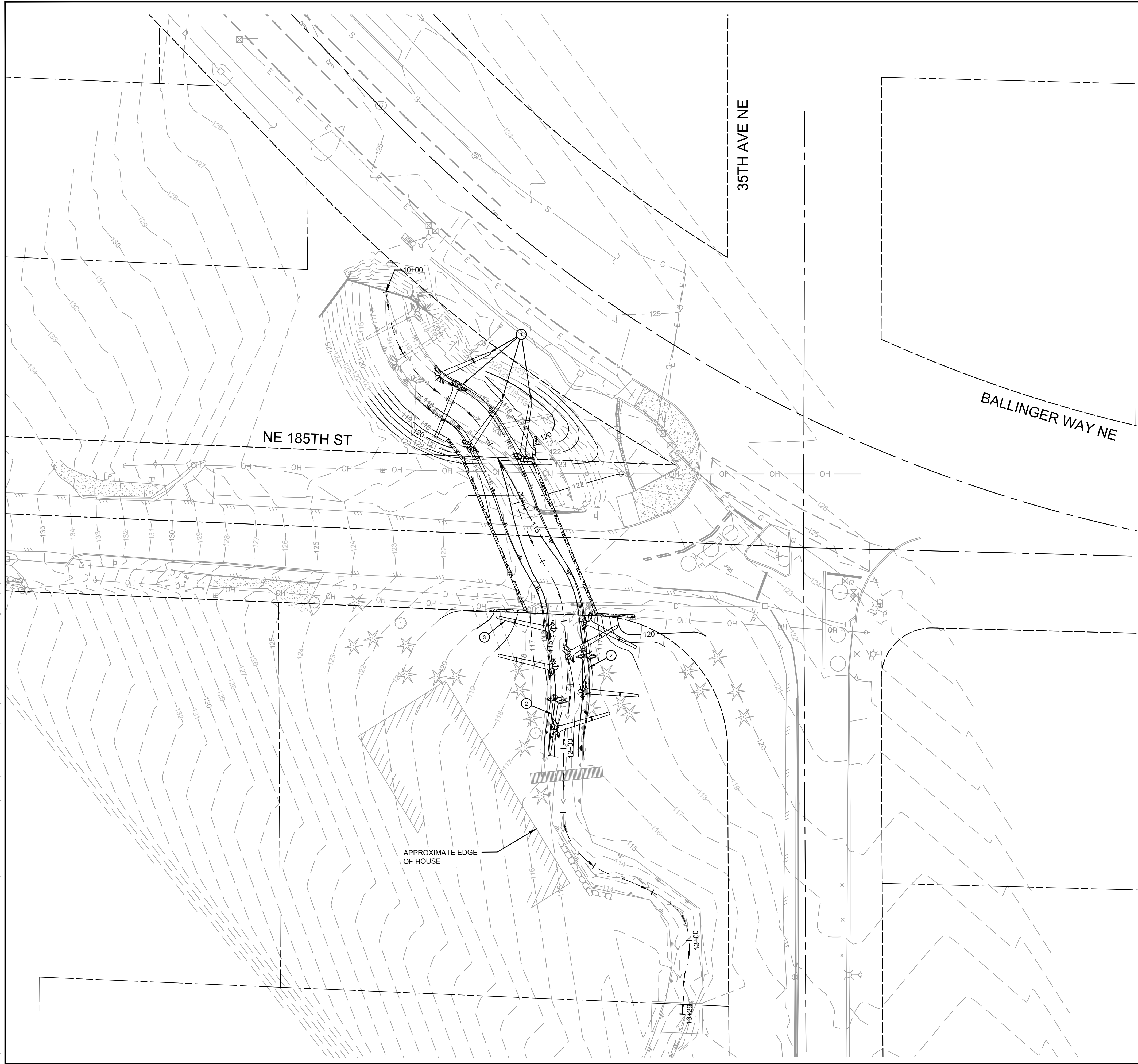


SHEET: 11
OF: 29
JOB NO.: 19569
DWG: CULVERT DETAILS2

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\02 PLANSET\Civil\HDWALL_RAILS.dwg, 10/6/2025 5:14 PM, STEPHEN MOORE

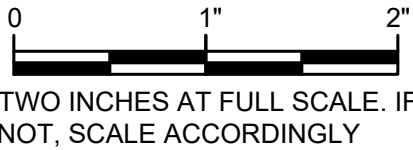



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LARGE WOODY MATERIAL NOTES:

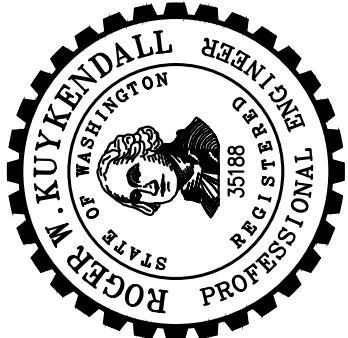
- 1 RE-INSTALL SALVAGED ROOT WADS, BURIED IN BANK.
- 2 INSTALL BANK-DEFINING ROOT WAD/LOG AS SHOWN. WOOD SPECIES TO BE WESTERN RED CEDAR OR DOUGLAS FIR, MINIMUM DIAMETER 24 INCHES. NOMINAL LENGTH AS SHOWN. ANCHOR LOGS WITH DEADMAN BOULDER ANCHORS.
- 3 INSTALL ROOT WAD AS SHOWN. TYP. WOOD SPECIES TO BE WESTERN RED CEDAR OR DOUGLAS FIR, DIAMETER 18-30 INCHES. NOMINAL LENGTH 20 FEET. ANCHOR LOGS WITH SOIL BALLAST OR DEADMAN BOULDER ANCHORS.





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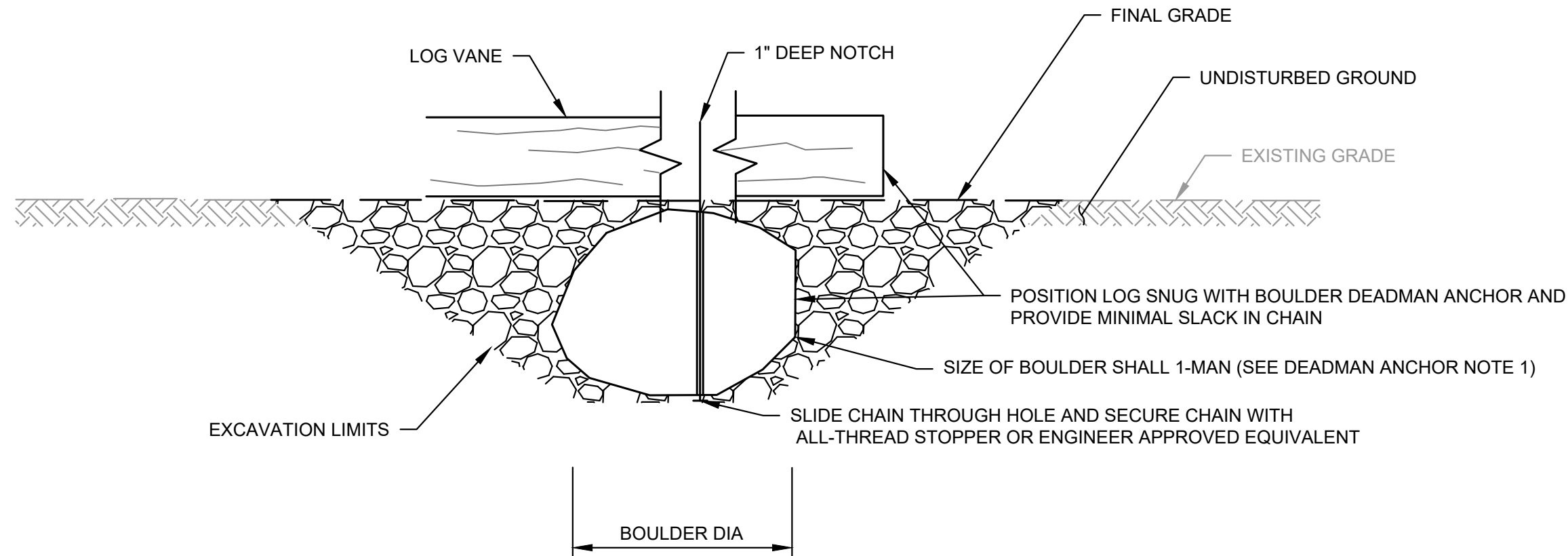
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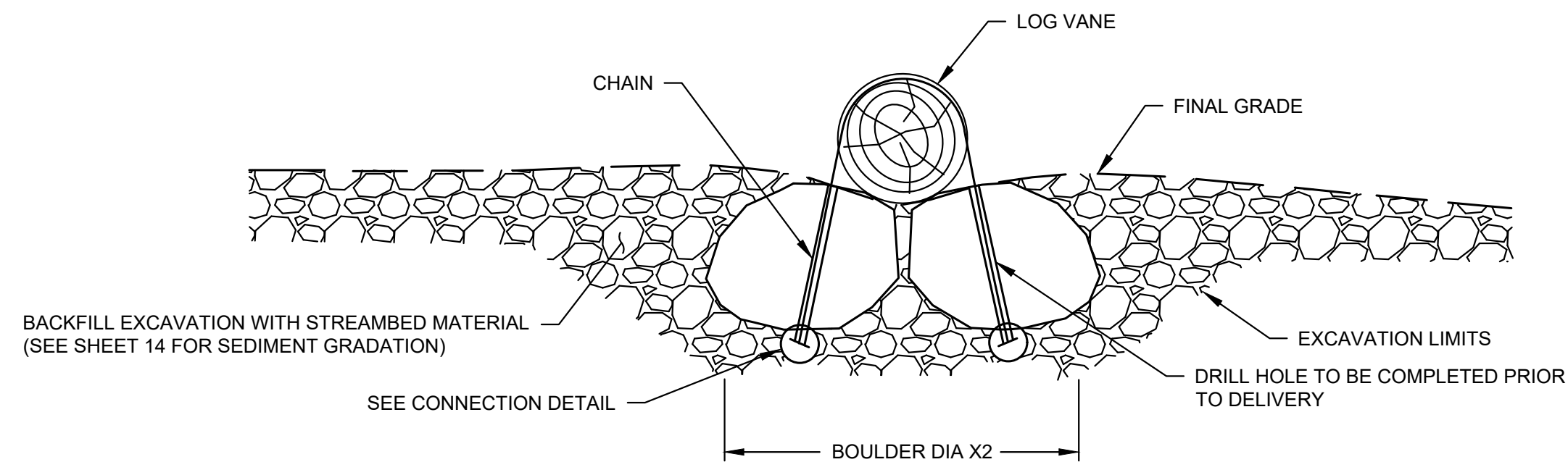
CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
LWM RESTORATION PLAN

SHEET:	13
OF:	29
JOB NO.:	19569
DWGRESTORATION PLAN	

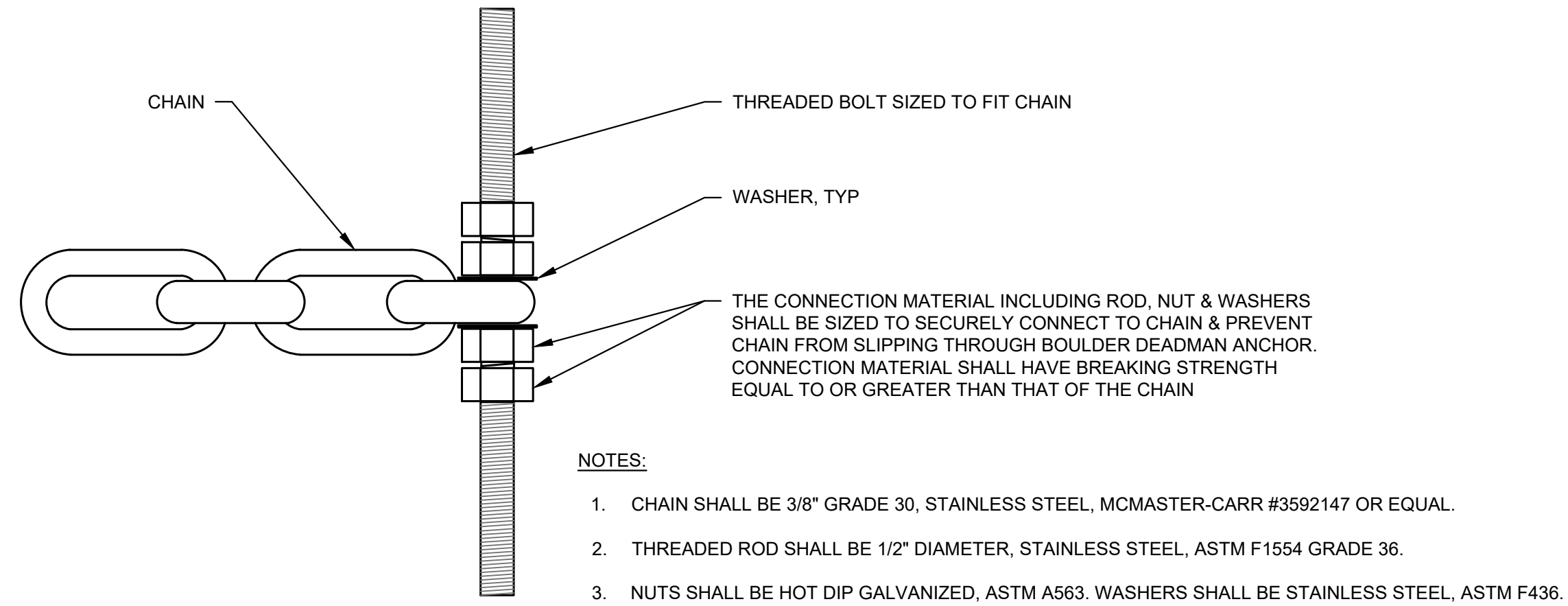
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1 DEADMAN ANCHOR DETAIL (CROSS SECTION SIDE VIEW)
SCALE: NTS



2 DEADMAN ANCHOR DETAIL (CROSS SECTION END VIEW)
SCALE: NTS

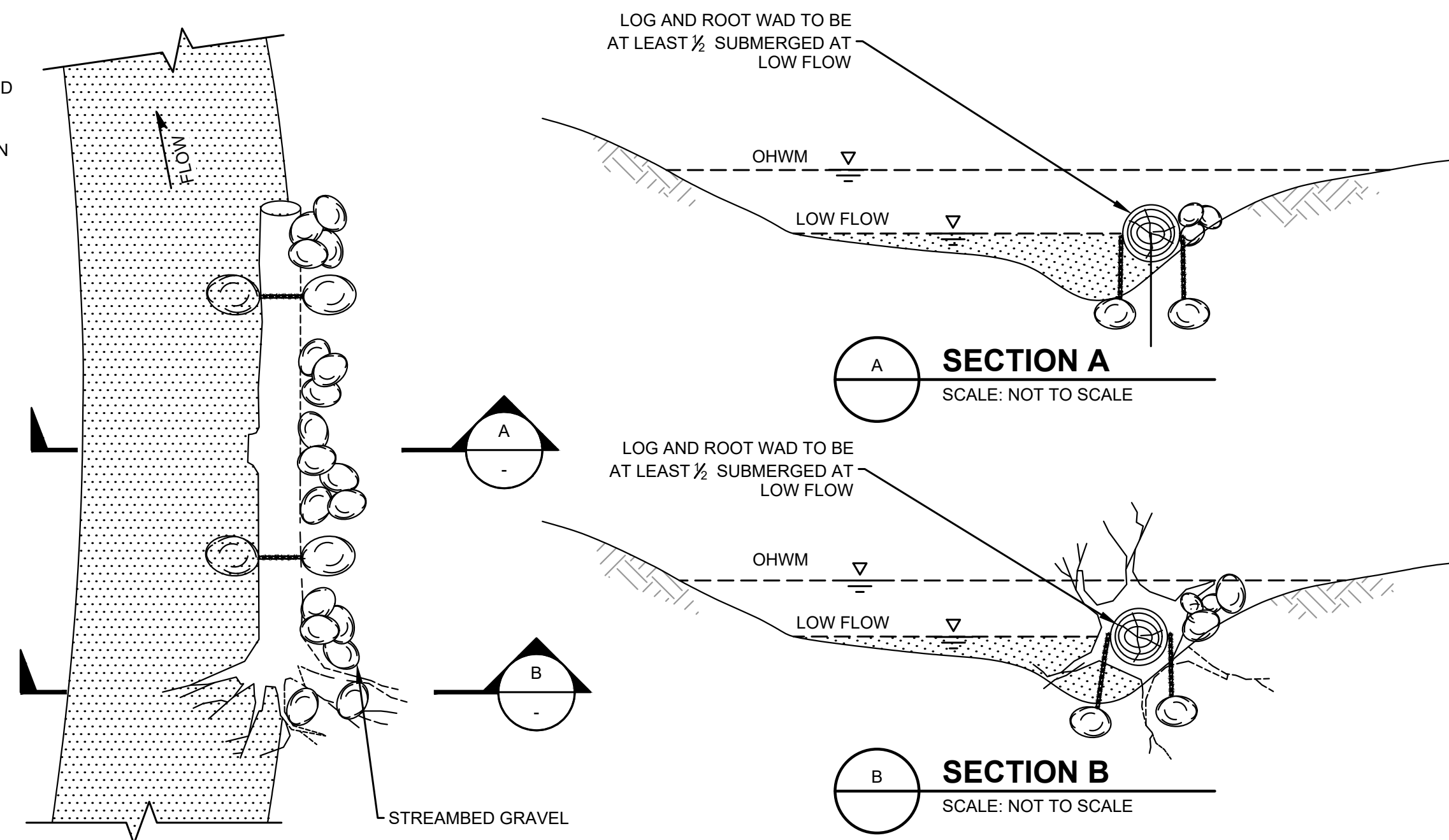


- NOTES:
- CHAIN SHALL BE 3/8" GRADE 30, STAINLESS STEEL, MCMASTER-CARR #3592147 OR EQUAL.
 - THREADED ROD SHALL BE 1/2" DIAMETER, STAINLESS STEEL, ASTM F1554 GRADE 36.
 - NUTS SHALL BE HOT DIP GALVANIZED, ASTM A563. WASHERS SHALL BE STAINLESS STEEL, ASTM F436.

2 CONNECTION DETAIL
SCALE: NTS

- DEADMAN ANCHOR NOTES:
- SIZE OF BOULDERS USED IN DEADMAN ANCHORS SHALL BE 1-MAN BOULDERS (WSDOT 9-03.11(3)).

NOTE: BANK LOG TO BE WESTERN RED CEDAR OR DOUGLAS FIR W/ ROOTS ATTACHED AND NO BRANCHES, CHAIN ROOT WAD TO DEADMAN BOULDER ANCHORS.

