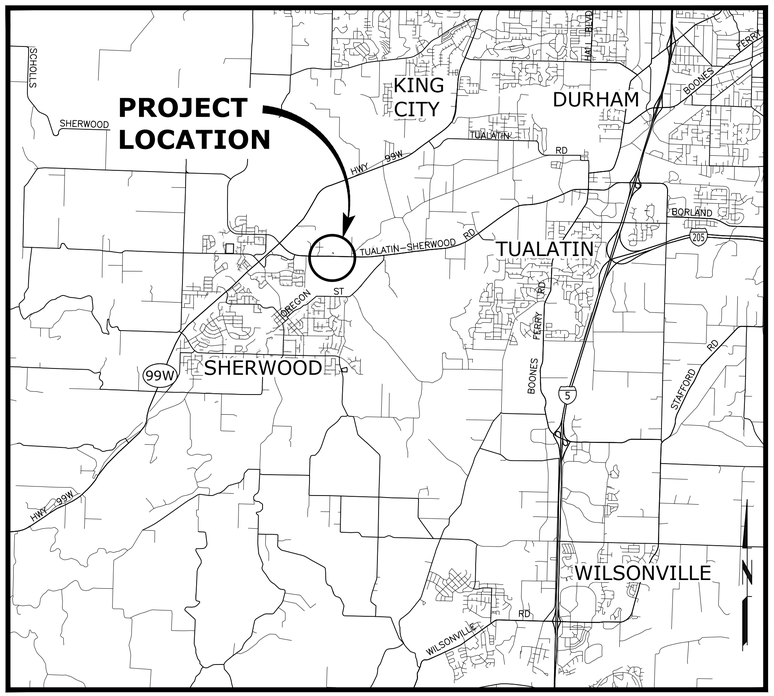
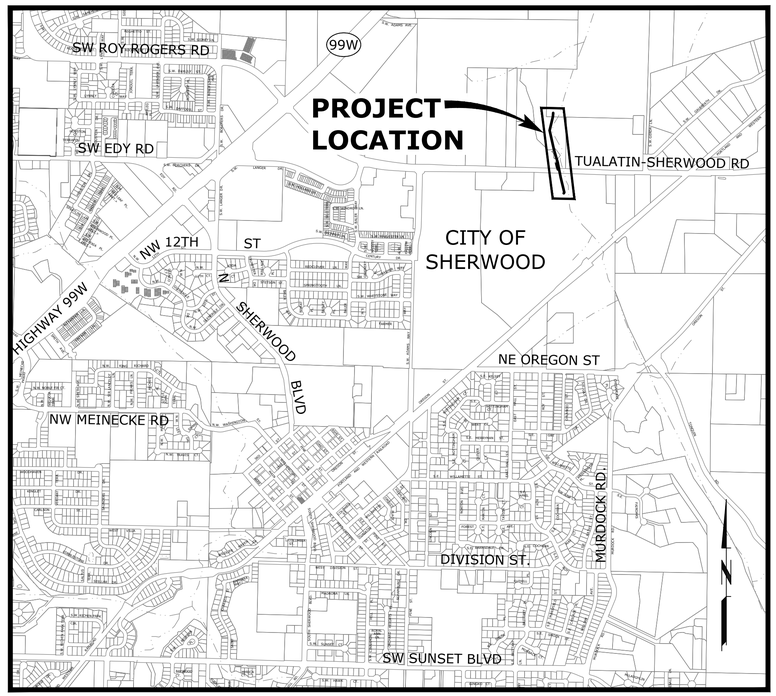
CITY OF SHERWOOD
ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE I

FEBRUARY 2021



VICINITY MAP
SCALE: 1"=5,000'

INDEX OF DRAWINGS



LOCATION MAP
SCALE: 1"=1,000'

murraysmith

888 SW 5TH AVENUE, SUITE 1170
PORTLAND, OREGON 97204
P 503.225.9010

811 Know what's **below.** **Call** before you dig.

THIS DESIGN COMPLIES WITH ORS 92.044 (7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN ONE (1) FOOT OF A SURVEY MONUMENT LOCATION SHOWN ON A SUBDIVISION OR PARTITION PLAT. NO DESIGN EXCEPTION NOR FINAL FIELD LOCATION CHANGES SHALL BE PERMITTED IF THAT CHANGE WOULD CAUSE ANY UTILITY INFRASTRUCTURE TO BE PLACED WITHIN THE PROHIBITED AREA.

ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-246-6699.)

GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, COUNTY, STATE, AND UTILITY CONSTRUCTION PERMITS, AND SHALL CONTACT EACH PERMITTING AGENCY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES BEFORE STARTING CONSTRUCTION.

2. THE LOCATIONS OF ALL EXISTING UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON A FIELD SURVEY AND INFORMATION SUPPLIED BY UTILITY COMPANIES. LOCATIONS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY LOCATIONS, ELEVATIONS, TYPE AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING/CONDUITS AND SHALL ADJUST NEW PIPING/CONDUITS AS REQUIRED. POTHOLING AND TRENCH EXCAVATION SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQUIRED ELEVATION AND ALIGNMENT ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT REWORK. ADJUSTMENTS SHALL BE EXPECTED AND CONSIDERED INCIDENTAL. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS NOT SHOWN ON THE PLANS AND SHALL KEEP EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. WHERE INTERRUPTION OF EXISTING FACILITIES IS REQUIRED, CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO ENGINEER AND THE AFFECTED UTILITY. CONTRACTOR SHALL ARRANGE FOR THE RELOCATION OF ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

3. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS-DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS, PRIOR TO EXCAVATING, BORING, OR POTHOLING.

4. NO ADDITIONAL PAYMENT SHALL BE MADE FOR UTILITY RELOCATION COORDINATION OR DELAYS CAUSED BY UTILITY CONFLICTS. ALL COSTS RELATED TO UTILITY COORDINATION AND RELOCATION, INCLUDING ADDITIONAL POTHOLING, ARE TO BE CONSIDERED INCIDENTAL AND INCLUDED IN THE UNIT PRICES OF THE BID. NO ADDITIONAL PAYMENT SHALL BE MADE FOR REWORK AND DELAYS RESULTING FROM FAILURE TO POTHOLE FOR UTILITIES SUFFICIENTLY IN ADVANCE OF WORK.

5. NOT USED

6. SURVEY DATA COMPILED BY AKS ENGINEERING & FORESTRY. ALL ELEVATIONS SHOWN ARE BASED ON VERTICAL DATUM NAVD 88. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SURVEYS. SEE CONTRACT DOCUMENT FOR SURVEY REQUIREMENTS.

7. A LOCAL DATUM PLANE SCALED FROM OREGON STATE PLANE NORTH 3601 NAD83(2011) EPOCH 2010.0000 HAS BEEN ESTABLISHED BY AKS BY HOLDING A PROJECT MEAN GROUND COMBINED SCALE FACTOR OF 1.0001033898 AT A CALCULATED CENTRAL PROJECT POINT WITH GRID VALUES OF (NORTH 453397.31, EAST 7552849.06). THE MERIDIAN CONVERGENCE ANGLE AT THE CALCULATED CENTRAL POINT IS -1°39'09". THE STATE PLANE COORDINATES WERE DERIVED FROM THE TRIMBLE VRS NOW NETWORK.

8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE PLANS AND PROJECT SPECIFICATIONS.

9. CONTRACTOR SHALL KEEP AND MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. CONTRACTOR TO KEEP ACCURATE "AS-BUILT" RECORD COPY OF PLANS INDICATING ALL CHANGES IN GRADE, ALIGNMENT, FITTINGS AND MATERIALS INSTALLED AND ANY OTHER UTILITIES OR OBSTACLES NOT SO INDICATED ON THESE PLANS. "AS-BUILT" PLANS TO BE RETURNED TO ENGINEER AT COMPLETION OF PROJECT.

10. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL HOMES AND BUSINESSES AT ALL TIMES. CONTRACTOR SHALL MAINTAIN ACCESS FOR MAIL, TRASH COLLECTION AND SCHOOL BUS SERVICES AT ALL TIMES. PROVIDE WRITTEN NOTICE TO ALL PROPERTY OWNERS AT LEAST TWO BUSINESS DAYS IN ADVANCE OF WORK IN AND/OR CROSSING OF DRIVEWAYS.

11. CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER 48 HOURS BEFORE STARTING CONSTRUCTION, AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS. CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY TESTING OR REQUIRED INSPECTION.

12. ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENT NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL FIRST BE APPROVED BY THE ENGINEER. ANY ALTERATIONS OR VARIANCE FROM THESE PLANS SHALL BE DOCUMENTED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER. ANY PROPOSED CHANGES IN CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING AND APPROVED BY ENGINEER PRIOR TO COMMENCING WORK.

13. CONTRACTOR SHALL PROTECT ALL PROPERTY CORNERS, SURVEY MONUMENTS AND CONTROL POINTS. SURVEY MONUMENTS OF THIS TYPE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE, WITH APPROPRIATE SURVEYS FILED WITH THE COUNTY SURVEYOR.

14. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED OR REPLACED MATERIAL AND EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

15. ALL STRUCTURES, LOTS, LANDSCAPING, SWALES, DITCHES, SIDEWALK, CONCRETE CURB AND GUTTER, ASPHALT CONCRETE, SPEED BUMPS, FENCES, WALLS, MAILBOXES, SIGNS, POLES, GUY WIRES, PIPING, AND UTILITIES DISTURBED DURING CONSTRUCTION TO BE RESTORED PER CITY OF SHERWOOD STANDARDS UNLESS OTHERWISE SPECIFIED. CONTRACTOR SHALL REPAIR ALL UTILITY SERVICES DAMAGED DURING CONSTRUCTION. ALL SUCH REPAIRS SHALL BE CONSIDERED INCIDENTAL TO PIPELINE INSTALLATION.

16. CONTRACTOR SHALL PROTECT TRAFFIC AT ALL TIMES DURING CONSTRUCTION. ALL TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY CITY, COUNTY AND STATE AS REQUIRED AND IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS TO THE ENGINEER PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY. SEE SPECIAL SPECIFICATIONS FOR DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EMERGENCY VEHICLE ACCESS TO ALL PROPERTIES AT ALL TIMES.

17. CONSTRUCTION SHALL BE CONFINED TO PERMANENT EASEMENTS, TEMPORARY CONSTRUCTION EASEMENTS, OR PUBLIC RIGHT-OF-WAY ONLY. WORK SHALL NOT ENCROACH BEYOND THE RIGHT-OF-WAY WITHOUT APPROVAL. IF AREAS OR FEATURES OUTSIDE DESIGNATED CONSTRUCTION ZONES SUSTAIN IMPACT FROM CONTRACTORS ACTIVITIES, CONTRACTOR SHALL RESTORE TO PRECONSTRUCTION CONDITION AT NO COST TO THE CITY.

18. CONTRACTOR TO INSTALL PERIMETER FENCE AROUND THE WORK ZONE AND LIMIT ALL CONSTRUCTION ACTIVITY INSIDE THE WORK ZONE. NO EQUIPMENT OR SOIL DISTURBANCE ALLOWED OUTSIDE THE WORK ZONE.

19. ALL CONCRETE SHALL BE A MINIMUM OF 3300 PSI STRENGTH.

20. NOT USED

21. NOT USED

22. COMPLY WITH OREGON ADMINISTRATION RULE (OAR) CHAPTER 333 RULES FOR REQUIRED WATERLINE - SEWER LINE SEPARATION AND CROSSING REQUIREMENTS.

23. ALL PIPING SHALL HAVE A MINIMUM OF 3 FEET OF COVER FROM TOP OF PIPE TO STREET GRADE OR OTHER FINISH GRADE.

24. AT THE END OF EACH WORK DAY, ALL OPEN TRENCHES SHALL BE BACKFILLED OR ADEQUATELY FENCED AND PROTECTED FROM THE PUBLIC, AND ALL TRENCHES WITHIN STREETS SHALL BE TEMPORARILY PAVED OR AC COLD PATCHED TO THE SATISFACTION OF THE ENGINEER.