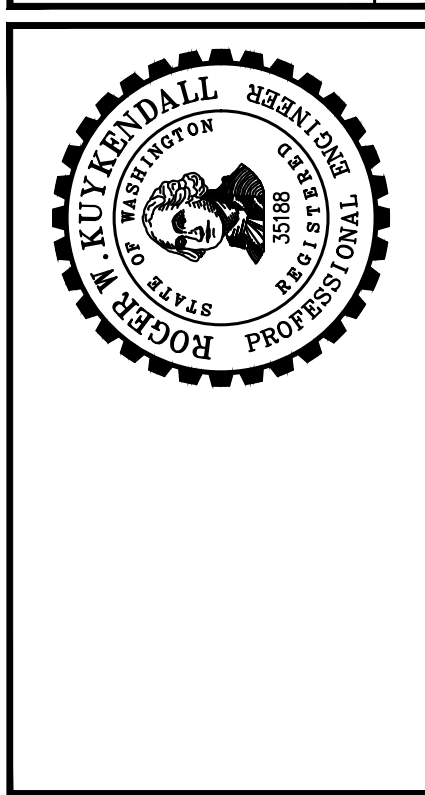


4 TYPICAL BANK LOG INSTALLATION
SCALE: NOT TO SCALE

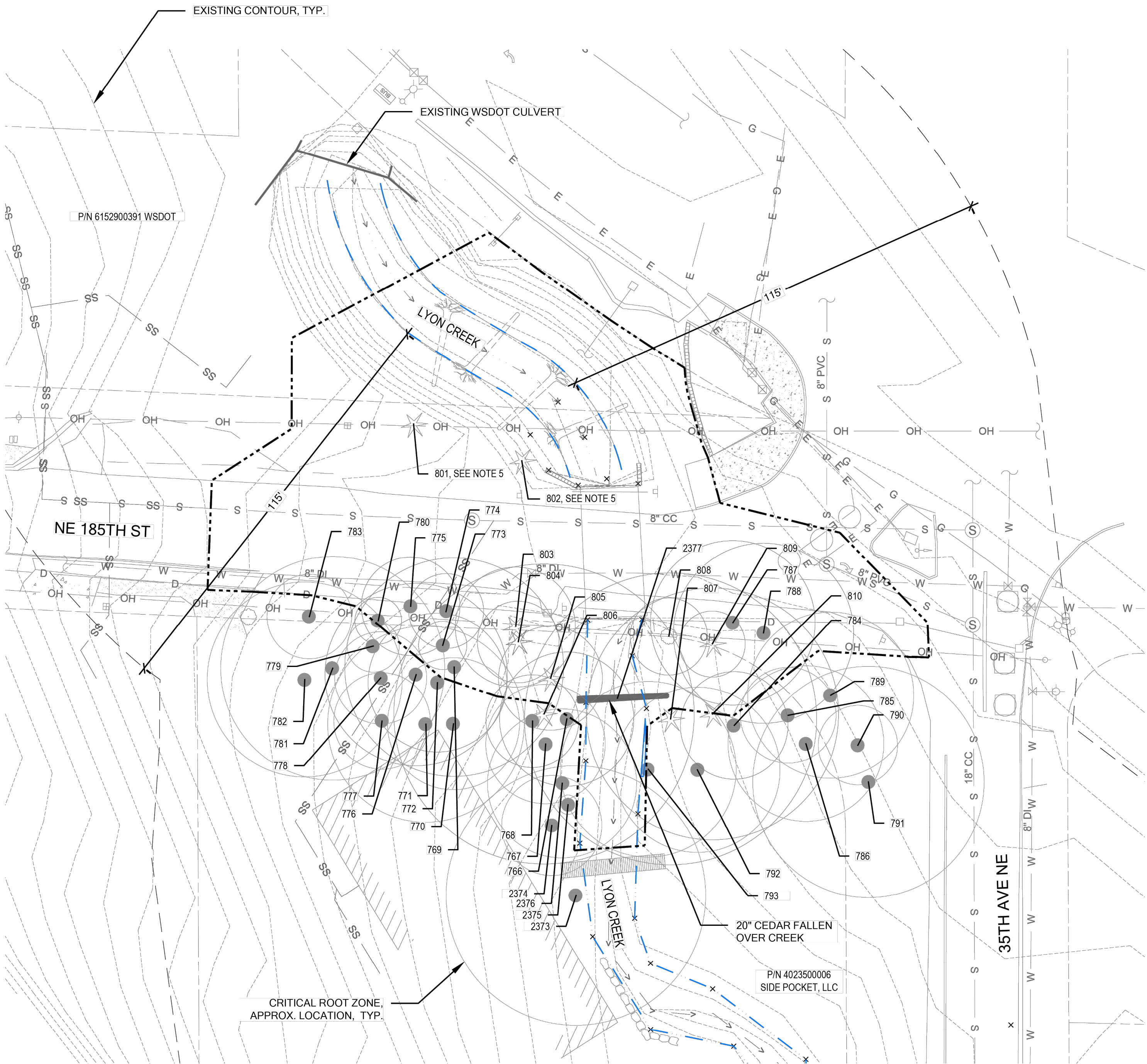
0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

DATE:	OCT 2025
SCALE:	NOTED
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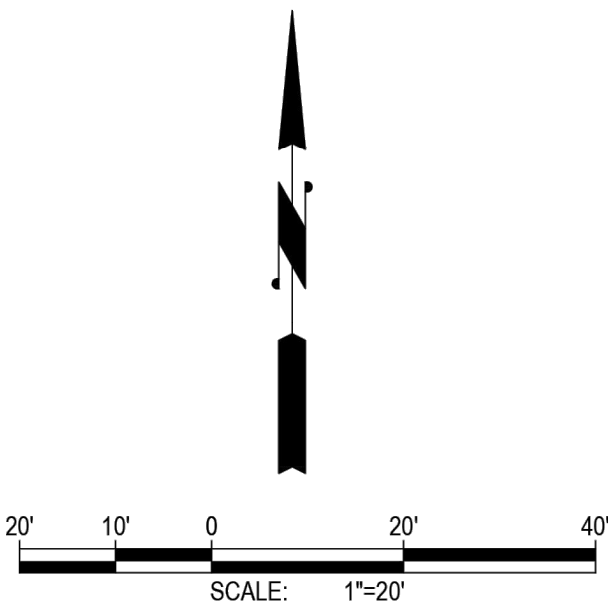


LEGEND

- PROJECT BOUNDARY
- ORDINARY HIGH WATER MARK (OHWM)
- 115-FT LYON CREEK BUFFER
- EXISTING TREES (SURVEYED)
- EXISTING TREES (APPROX. LOCATION)
- CRITICAL ROOT ZONE (APPROX. LOCATION)

NOTES

- SURVEY RECEIVED FROM GRAY & OSBORNE, INC. ON MAY 30, 2025.
- EXISTING TREES WERE INVENTORIED BY FACET ON SEPTEMBER 19, 2019 AND APRIL 23, 2025. SEE ARBORIST REPORT FOR DETAILS.
- CRITICAL ROOT ZONES WERE DRAWN USING ONE FOOT PER INCH OF DBH (DIAMETER AT BREAST HEIGHT).
- EXISTING CONDITIONS NORTH OF NE 185TH ST ARE BASED ON THE WSDOT L-100 CULVERT REPLACEMENT PROJECT'S PROPOSED CONDITIONS, WHICH WILL PRECEDE CONSTRUCTION OF THE L-90 CULVERT REPLACEMENT PROJECT.
- TREE 801 AND 802 WILL BE REMOVED BY WSDOT.



750 Sixth Street South
Kirkland, WA 98033
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F: 425.827.8136
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FEDERAL WAY | KIRKLAND | MOUNT VERNON | SEATTLE | SPOKANE | WHIDBEY ISLAND

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY



DATE: AUG. 2025	SCALE: NOTED	DRAWN: HC	CHECKED: AM/SP	APPROVED: HM
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REVISION	DATE	APPD
No.		

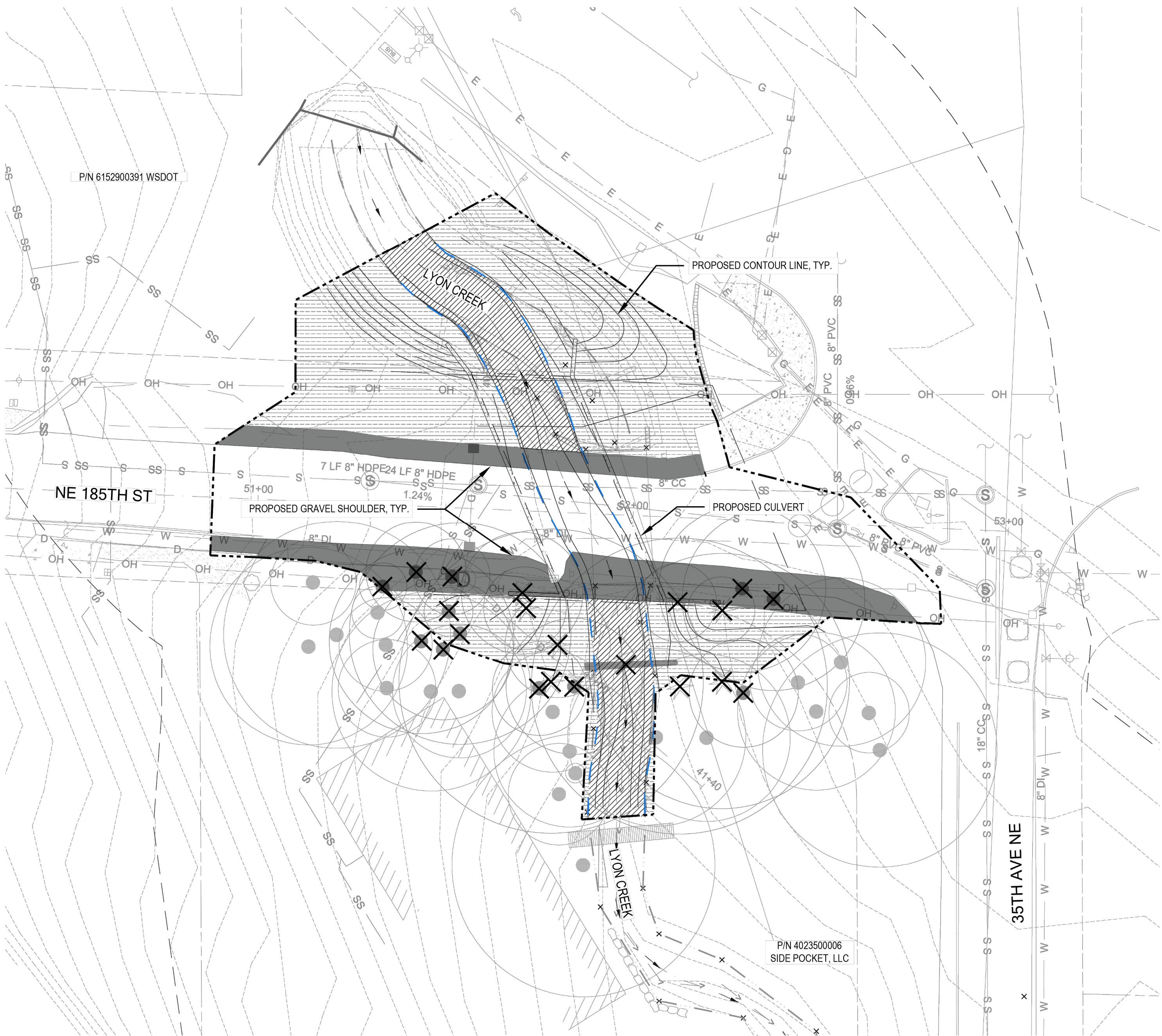


CITY OF LAKE FOREST PARK
NE 18TH ST, KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
EXISTING CONDITIONS

SHEET: **15**
OF: **29**

JOB NO.: 1905.0089.00
DWG: L90 RESTORATION

Z:\Shared\Projects\Active\2019\05\1905.0089.00- Lake Forest Park Culvert Replacements\CAD\190542_Lake Forest Park Culvert Replacements_MIT_PLN.dwg, 8/11/2025 1:23 PM, HUI CAO



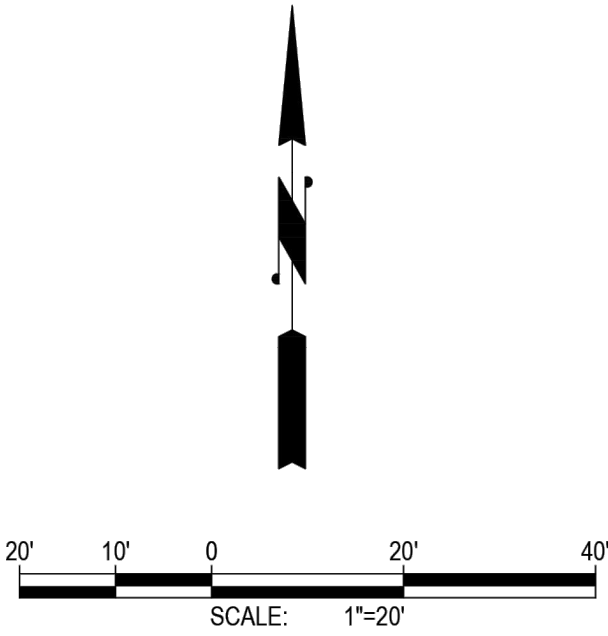
LEGEND

- PROJECT BOUNDARY
- EXISTING ORDINARY HIGH WATER MARK (OHWM)
- PROPOSED ORDINARY HIGH WATER MARK (OHWM)
- 115-FT LYON CREEK BUFFER
- EXISTING TREES (SURVEYED)
- EXISTING TREES (APPROX. LOCATION)
- CRITICAL ROOT ZONE

NOTES
1 PROPOSED GRADING AND SITE PLAN RECEIVED FROM GRAY & OSBORNE, INC. ON MAY 30, 2025.

IMPACTS ASSESSMENT

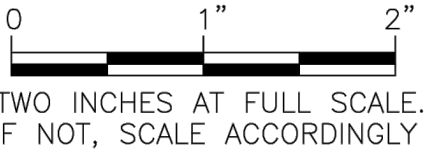
SYMBOL	IMPACT	AREA (SF)
[Solid Gray Box]	PERMANENT IMPACT WITHIN LYON CREEK BUFFER	2,390
[Diagonal Lines Box]	TEMPORARY IMPACT WITHIN LYON CREEK	1,905
[Horizontal Lines Box]	TEMPORARY IMPACT WITHIN LYON CREEK BUFFER	6,142
[X Symbol]	TREE REMOVAL (20 TREES AND 1 SNAG)	



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**Gray & Osborne, Inc.**
CONSULTING ENGINEERS
3710 168TH STREET NE BLDG. B, SUITE 210
ARLINGTON, WA 98223 • (866) 464-5490

DATE: AUG. 2025	SCALE: NOTED	DRAWN: HC	CHECKED: AM/SP	APPROVED: HM
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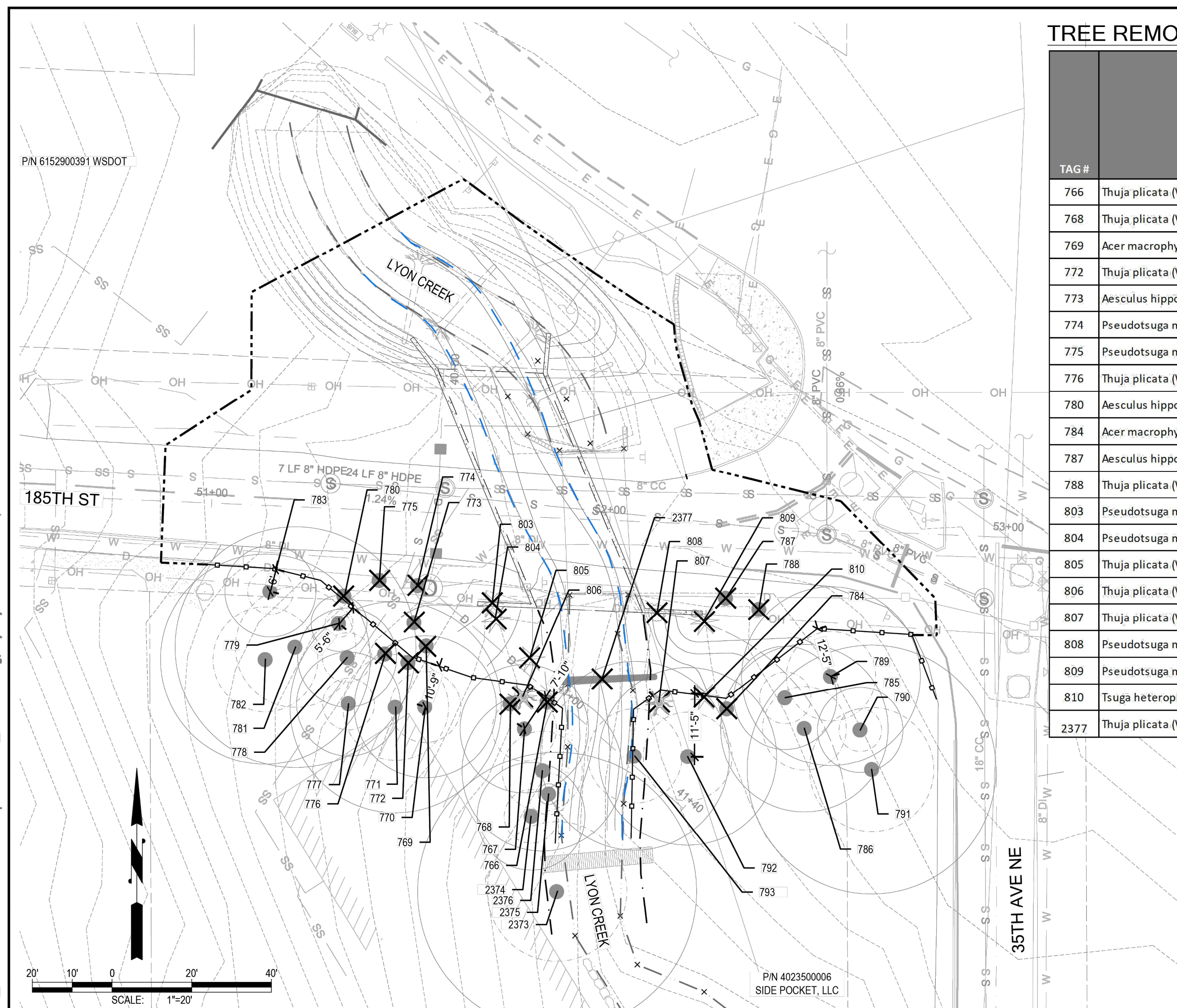
No.	REVISION	DATE	APPD



CITY OF LAKE FOREST PARK
NE 18TH ST, KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
IMPACTS ASSESSMENT

SHEET:	16
OF:	29

JOB NO.: 1905.0089.00
DWG: L90 RESTORATION



SHEET: **17**
OF: **29**

JOB NO.: 1905.0089.00
DWG: L90 RESTORATION

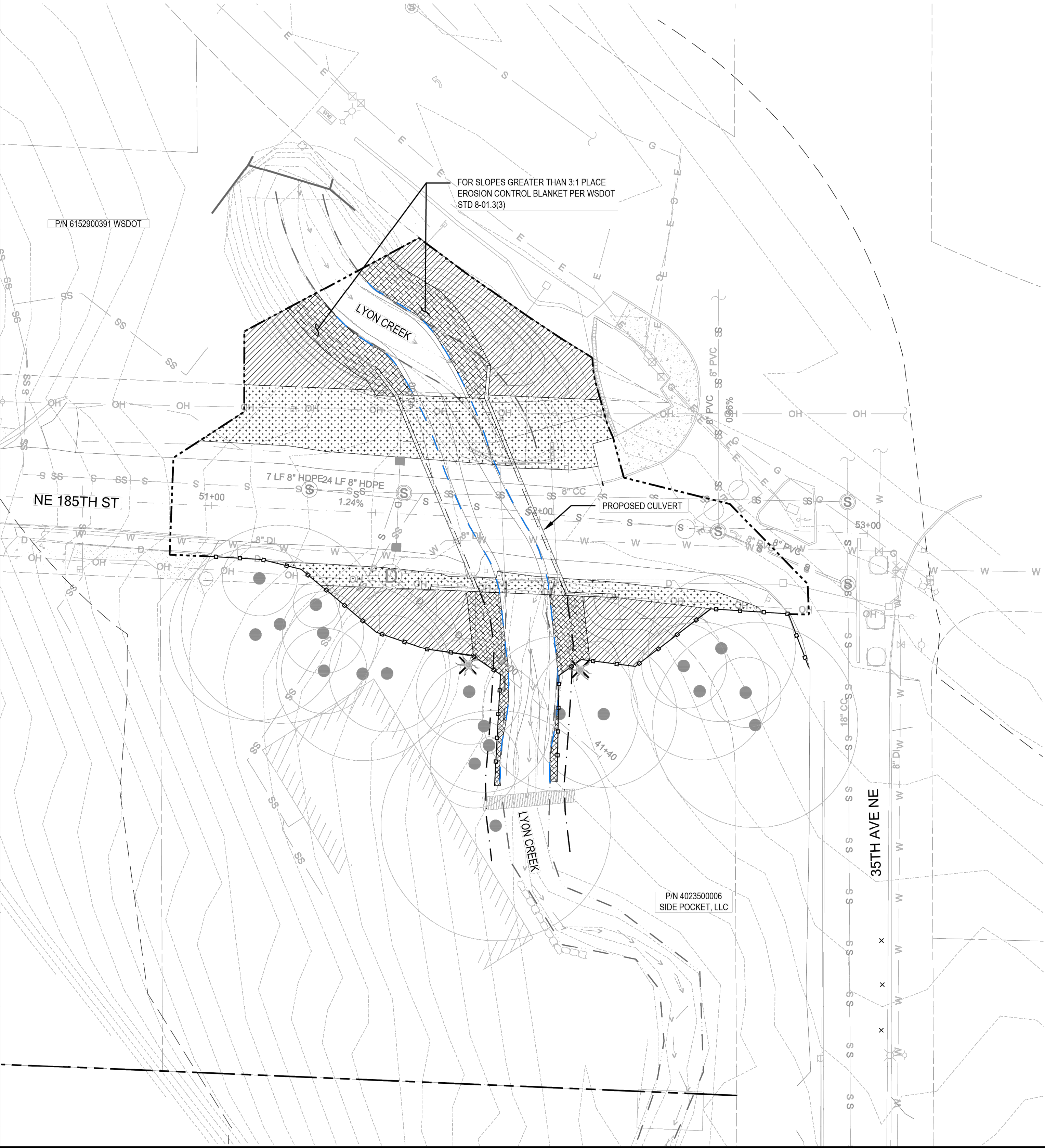
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PLANT MATERIAL SETBACK CHART

	GUARDRAIL BARRIER	EDGE OF ROAD	PATHS, TRAILS	WALL	FENCE	SIGNS	EXISTING TREE, TRUNK	EXISTING VEGETATION MASS	OVERHEAD POWER
TREE	8'	10'	10'	8'	8'	15'	10'	-	10'
SHRUBS	5'	5'	8'	8'	3'	6'	5'	5'	

THIS CHART SUPPLEMENTS SECTION 8.02.3(7) OF THE STANDARD SPECIFICATIONS SETBACKS APPLY UNLESS OTHERWISE ADJUSTED BY ENGINEER DURING PLANT STAKING OR LAYOUT DISTANCES ARE THE STEM OR TRUNK OF THE PLANT BEING INSTALLED.




*MAINTAIN SIGHT DISTANCE FOR SIGNS ACCORDING TO M51-02-07 (TRAFFIC MANUAL)



LEGEND

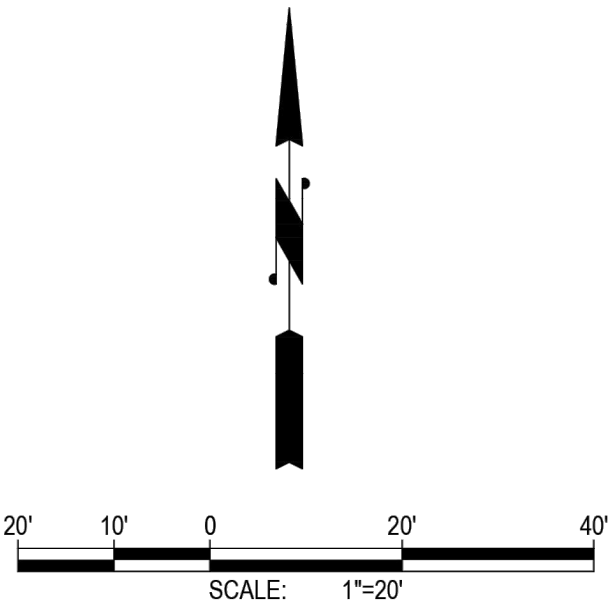
- PROJECT BOUNDARY
- EXISTING ORDINARY HIGH WATER MARK (OHWM)
- PROPOSED ORDINARY HIGH WATER MARK (OHWM)
- 115-FT LYON CREEK BUFFER
- EXISTING TREES (SURVEYED)
- EXISTING TREES (APPROX. LOCATION)
- CRITICAL ROOT ZONE
- TREE PROPOSED TO BE SNAGGED

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY	SOIL PREP
 2,764 SF	NATIVE TREES				
	ACER MACROPHYLLUM / BIG LEAF MAPLE	2 GALLON	9' o.c.	5	TYPE 2
	PSEUDOTSUGA MENZIESII / DOUGLAS-FIR	2 GALLON	9' o.c.	14	TYPE 2
	THUJA PLICATA / WESTERN RED CEDAR	2 GALLON	9' o.c.	14	TYPE 2
 1,477 SF	NATIVE SHRUBS				
	ACER CIRCINATUM / VINE MAPLE	1 GALLON	5' o.c.	14	TYPE 2
	CORYLUS CORNUTA VAR. CALIFORNICA / BEAKED HAZELNUT	1 GALLON	5' o.c.	14	TYPE 2
	HOLODISCUS DISCOLOR / OCEANSPRAY	1 GALLON	5' o.c.	14	TYPE 2
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK	1 GALLON	5' o.c.	14	TYPE 2
	SAMBUCUS RACEMOSA / RED ELDERBERRY	1 GALLON	5' o.c.	14	TYPE 2
	ROSA NUTKANA / NOOTKA ROSE	1 GALLON	5' o.c.	14	TYPE 2
	SYMPHORICARPOS ALBUS / COMMON SNOWBERRY	1 GALLON	5' o.c.	14	TYPE 2
	NATIVE TREES				
	ALNUS RUBRA / RED ALDER	2 GALLON	9' o.c.	7	TYPE 2
 2,880 SF	NATIVE SHRUBS				
	CORNUS SERICEA / RED OSIER DOGWOOD	1 GALLON	5' o.c.	12	TYPE 2
	LONICERA INVOLUCRATA / TWINBERRY	1 GALLON	5' o.c.	12	TYPE 2
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK	1 GALLON	5' o.c.	12	TYPE 2
	RUBUS SPECTABILIS / SALMONBERRY	1 GALLON	5' o.c.	12	TYPE 2
	DRY NATIVE SEED MIX WSDOT STD 8-02.2 (9-14.3)	SEED MIX		2,880 SF	TYPE 1

PLANTING PLAN AND SCHEDULE NOTES

- RESTORATION PLANTING PLAN REPRESENTS A CONCEPTUAL LAYOUT. FINAL PLANT LOCATIONS SHALL BE APPROVED BY ECOLOGIST PRIOR TO PLANTING.
- EXISTING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BEYOND THOSE SHOWN ARE TO BE RESTORED AND/OR SEEDED TO EXISTING CONDITION.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
- SEE PLANTING DETAILS ON SHEET 5.
- CONTRACTOR IS RESPONSIBLE FOR 100% PERCENT SURVIVAL OF ALL TREES, SHRUBS, AND GROUND COVERS FOR ONE YEAR FROM DATE OF CONSTRUCTION COMPLETION.
- AMEND ALL PLANTING AREAS AND SEEDING AREAS PER SOIL PREPARATION DETAILS ON SHEET 5. SOIL AMENDMENT SHALL BE CEDAR GROVE FINE COMPOST PER THE SPECIAL PROVISIONS..
- ALL TREES SHALL BE MINIMUM 2 GAL CONTAINER. FULL, DENSE, AND SYMMETRICAL IN SHAPE.
- ALL 1 GALLON CONTAINER PLANTS SHALL BE MINIMUM HEIGHT OF 12".
- CLUSTER SAME SPECIES OF LIVE STAKES IN GROUPS OF 3, 5, AND 7.
- INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL INSTALLED PLANTS WITHIN THE RESTORATION AREA.
- REFER TO CRITICAL AREA STUDY FOR GOALS AND OBJECTIVES, PERFORMANCE STANDARDS, MONITORING METHODS, MAINTENANCE RECOMMENDATIONS, AND CONTINGENCIES.

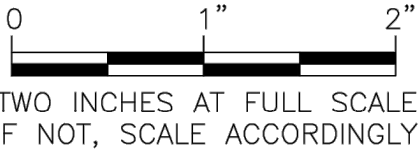


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DATE: AUG. 2025	NOTED	HC	AM/SP	HM
SCALE:	DRAWN:	CHECKED:	APPROVED:	

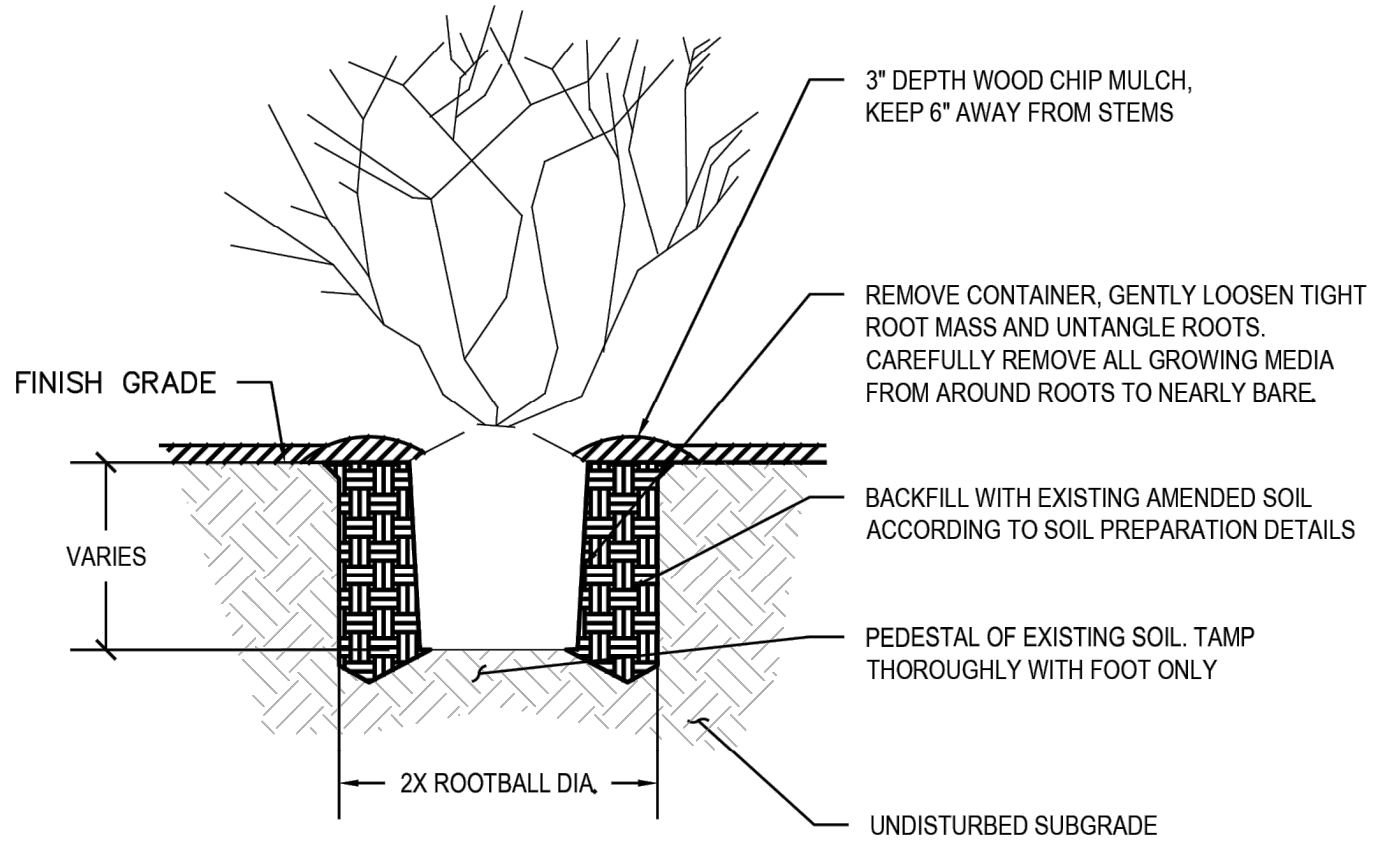
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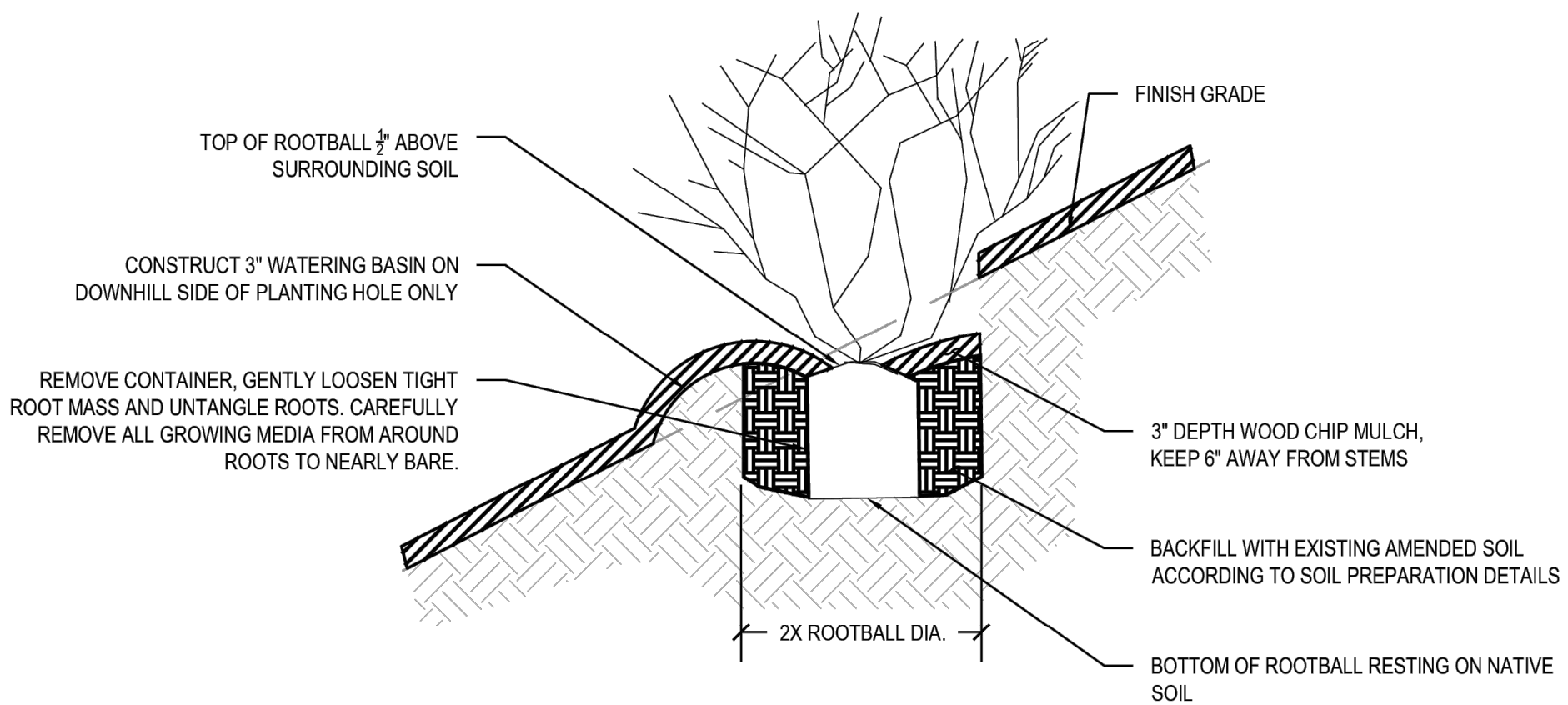
CITY OF LAKE FOREST PARK
NE 18TH ST, KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
RESTORATION PLANTING PLAN AND SCHEDULE

SHEET:	18
OF:	29
JOB NO.:	1905.0089.00
DWG:	L90 RESTORATION

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1 TREE AND SHRUB PLANTING
NOT TO SCALE



2 TREE AND SHRUB PLANTING ON SLOPE
NOT TO SCALE

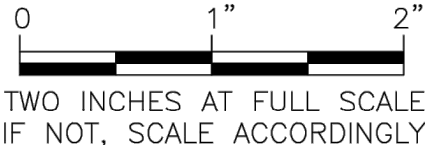



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DATE: AUG. 2025	SCALE: NOTED	DRAWN: HC	CHECKED: AM/SP	APPROVED: HM
				DATE: APPD.
				REVISION
				No.

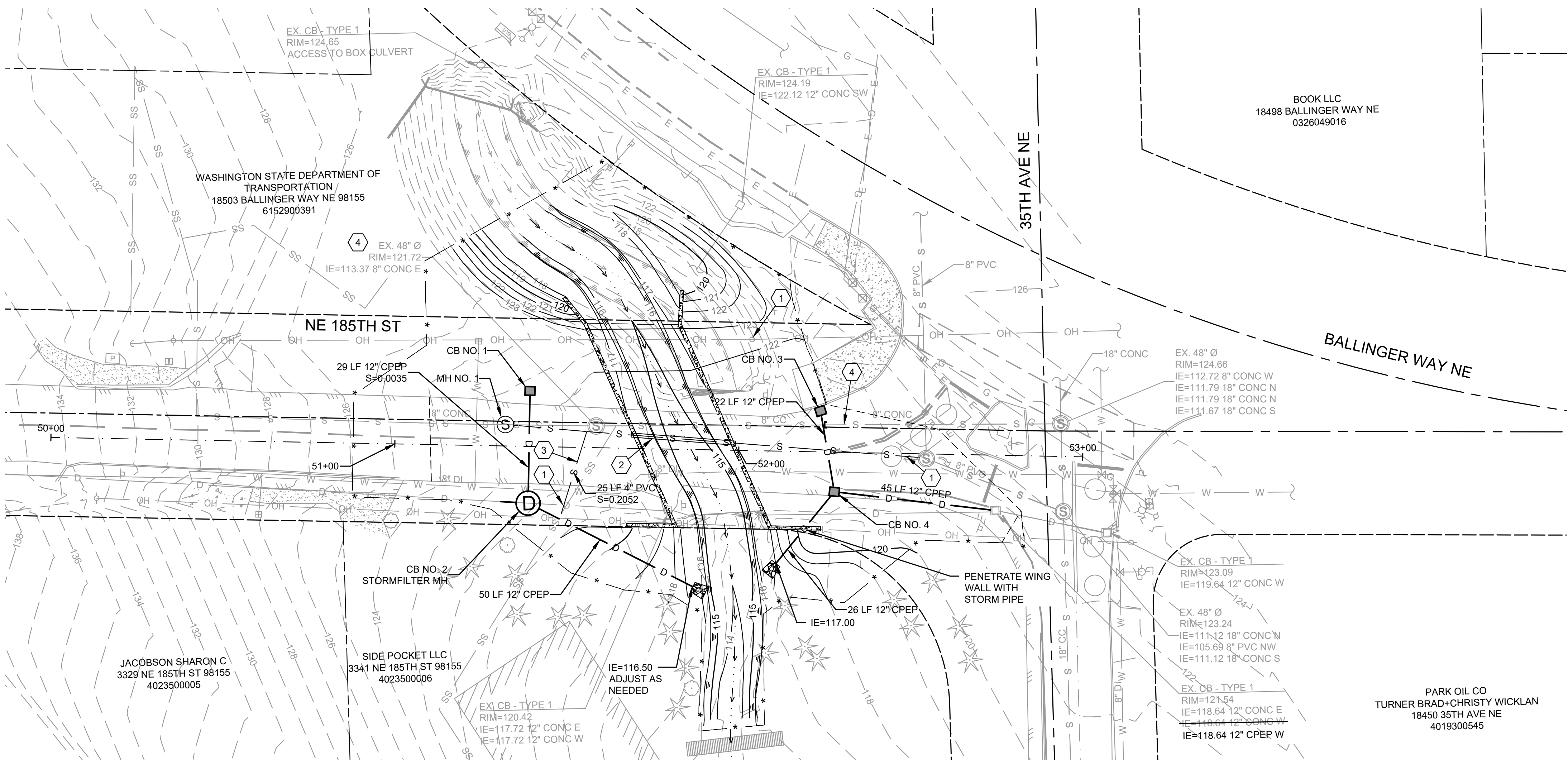
STATE OF WASHINGTON
AMANDA C. SARELLI
LANDSCAPE ARCHITECT
4303 EXP. 05/26/2026

PRELIMINARY

CITY OF LAKE FOREST PARK
NE 18TH ST, KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
RESTORATION DETAILS

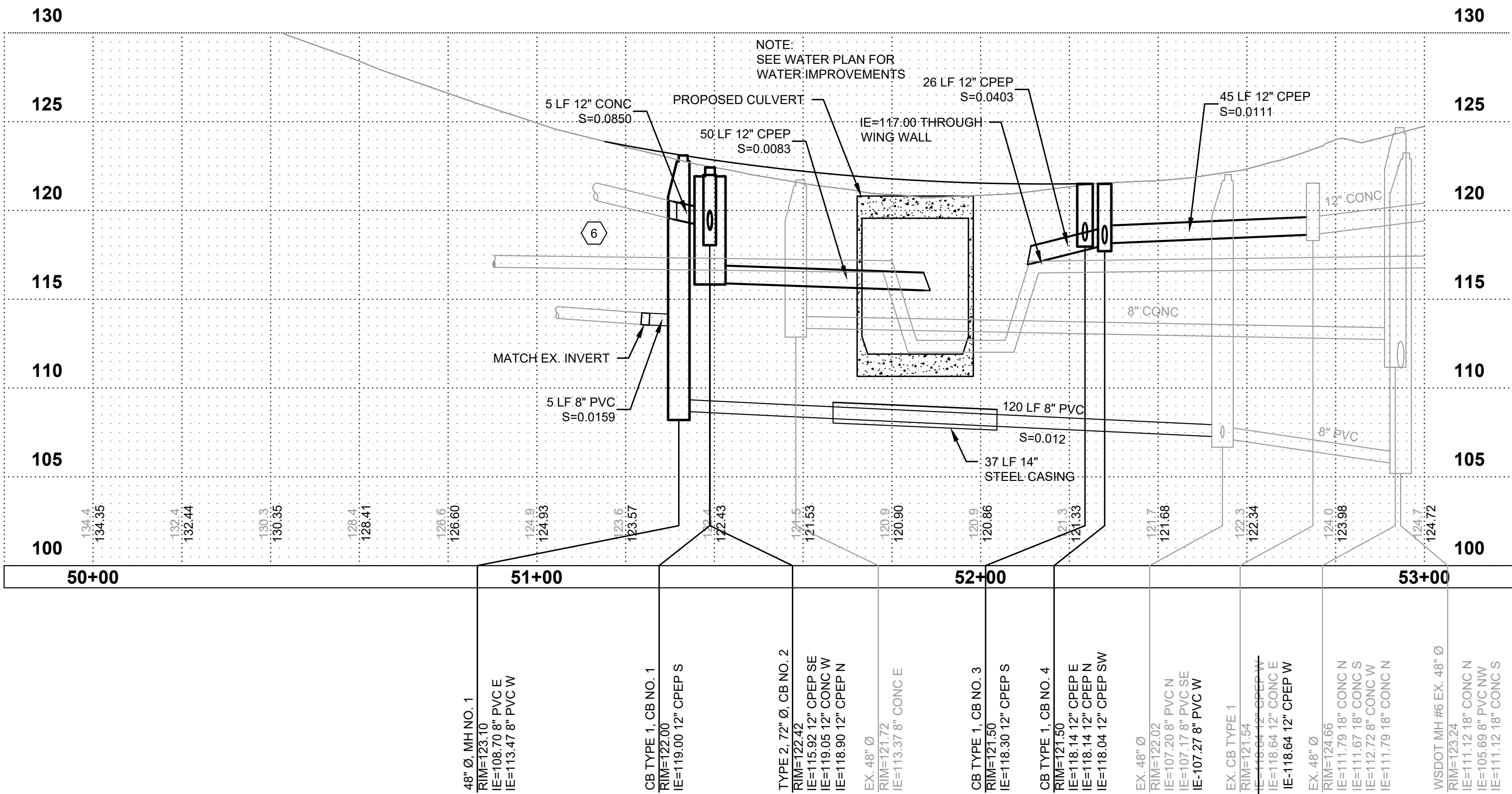
SHEET: 19
OF: 29
JOB NO.: 1905.0089.00
DWG: L90 RESTORATION

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CONSTRUCTION NOTES

- CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO POTHOLE AND FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY.
- INSTALL NEW 8-INCH PVC SEWER MAIN AND 14-INCH STEEL CASING PER LAKE FOREST PARK STANDARDS AND DETAILS. COORDINATE SHUT DOWN WITH CUSTOMERS AND SEWER UTILITY. BYPASS SEWER FLOWS.
- CONSTRUCT SIDE SEWER, CONNECT TO NEW MAIN.
- ABANDON EX. SEWER MAIN. REMOVE AND WASTEHAUL EX. PIPE AND MANHOLE NEAR CULVERT ~ STATION 51+30 TO STATION 52+25.
- CONTRACTOR SHALL PROTECT POLE POST / LANDSCAPE / FENCE AND WALL.
- SEE SHEET 19 FOR PROPOSED WATER PLAN & PROFILE.

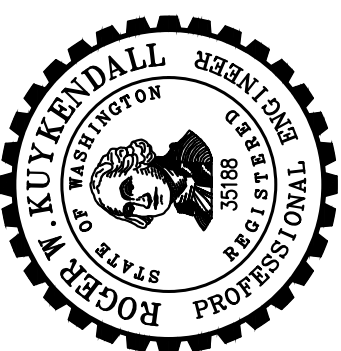


0 1" 2"
TWO INCHES AT FULL SCALE. IF
NOT, SCALE ACCORDINGLY

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DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

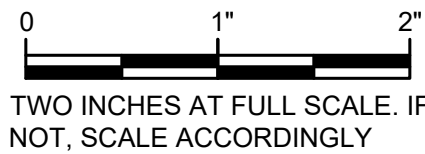
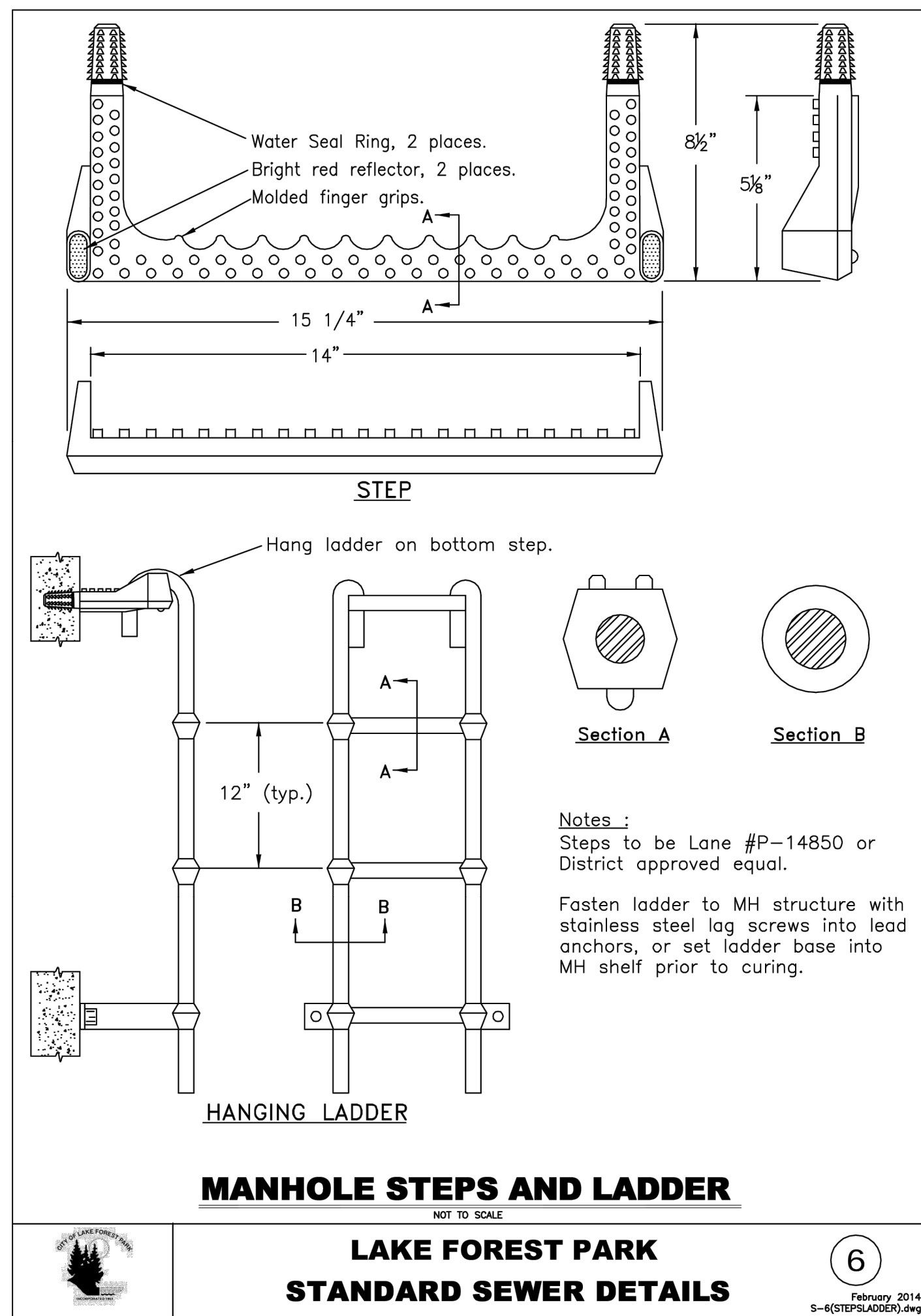
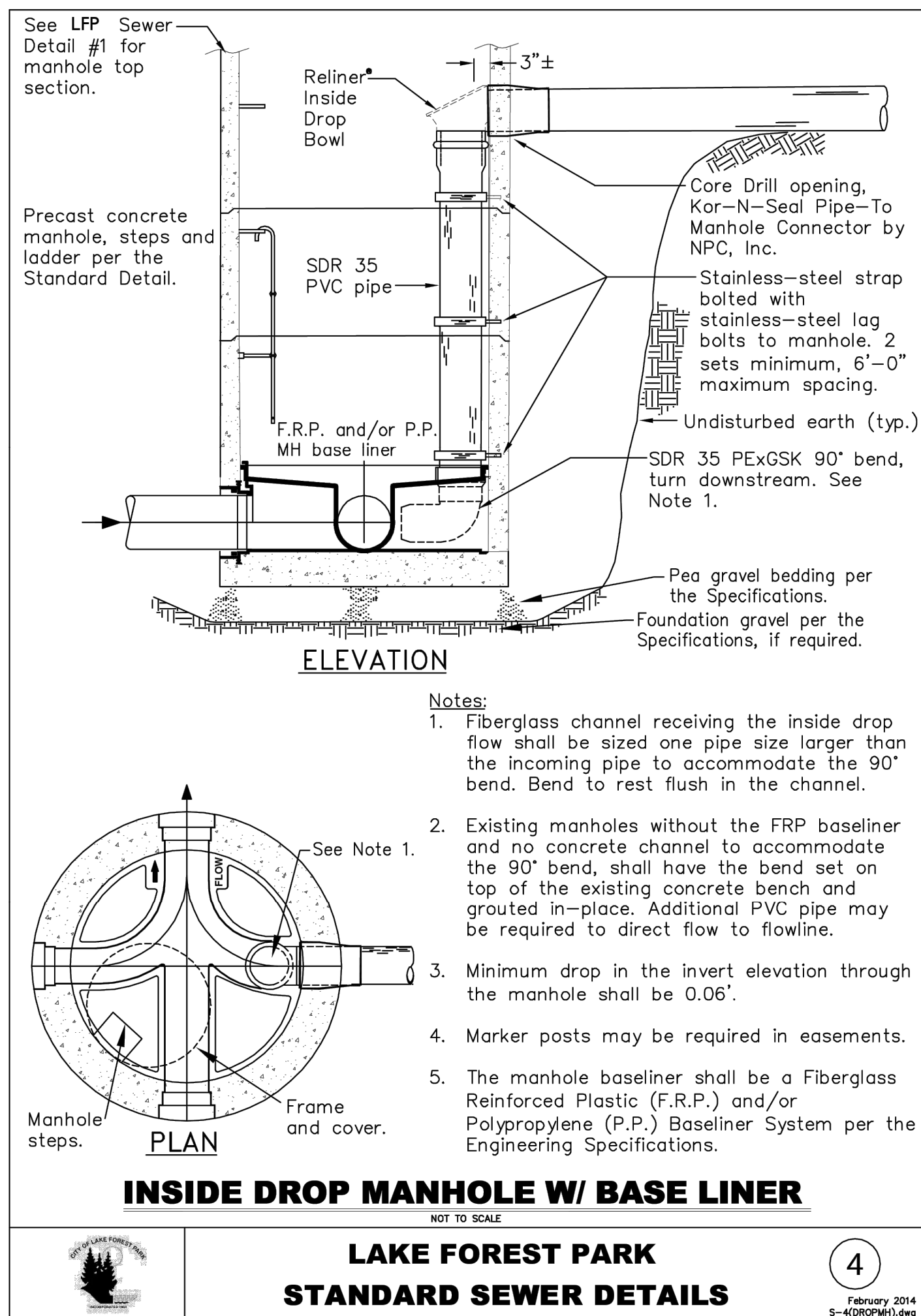
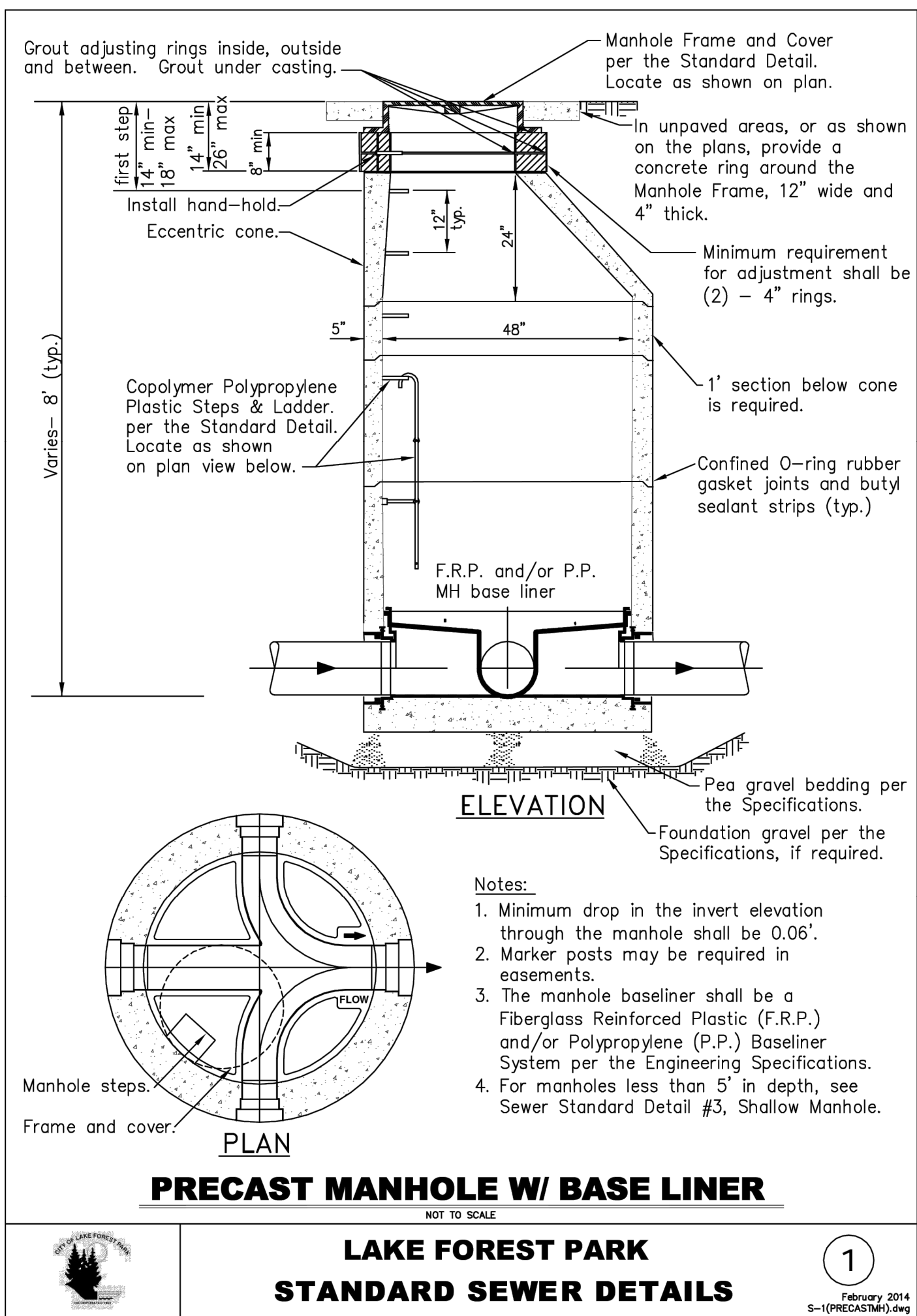
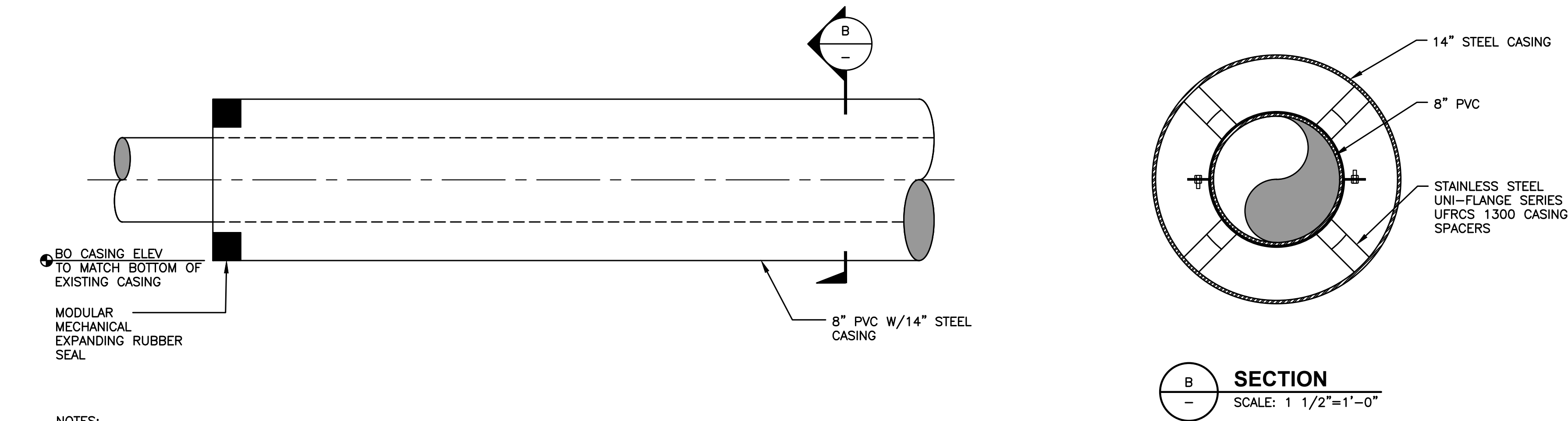
60% PLANSET	DATE	APPD
	REVISION	No.



CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
SEWER & STORM PLAN & PROFILE

SHEET:	21
OF:	29
JOB NO.:	19569
DWG/SEWER	

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\02 PLANSET\Civil\WATER PLAN.dwg, 10/6/2025 5:16 PM, STEPHEN MOORE



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DATE: OCT 2025	SCALE: NOTED	DRAWN: S.E.M.	CHECKED: R.W.K.	APPROVED: R.W.K.
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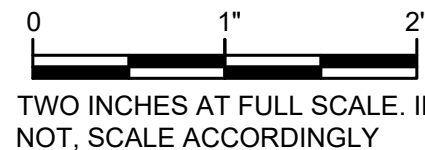
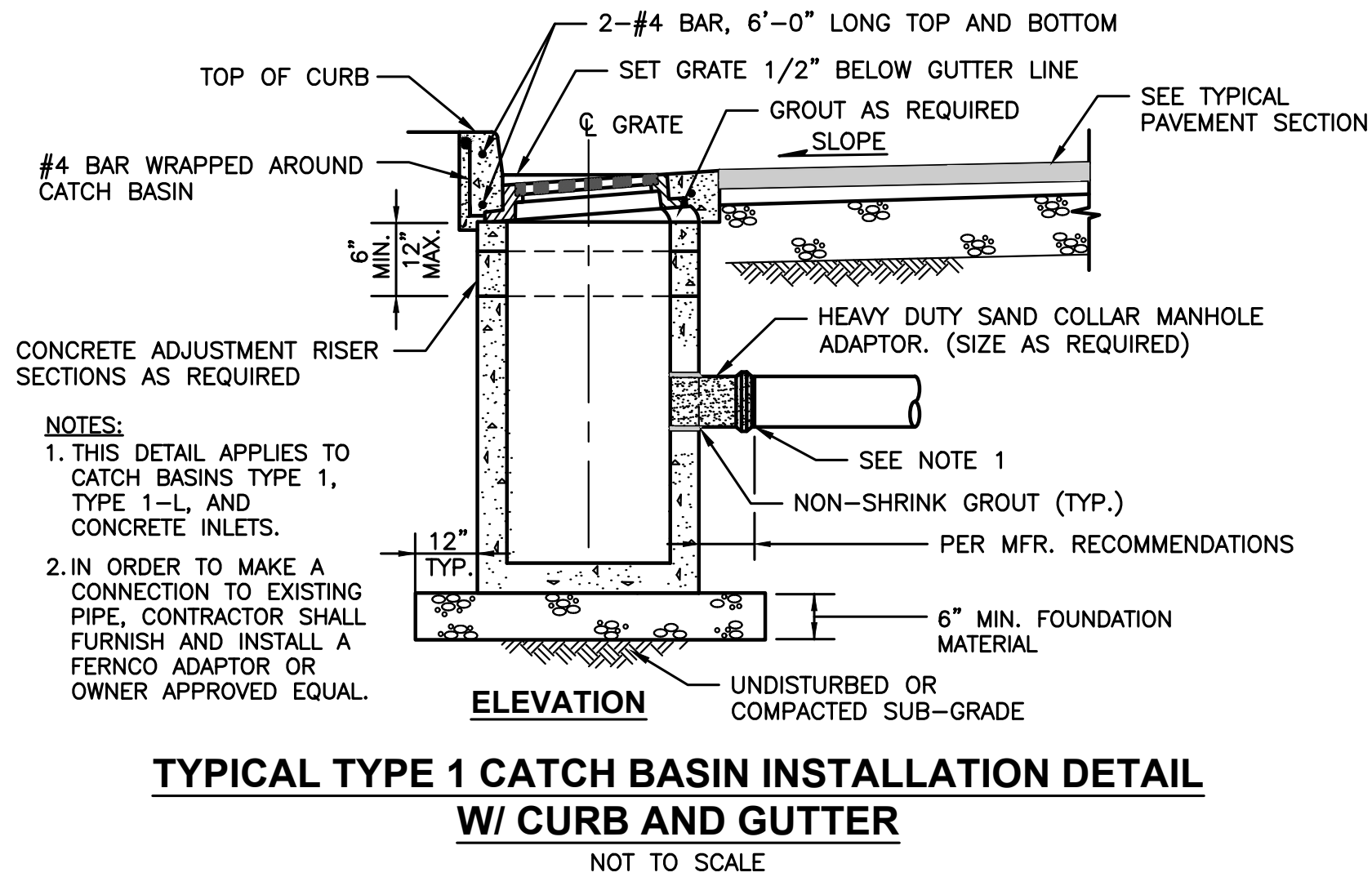
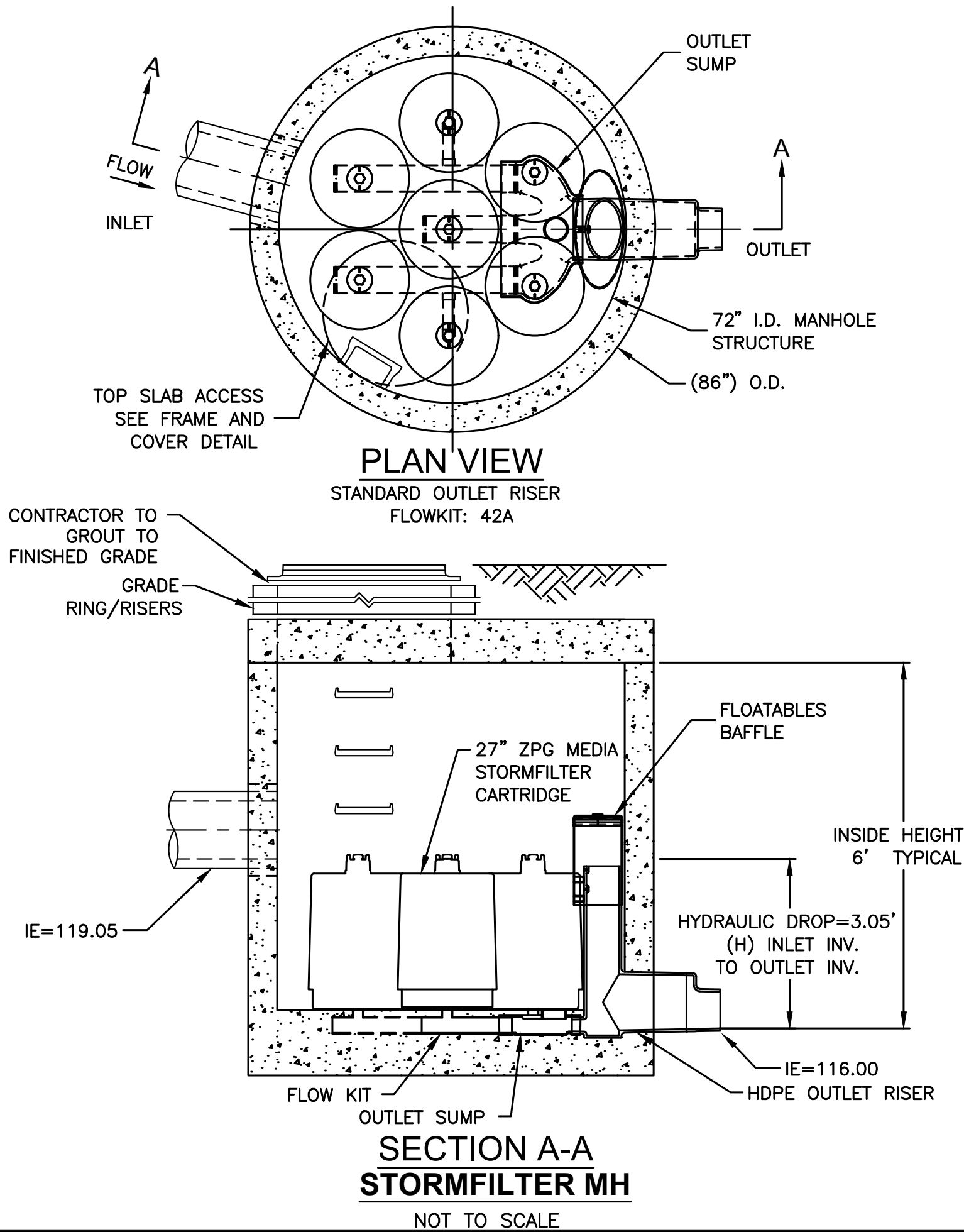
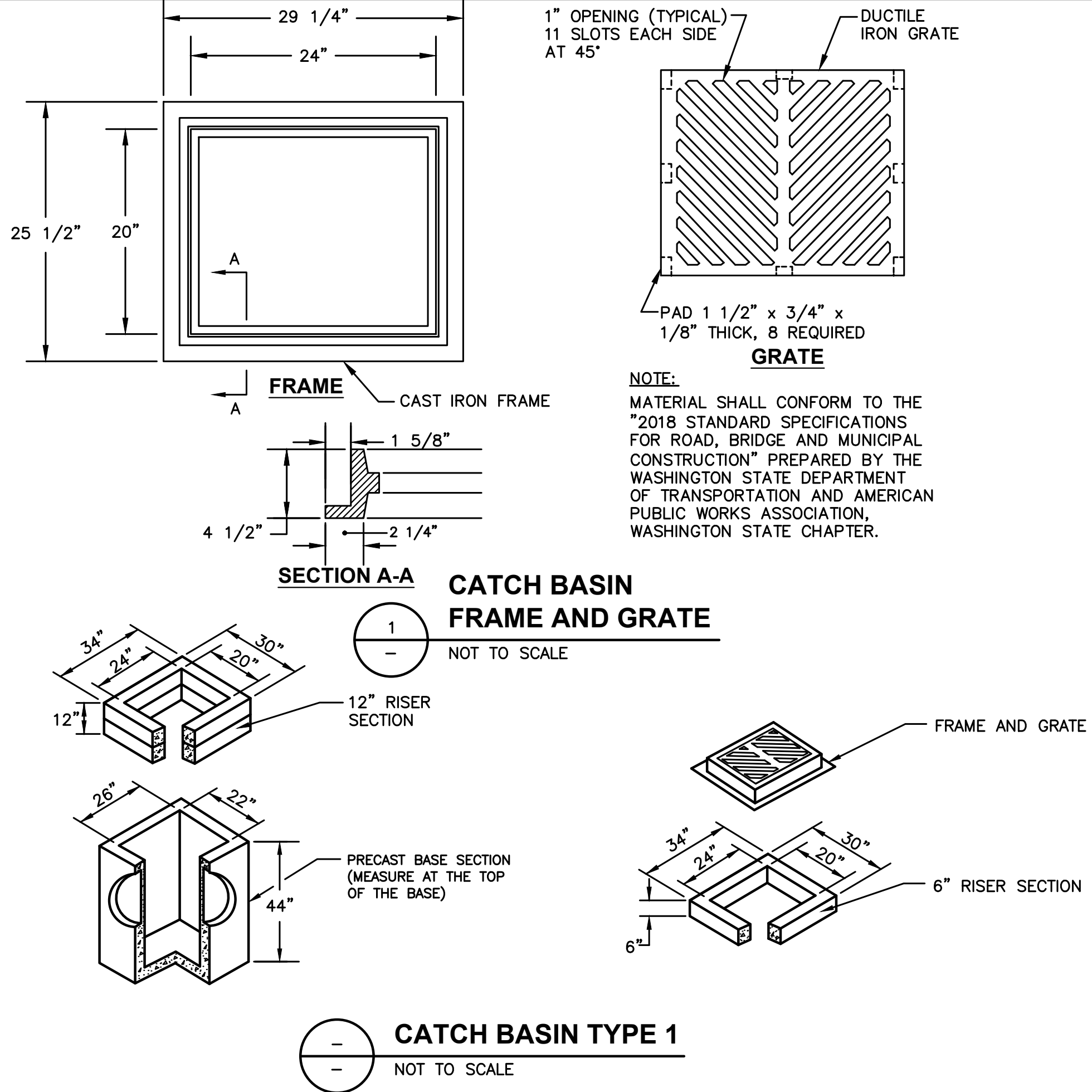
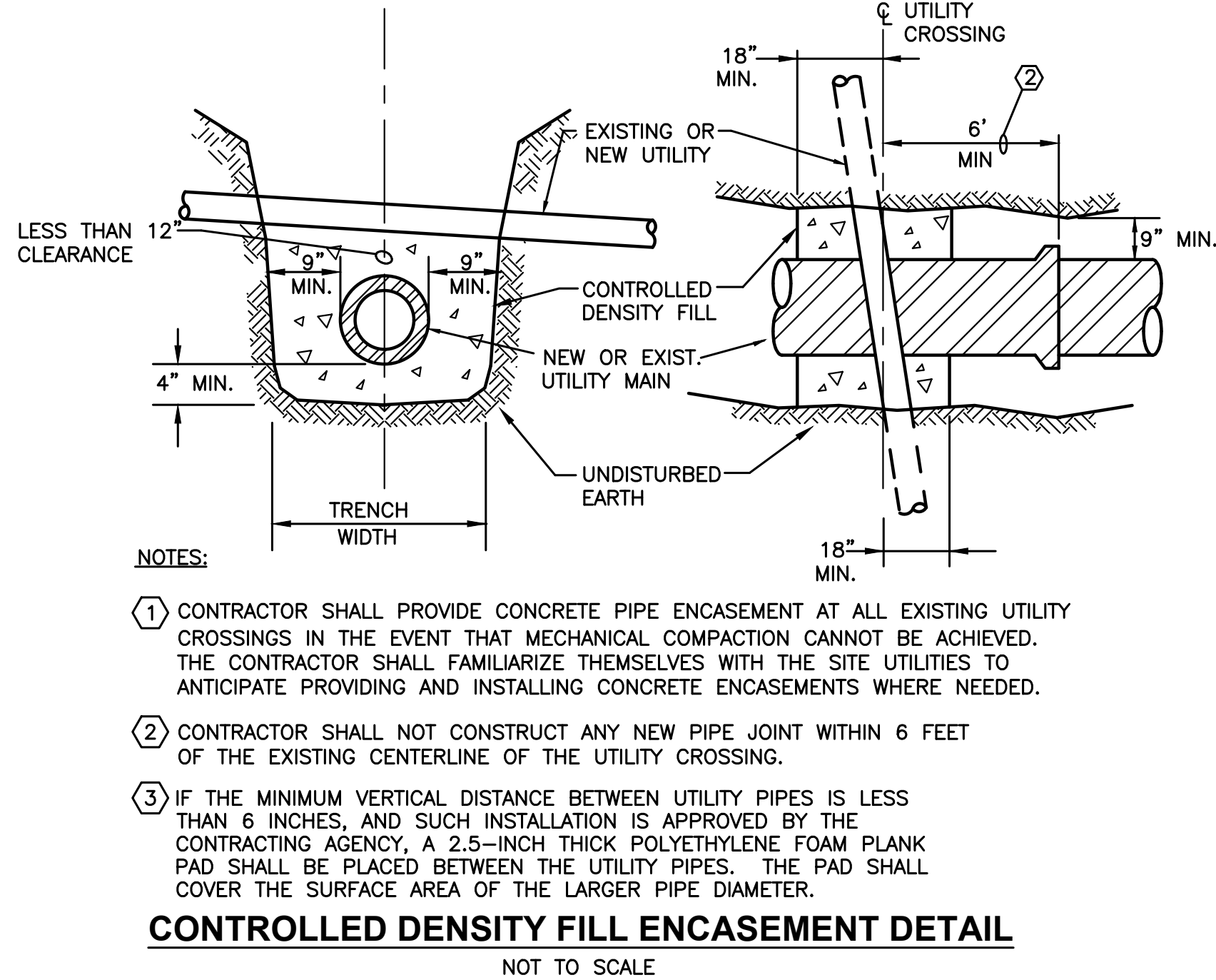
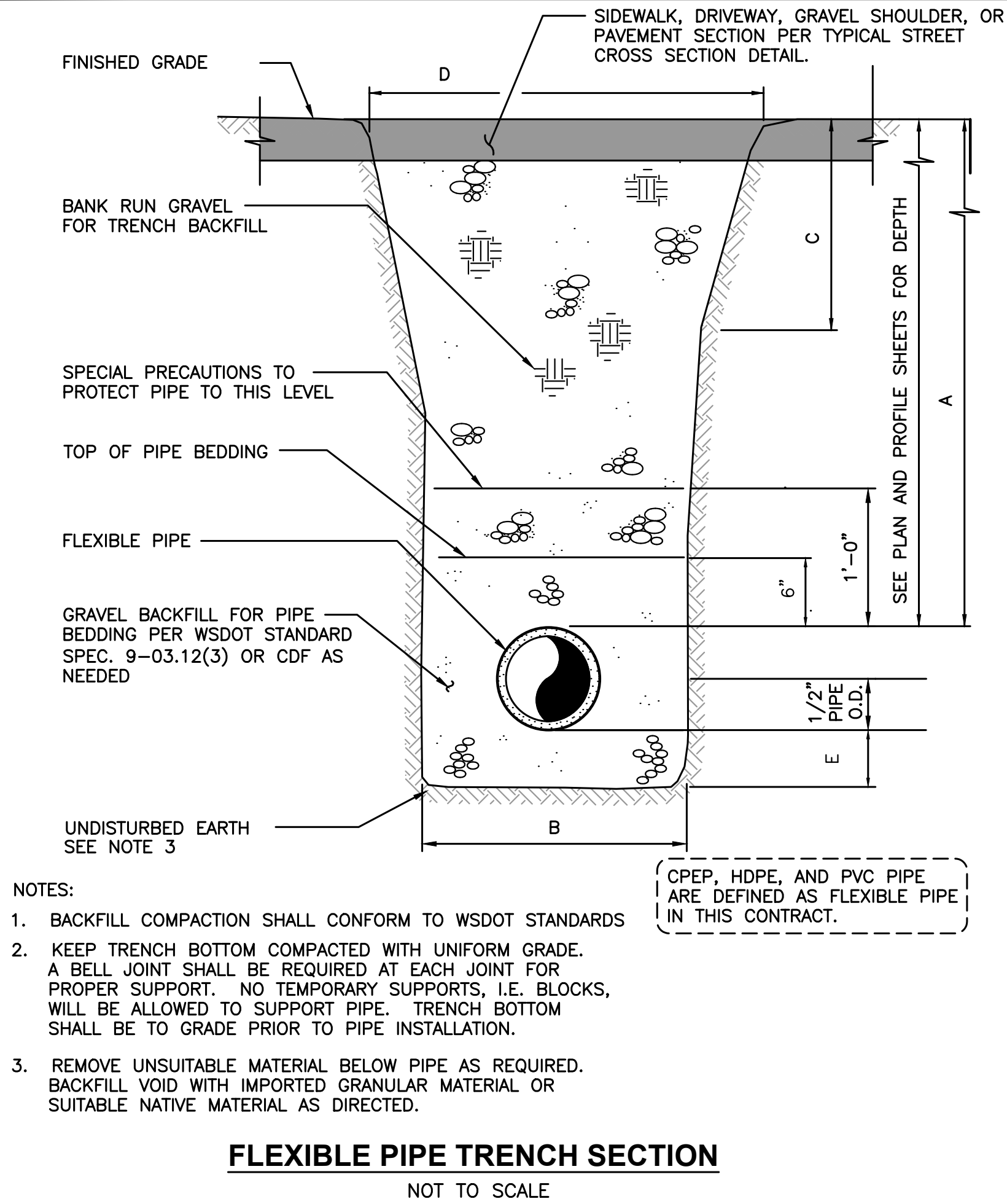
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60% PLANSET		REVISION		
			No.	

ROGER M. KUYKENDALL
ENGINEER
STATE OF WASHINGTON
LICENSE NO. 35188

CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
SEWER DETAILS

SHEET: 22
OF: 29
JOB NO.: 19569
DWG: WATER PLAN

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\Civil\DRN_UTILITY.dwg, 10/6/2025 5:16 PM, STEPHEN MOORE



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DATE: OCT 2025	SCALE: NOTED	DRAWN: S.E.M.	CHECKED: R.W.K.	APPROVED: R.W.K.
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60% PLANSET

DATE

REVISION

No.

CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
STORMWATER & UTILITY DETAILS

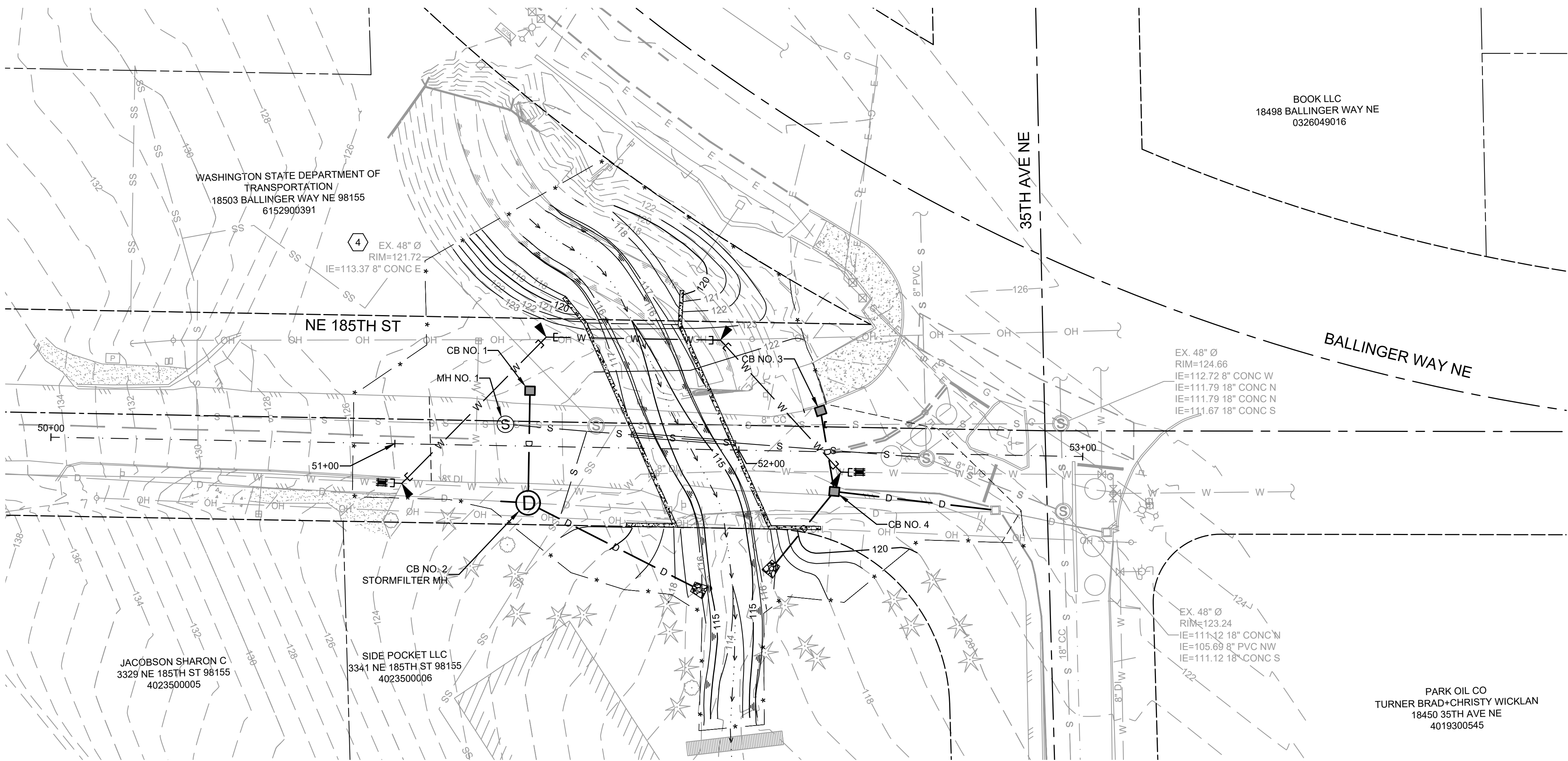
SHEET: 23

OF: 29

JOB NO.: 19569

DWG:DRN_UTILITY

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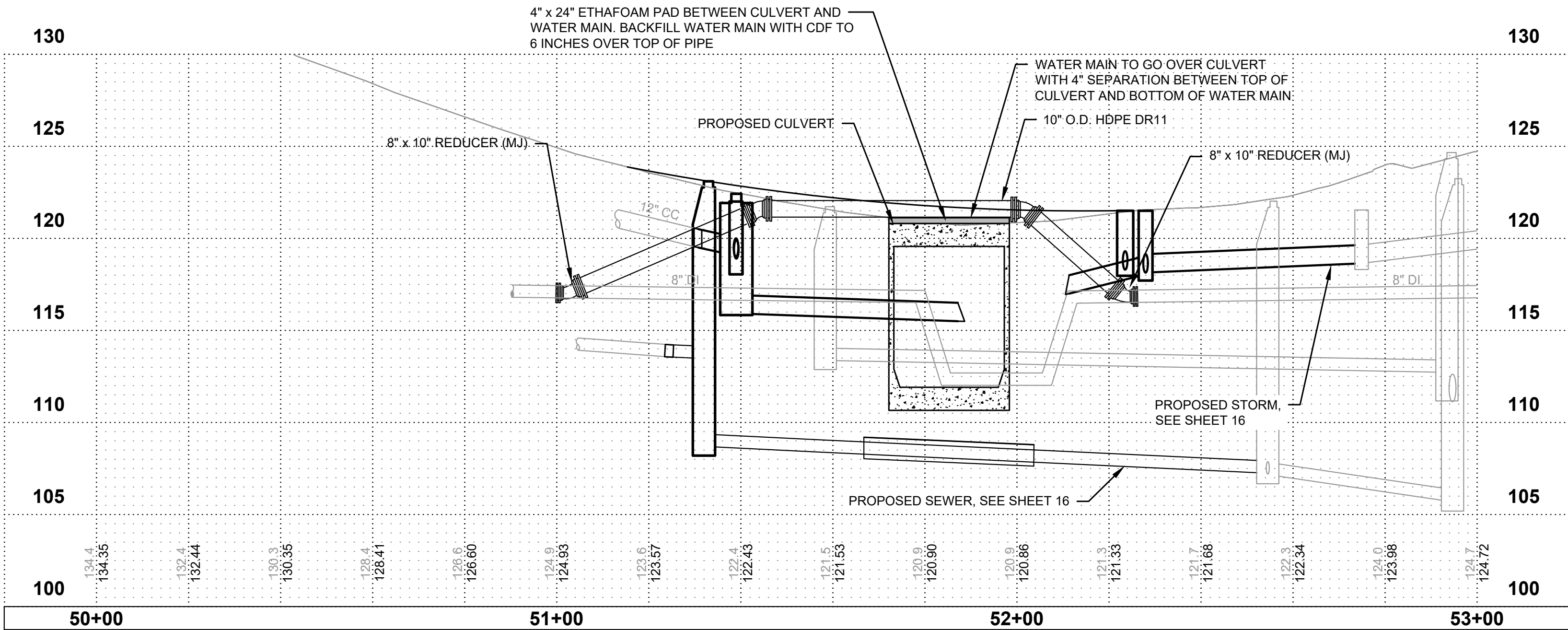


WATER CONSTRUCTION NOTES

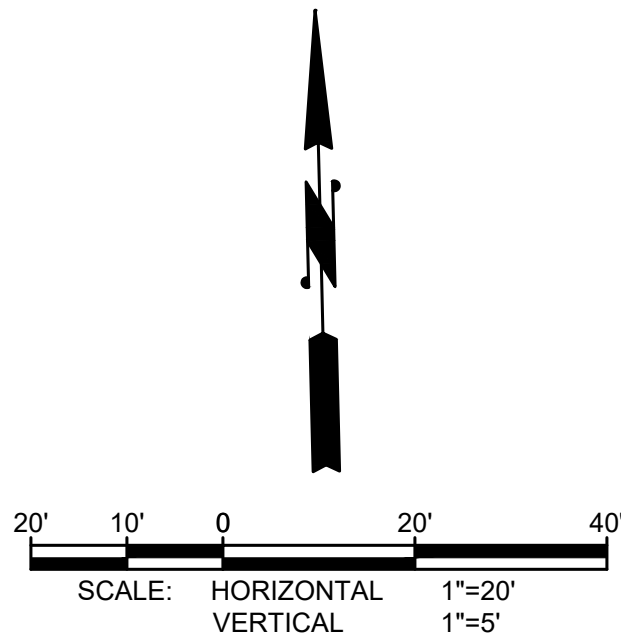
- CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO POTHOLE AND FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY.
- NO CONNECTIONS TO THE EXISTING WATER SYSTEM SHALL BE MADE WITHOUT AN APPROVED BACKFLOW PREVENTION DEVICE AND THE DISTRICTS APPROVAL. PERMANENT CONNECTIONS SHALL NOT BE MADE UNTIL NEW MAINS HAVE BEEN DISINFECTED, FLUSHED, AND HAVE PURITY IN ACCORDANCE WITH DISTRICT REQUIREMENTS. ANY CONNECTION TO THE EXISTING WATER SYSTEM SHALL BE WITNESSED BY THE DISTRICT'S INSPECTOR.
- ALL SERVICE CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE LAKE FOREST PARK WATER DISTRICT REQUIREMENTS.
- ALL FIRE HYDRANTS SHALL BE INSTALLED, INSPECTED, AND ADJUSTED IN ACCORDANCE WITH THE DISTRICTS STANDARD DETAILS, SHEET 15.
- BACKFILL WITH CDF WHERE PIPE HAS LESS THAN 36" OF COVER. MAINTAIN A MINIMUM SEPARATION OF 4" FROM TOP OF BOX CULVERT.

GENERAL NOTES

- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AND ENGINEER.
- A COMPLETE SET OF PLANS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION, AND SHALL REFLECT ANY VARIATION IN CONSTRUCTION FROM THE PLANS. THESE "AS-BUILT" PLANS SHALL BE PROVIDED TO THE DISTRICT AT THE COMPLETION OF CONSTRUCTION.
- THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND WILL NEED FIELD VERIFICATION FOR EXACT ALIGNMENT AND DEPTH. THERE MAY BE EXISTING UTILITIES NOT SHOWN ON THE PLANS.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH SEATTLE CITY POWER & LIGHT FOR UTILITY POLE STABILIZATION IF REQUIRED.
- THE DISTRICT SHALL AT ALL TIMES HAVE ACCESS TO THE WORK AND TO THE LOCATIONS WHERE THE WORK IS IN PREPARATION.
- THE CONTRACTOR SHALL NOTIFY ONE CALL UTILITY LOCATING SERVICE PRIOR TO ANY CONSTRUCTION TO VERIFY LOCATION OF EXISTING UTILITIES, AT (800) 424-5555.
- AFTER THE PIPE AND APPURTENANCES ARE IN PLACE AND THE SYSTEM HAS BEEN SATISFACTORILY PRESSURE TESTED, IT SHALL BE FLUSHED WITH WATER OF SUFFICIENT VELOCITY TO REMOVE ALL DIRT AND OTHER FOREIGN MATERIALS AND DISINFECTED/CHLORINATED IN ACCORDANCE WITH THE DISTRICT STANDARD DETAIL, SHEET 15 AND RECOMMENDED AWWA STANDARDS. THE CONTRACTOR SHALL REQUEST A BACTERIOLOGICAL SAMPLE TO BE TAKEN AT LEAST 24 HOURS AFTER FLUSHING AND DISINFECTING.
- ALL WORK, MATERIALS, CONCRETE BLOCKING AND TESTING OF WATER LINES SHALL CONFORM TO STANDARD DETAILS OF LAKE FOREST PARK WATER DISTRICT AND AWWA STANDARDS.
- THE WATER MAIN SHALL BE INSTALLED WITH MINIMUM OF 36" OF COVER, AS MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE, UNLESS OTHERWISE APPROVED. WHERE UTILITY CONFLICTS OCCUR, THE WATER MAIN SHALL BE LOWERED TO CLEAR AS APPROVED BY THE WATER DISTRICT.
- EXACT LOCATIONS AND CONFIGURATIONS OF WATER METERS AND VAULTS SHALL BE APPROVED BY THE DISTRICT PRIOR TO CONSTRUCTION.
- BEDDING FOR WATER MAINS SHALL BE PROVIDED AS REQUIRED IN THE FLEXIBLE PIPE TRENCH SECTION DETAIL ON SHEET 13 AND THE SPECIFICATIONS.
- PRIOR TO BACKFILLING, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED FOR BACKFILLING BY THE DISTRICT.

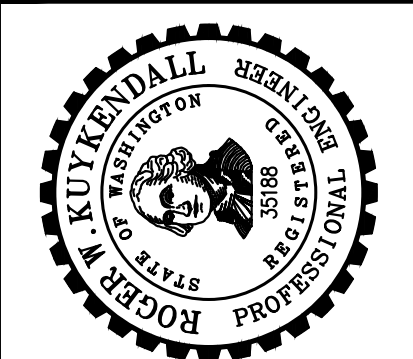


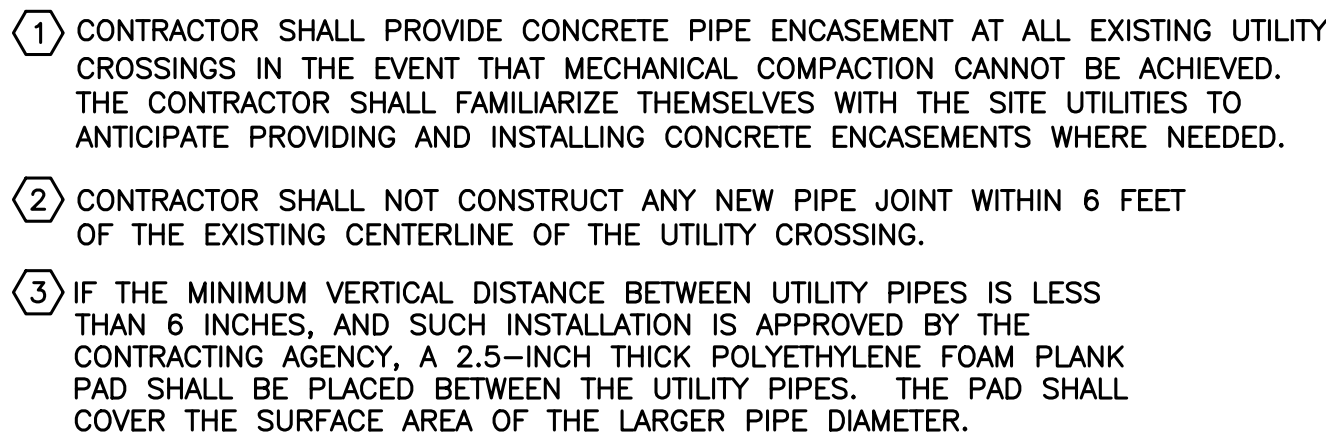
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TWO INCHES AT FULL SCALE. IF
NOT, SCALE ACCORDINGLY



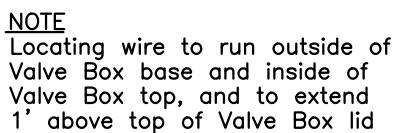
DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

60% PLANSET	DATE	APPD
	REVISION	
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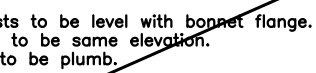
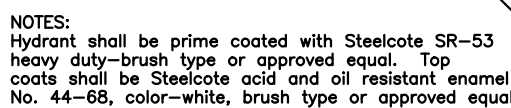




NOT TO SCALE



VALVE BOX
NO SCALE

ELEVATION

FIRE HYDRANT ASSEMBLY

NO SCALE

Rev. 5/12/05 DLW
FIRE HYDRANT ASSEMBLY.DWG

MODIFIED



2 - 1/2" dia. rods
for 10" size and
smaller
2 - 1" dia. rods
for sizes larger
than 10"

GATE VALVE

The safe bearing loads given in the following table are for horizontal thrusts when the depth of cover over the pipe exceeds 2 feet.

SOIL	SAFE BEARING LB. LBS./SQ. FT.
CLAY	1000
SAND	2000
GRAVEL	3000
ROCK	4000
CONCRETE	5000
STEEL	6000
BRICK	7000
GLASS	8000
WOOD	9000
PLASTER	10000
PAINT	11000
GLUE	12000
WAX	13000
SOAP	14000
SHOE	15000
HAIR	16000
TOOTH	17000
NOSE	18000
EYE	19000
EAR	20000
MOUTH	21000
SKIN	22000
BLOOD	23000
TEARS	24000
SWEAT	25000
URINE	26000
FEACES	27000
SPIT	28000
COPIES	29000
REPRODUCTION	30000

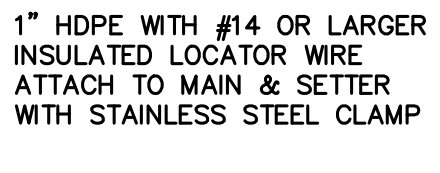
*Muck, peat, etc.	0
Soft caly	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000
Hard shale	10,000

*In muck or peat, all thrusts shall be restrained by piles or tie rods to solid foundations or by removal of muck or peat and replacement with ballast of sufficient stability to resist thrusts.

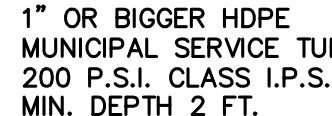
NO SCALE

Rev. June 2003
Concrete Blocking.dwg

COPPER SETTER SHALL BE SET LEVEL AND CENTERED IN THE METER BOX.




METER BOX SHALL BE INSTALLED FLUSH W/FINAL GRADE
AND MUST BE SIZED TO ALLOW FOR MIN. CLEARANCE REQUIREMENTS.



*LARGER SIZE METERS REQUIRE BIGGER METER BOX

Rev. 7/07 - ACH
Service. One Inch dia

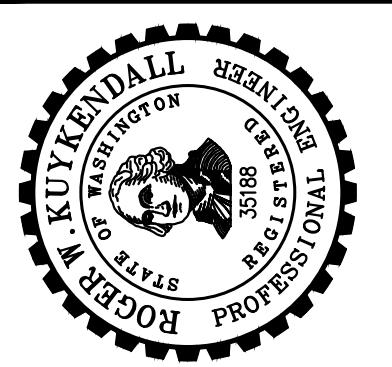


0 1" 2"

TWO INCHES AT FULL SCALE. 1 NOT. SCALE ACCORDINGLY

DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

No.	REVISION	DATE	APPD
60% PLANSET			



CITY OF LAKE FOREST PARK

KING COUNTY WASHINGTON

L90 CULVERT REPLACEMENT

WATER DETAILS

WATER DETAILS

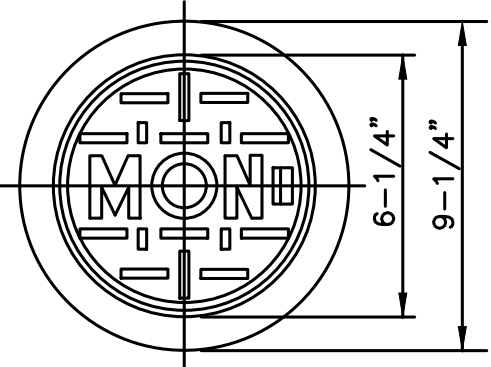
SHEET: 25

OF: **29**

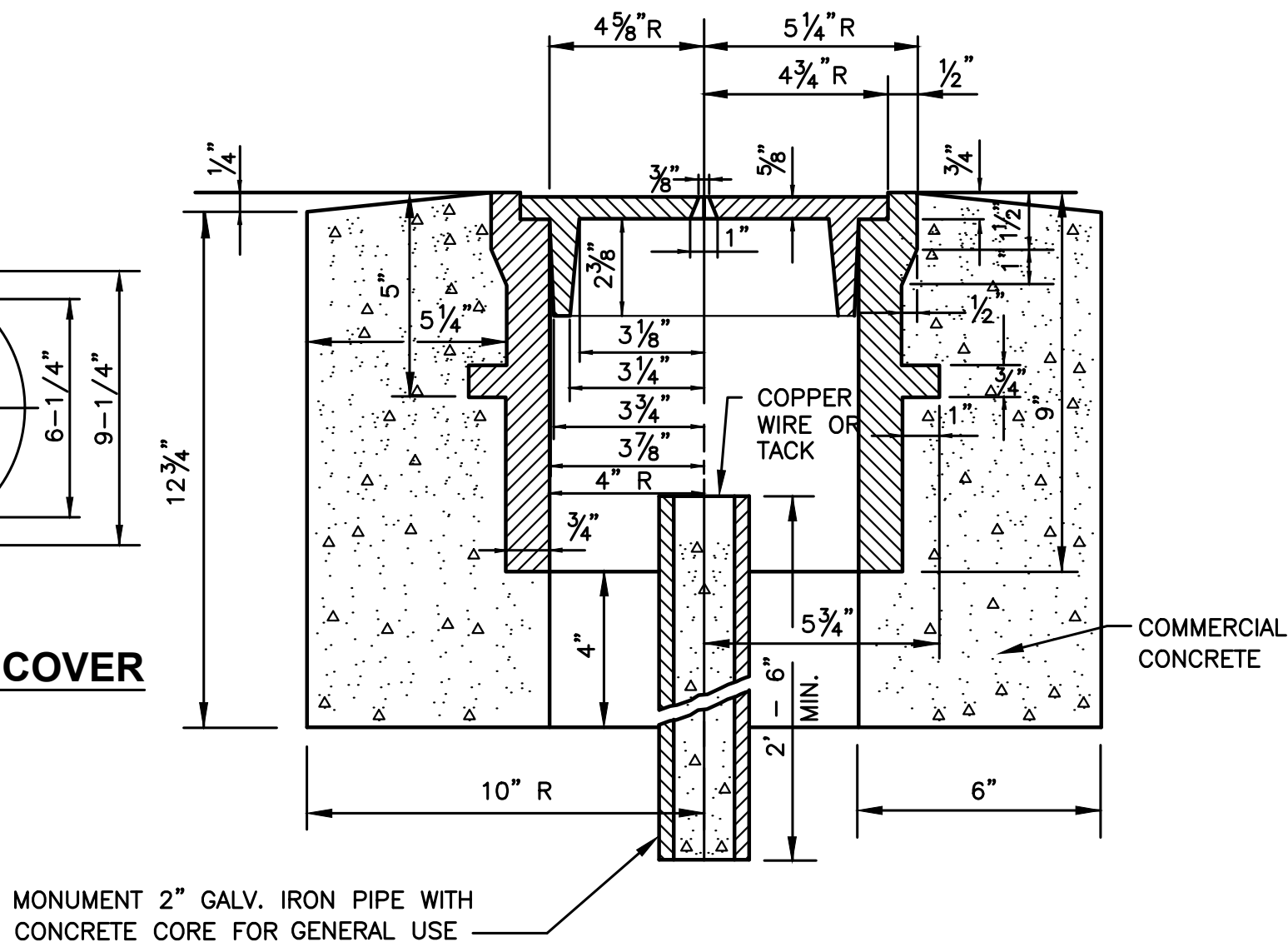
JOB NO.: 19569

DWG:WATER PLAN

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\Civil\RD_RESTORE.dwg, 10/6/2025 5:17 PM, STEPHEN MOORE

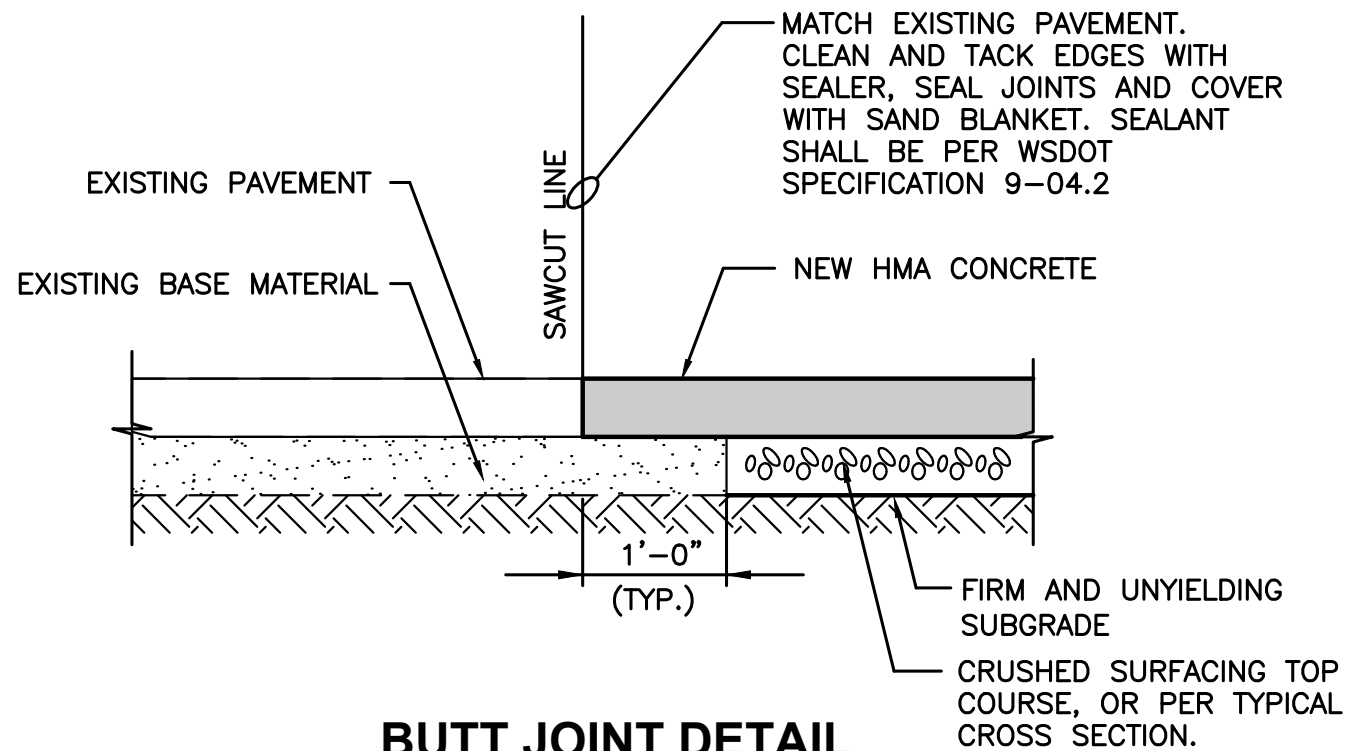


MONUMENT COVER



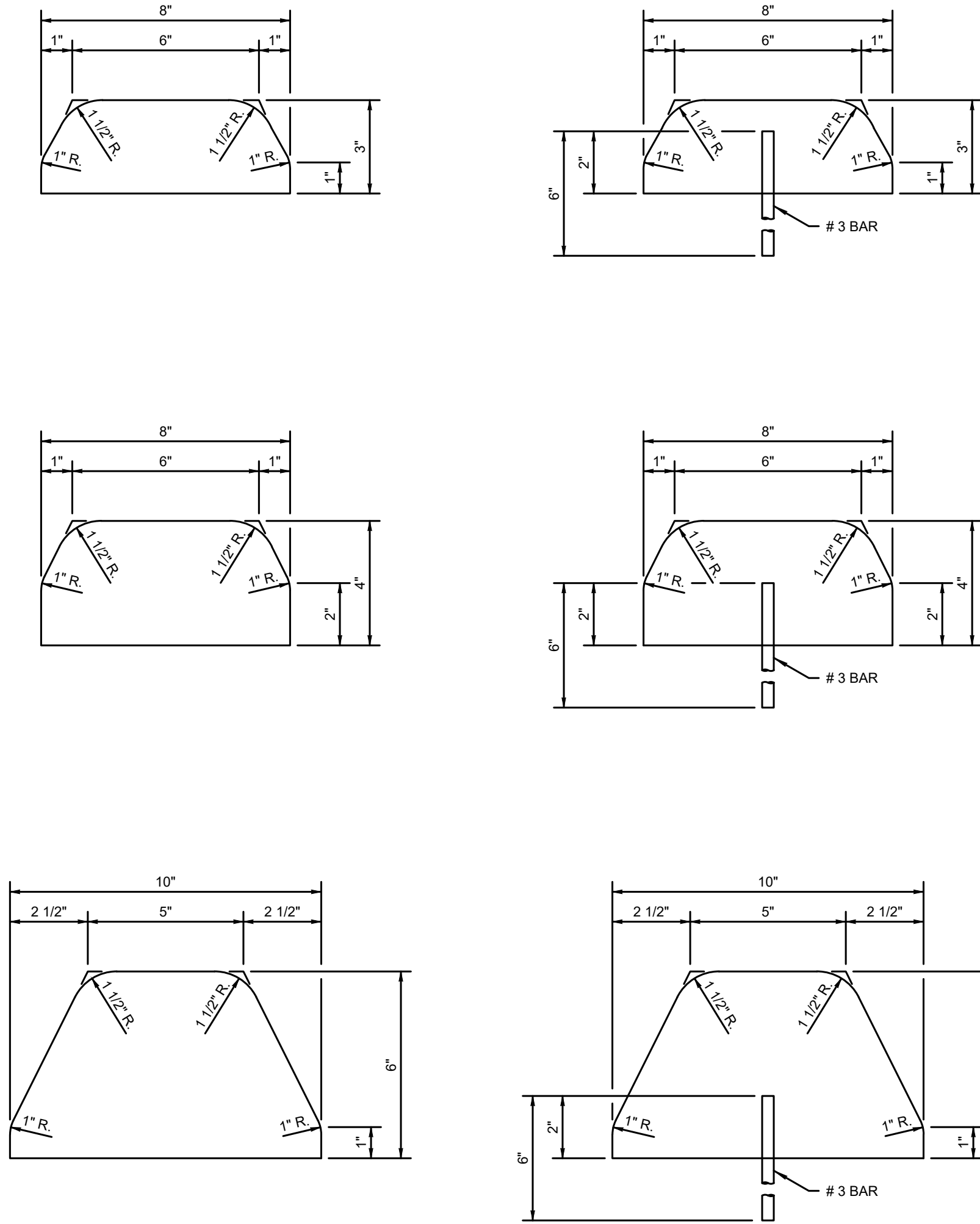
PRECAST MONUMENT CASE AND COVER

NOT TO SCALE



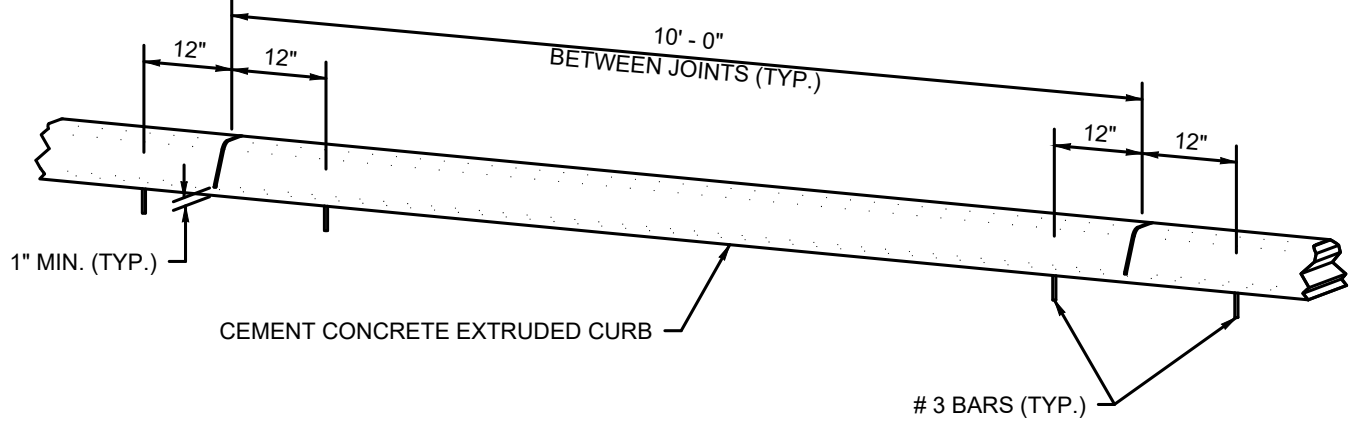
BUTT JOINT DETAIL

NOT TO SCALE



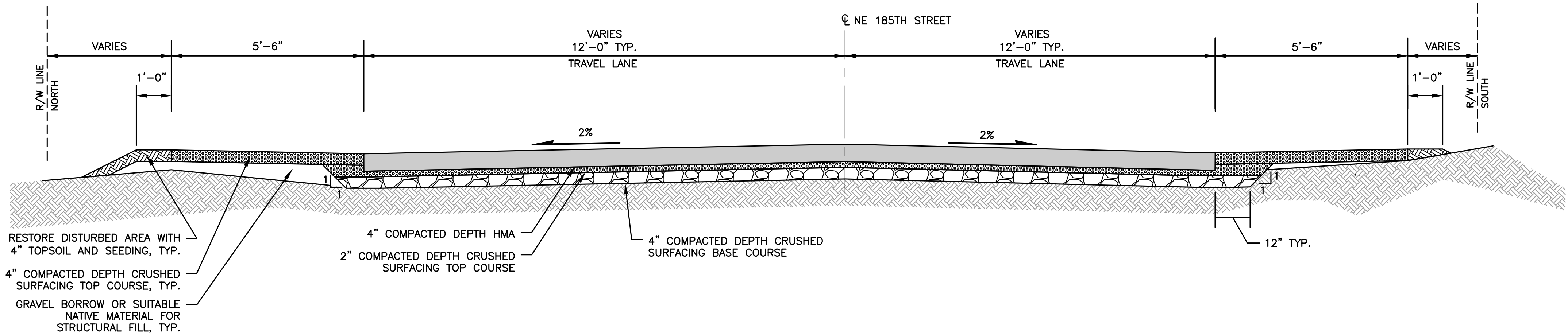
WSDOT STANDARD PLAN F-10.42-00

SCALE: NOT TO SCALE



NOTE

JOINTS MAY BE FORMED DURING INSTALLATION USING
A RIGID DIVIDER OR SAWCUT AFTER CONCRETE CURES
TO MINIMUM STRENGTH.



TYPICAL CROSS-SECTION NE 185TH STREET

NOT TO SCALE



TWO INCHES AT FULL SCALE. IF
NOT, SCALE ACCORDINGLY



Gray & Osborne, Inc.

CONSULTING ENGINEERS
3710 187TH STREET, NE BLDG. B, SUITE 210
ARLINGTON, WA 98223 • (360) 654-5450

DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

	DATE	APPD
60% PLANSET	REVISION	
	No.	



CITY OF LAKE FOREST PARK

KING COUNTY WASHINGTON

L90 CULVERT REPLACEMENT

ROAD RESTORATION DETAILS

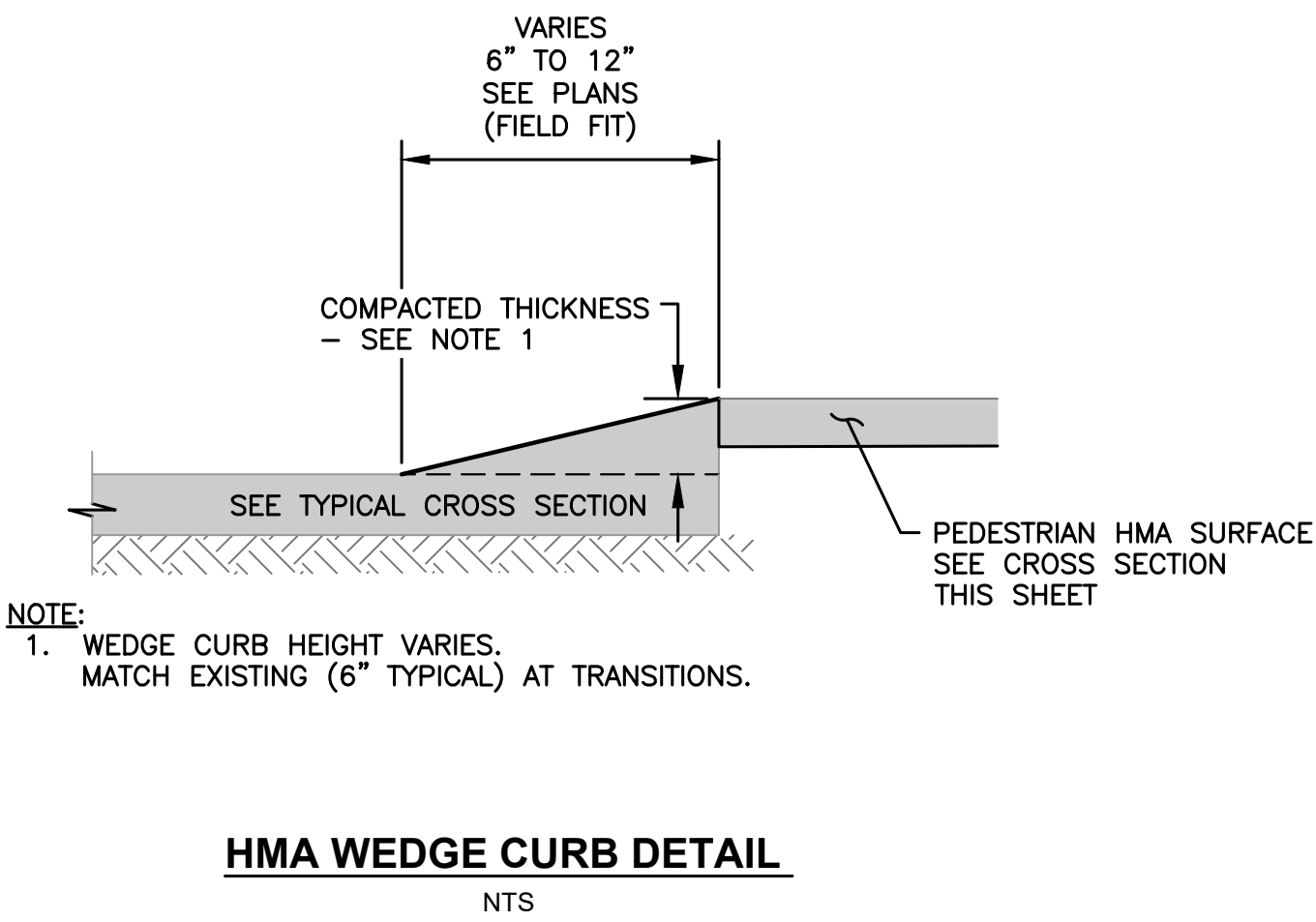
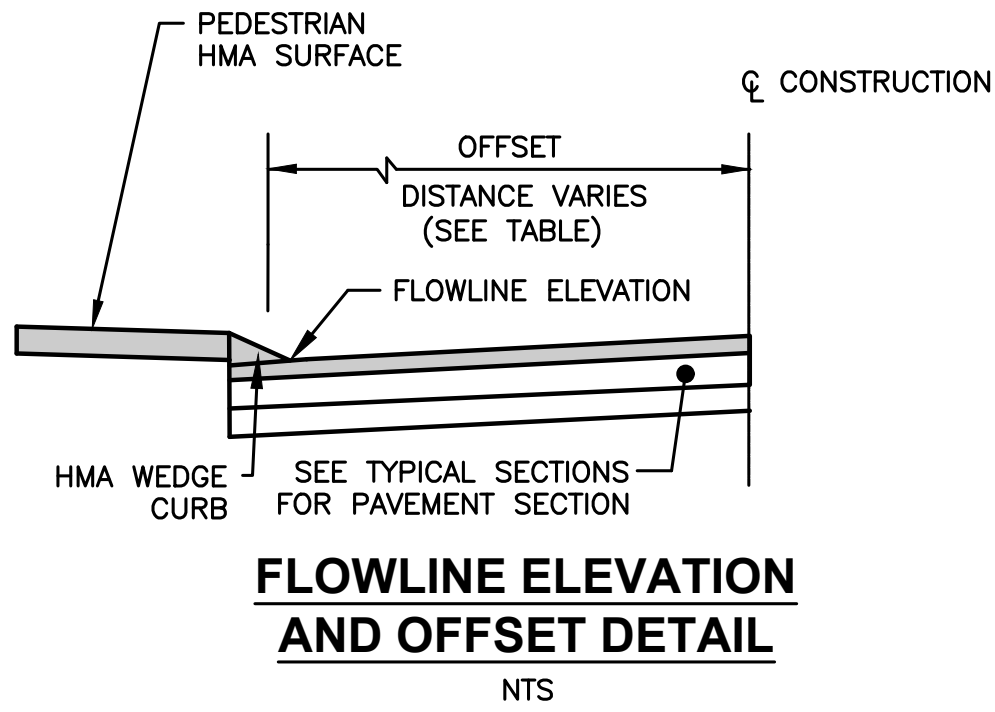
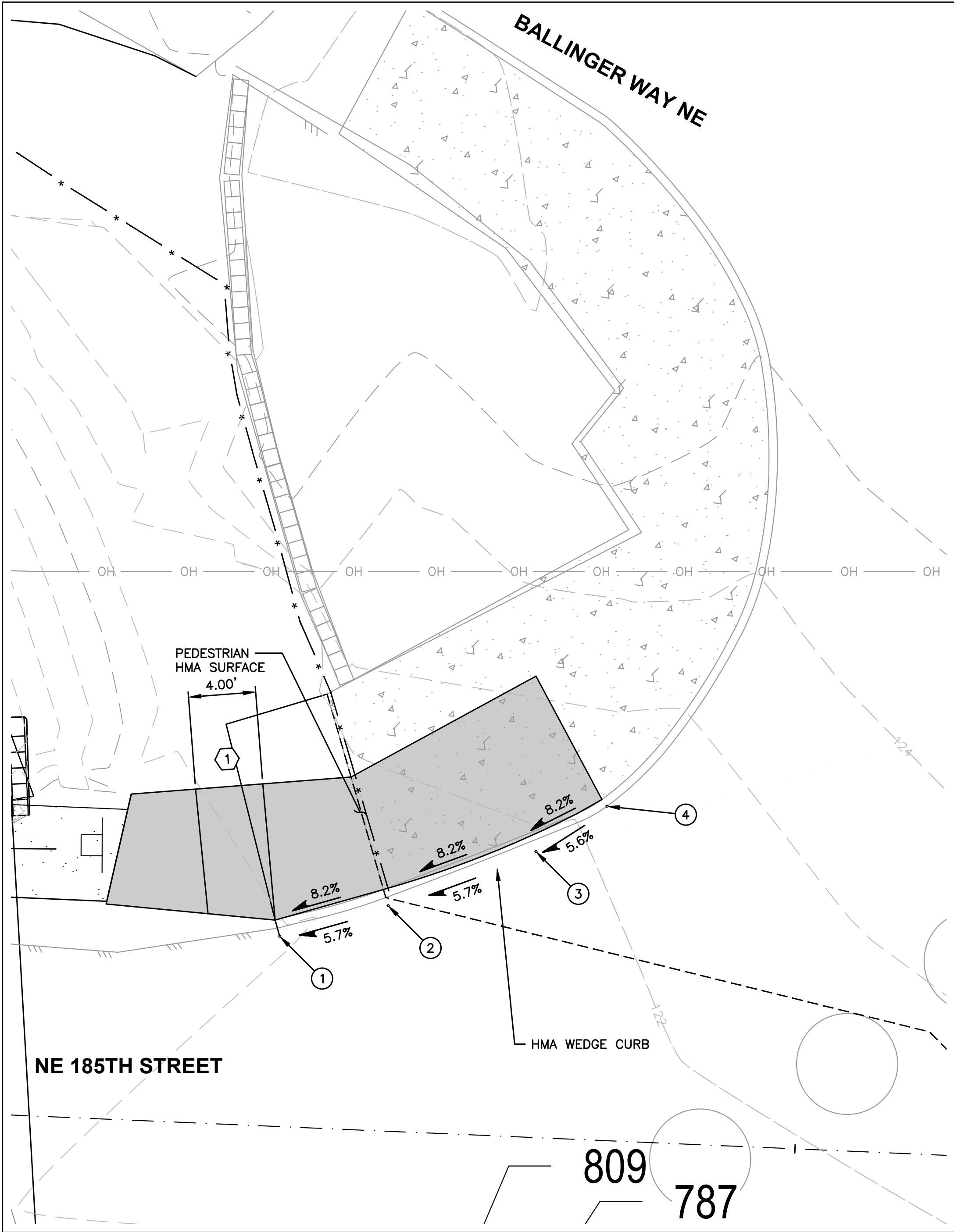
SHEET: 27

OF: 29

JOB NO.: 19569

DWG: RD_RESTORE

L:\Lake Forest Park\19569.02 L90 Culvert Replacement - Civil plans\Civil\02 PLANSET\Civil\Curb Return.dwg, 10/6/2025 5:17 PM, STEPHEN MOORE

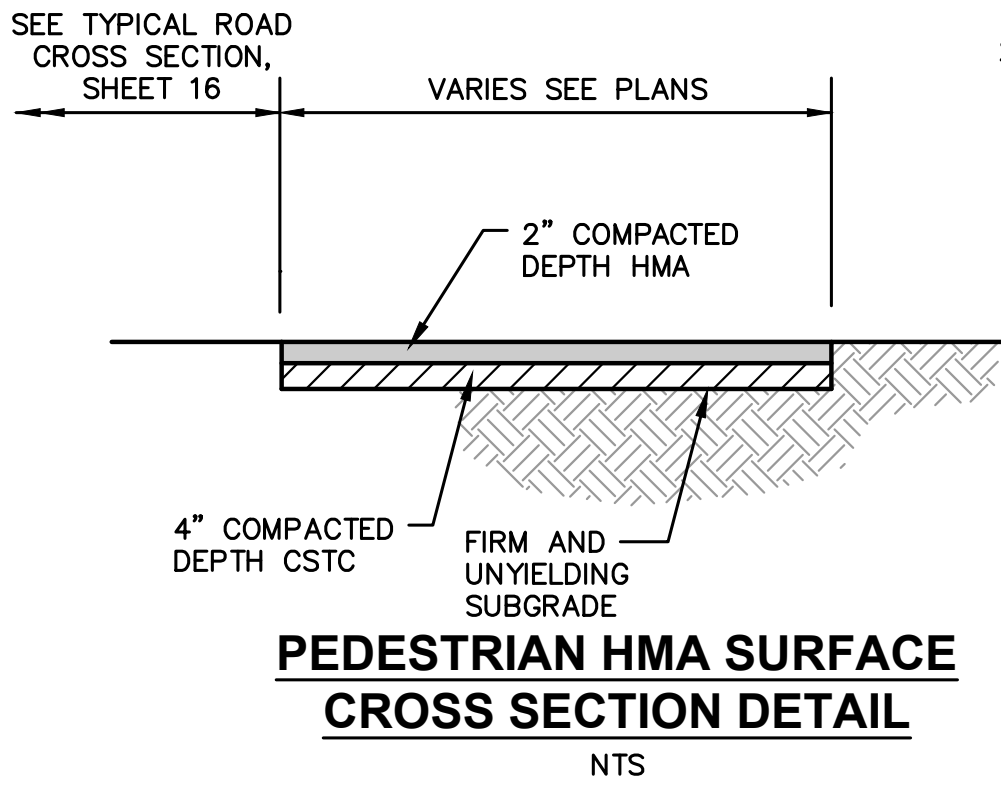


NE 185TH STREET/ BALLINGER WAY NE SW CORNER CURB RETURN TABLE

NUMBER	TYPE	STATION	OFFSET	② FLOWLINE ELEVATION	CURB HEIGHT	DESCRIPTION	CENTER
①	--	52+18.89	11.29 LT	120.96 *	6" (MATCH EX.)		
②	PC	52+25.24	13.39 LT	121.34	CALC		52+05.96
③	PT/PI	52+33.87	16.98 LT	121.87	CALC		71.92 LT
④	--	52+37.97	19.85 LT	122.15 *	0"		

② ADDITIONAL CURB RAMP NOTES

1. LANDING. 4'x4' MIN. OR AS NOTED. CROSS SLOPE SHALL NOT EXCEED 1.5%.
2. ELEVATIONS WITH " * " CONTRACTOR SHALL MATCH EXISTING ELEVATIONS AT EXISTING CURB/SIDEWALK TIE-INS. (APPROXIMATE ELEVATIONS LISTED).



0 1" 2"
TWO INCHES AT FULL SCALE. IF
NOT, SCALE ACCORDINGLY

DATE: OCT 2025	SCALE: NOTED	DRAWN: S.E.M.	CHECKED: R.W.K.	APPROVED: R.W.K.
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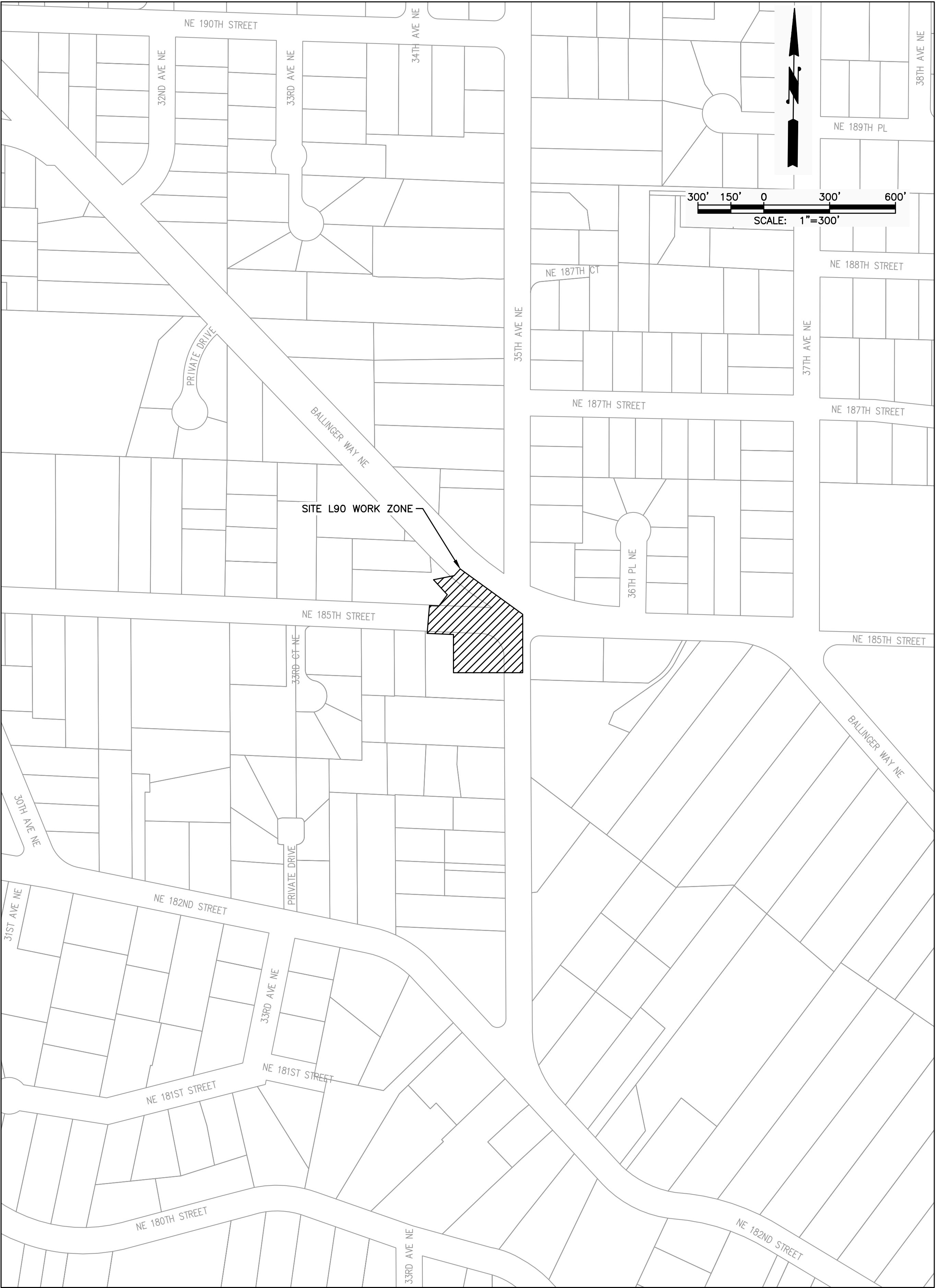
	DATE	APPD
60% PLANSET	REVISION	
	No.	



CITY OF LAKE FOREST PARK
KING COUNTY WASHINGTON
L90 CULVERT REPLACEMENT
CURB RETURN

SHEET: 28
OF: 29
JOB NO.: 19569
DWG: CURB RETURN

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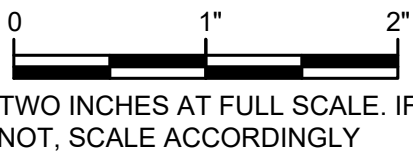
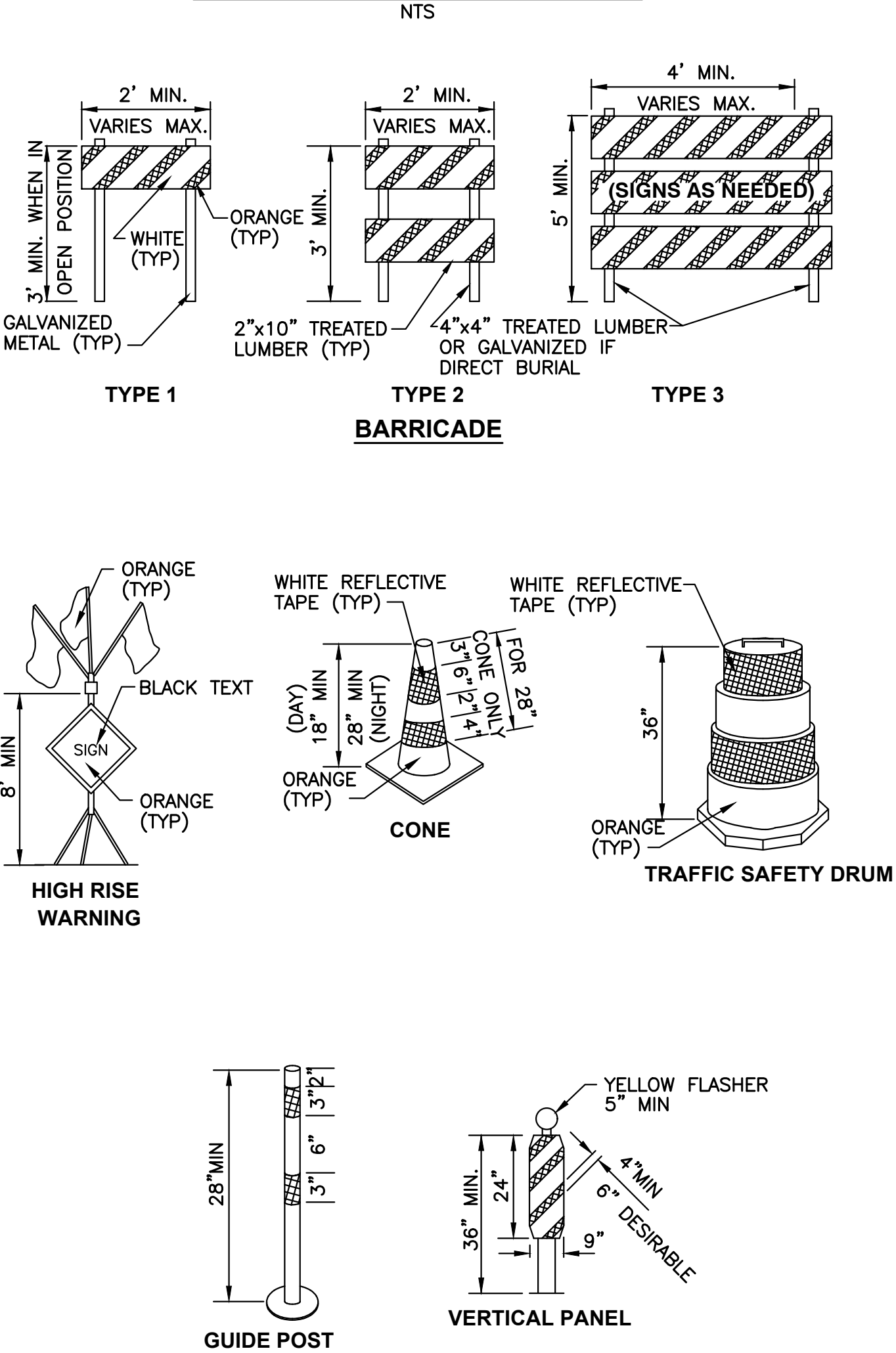
GENERAL TRAFFIC CONTROL NOTES:

1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT) O.C.
2. ALL SIGNS ARE BLACK (NON-REFL.) ON ORANGE (REFL.), EXCEPT AS NOTED.
3. EXTEND DEVICES TAPER ACROSS SHOULDER WHERE SHOWN. NO ENCROACHMENT IN TRAVELED LANE SHALL BE PERMITTED. IF ENCROACHMENT IS NECESSARY, THE LANE SHALL BE CLOSED.
4. MOTORCYCLE USE EXTREME CAUTION SIGNS SHALL BE INSTALLED WHEN THE FOLLOWING ROADWAY CONDITIONS EXIST:
 - GROOVED PAVMENT
 - ABRUPT LANE EDGE
 - STEEL PLATES
 - LOOSE GRAVEL OF EARTHSPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL BE INSTALLED ALONG WITH MOTORCYCLES USE EXTREME CAUTION SIGNS
5. ALL SIGNS TO BE IN PLACE FOR 3 DAYS OR MORE SHALL BE POST MOUNTED
6. ALL BUSINESS ACCESSSES TO ROAD CLOSURE SHALL BE BARRICADED W/ TYPE 3 BARRICADES AND TRAFFIC DRUMS.
7. DETOUR ROUTES FOR EACH PROJECT TO BE DEVELOPED AT 60% DESIGN.
8. CONTRACTOR SHALL NOT CLOSE ROAD UNTIL PRECAST CULVERT SECTIONS HAVE BEEN APPROVED FOR SHIPMENT.
9. MAXIMUM ROAD CLOSURE SHALL BE LESS THAN TWO WEEKS.

DETOUR CALLOUTS

- | | | |
|---|--|--|
| ① | R11-4, 60"x30"
BLACK ON WHITE | |
| ② | M4-9L, 30"x24"
BLACK ON ORANGE | |
| ③ | M4-9R, 30"x24"
BLACK ON ORANGE | |
| ④ | SPECIAL, 60"x48"
BLACK ON WHITE | |
| ⑤ | W20-2, 48"x48"
BLACK ON ORANGE | |
| ⑥ | M4-8a, 30x24
BLACK ON ORANGE | |
| ⑦ | R3-1, RED ON BLACK
ON WHITE | |
| ⑧ | R3-2, RED ON BLACK
ON WHITE | |
| ⑨ | R11-3, 60"x30"
BLACK ON WHITE | |
| ⑩ | W20-1, 48"x48"
BLACK ON ORANGE | |
| ⑪ | TYPE 3 BARRICADE
SEE TRAFFIC CONTROL DEVICES DETAIL | |
- PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL DEVICES



DATE:	OCT 2025
SCALE:	NOTED
DRAWN:	S.E.M.
CHECKED:	R.W.K.
APPROVED:	R.W.K.

		APPD
		DATE
		REVISION
		No.