25. THE CONTRACTOR SHALL COMPLY WITH ALL CITY OF SHERWOOD REQUIREMENTS FOR WORK IN AND RESTORATION OF CITY STREETS AND RIGHT-OF-WAYS. SEE CURRENT REVISION OF CITY OF SHERWOOD ENGINEERING DESIGN AND STANDARD DETAILS MANUAL FOR DETAILS.

26. CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ZONE SIGNS AT LOCATIONS TO BE DETERMINED BY ENGINEER 10 DAYS PRIOR TO BEGINNING OF CONSTRUCTION. TEMPORARY SIGNS SHALL BE CONSTRUCTED AS SPECIFIED WITHIN THE SPECIAL SPECIFICATIONS. TEMPORARY SIGNS SHALL BE LOCATED BY ENGINEER.

27. NO UNDERGROUND WORK SHALL BE "BURIED" UNTIL INSPECTED AND APPROVED BY THE CITY OR OWNER'S REPRESENTATIVE.

28. ALL WORK SHALL BE CONDUCTED BETWEEN THE HOURS OF 7:00AM AND 6:00PM ON NON-HOLIDAY WEEKDAYS. LANE CLOSURES WILL ONLY BE ALLOWED BETWEEN THE HOURS OF 8:00AM AND 6:00PM ON NON-HOLIDAY WEEKDAYS. NO SUNDAY WORK WILL BE ALLOWED. SATURDAY WORK MAY BE ALLOWED VIA A CITY APPROVED SATURDAY WORK REQUEST. SATURDAY WORK REQUESTS MUST BE SUBMITTED AT LEAST 72 HOURS IN ADVANCE OF DESIRED WORK DAY.

29. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE CITY CODES AND STANDARDS, THE OREGON STATE HEALTH DIVISION ADMINISTRATION RULES, A.P.W.A. STANDARDS, AND CITY OF SHERWOOD ENGINEERING DESIGN AND DETAILS MANUAL.

30. CONTRACTOR SHALL RESTORE ALL EASEMENT AREAS ASSOCIATED WITH CONSTRUCTION AS STIPULATED IN EASEMENT AND CONTRACT DOCUMENTS. CITY OR OWNER'S REPRESENTATIVE SHALL PROVIDE CONTRACTOR WITH REFERENCE COPY OF ALL EASEMENT AGREEMENT CONDITIONS.

31. CONTRACTOR TO PROTECT AND MAINTAIN ALL STORM WATER FACILITIES AND STRUCTURES INCLUDING OUTFALLS, PIPES, RIPRAP, AND INLETS. ANY DAMAGE TO STORM WATER FACILITIES SHALL BE REPLACED AT CONTRACTORS EXPENSE.

ABANDONMENT NOTES

1. AFTER SUCCESSFUL COMPLETION, TESTING, ACCEPTANCE AND UTILIZATION OF THE NEW SEWER, THE EXISTING SEWER SHALL BE ABANDONED IN PLACE.

2. ALL EXISTING SEWER TO BE ABANDONED IN PLACE SHALL BE FILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) AS SPECIFIED WITHIN THE SPECIAL SPECIFICATIONS. CLSM SHALL BE PUMPED IN AND VOLUME MEASURED TO ENSURE NO VOIDS ARE REMAINING. CLSM SHALL BE FINISHED FLUSH WITH INSIDE FACE OF WALL FOR ALL EXISTING MANHOLES TO REMAIN.

3. MANHOLES NOTED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASES, SECTIONS, CONES, TOPS AND COVERS. ALL MANHOLE MATERIALS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED. THE BOTTOM THREE FEET OF MANHOLE EXCAVATION SHALL BE BACKFILLED WITH BENTONITE TO CREATE AN IMPERVIOUS ZONE, THE REMAINING VOID LEFT FROM THE MANHOLE SHALL BE BACKFILLED WITH NATIVE WETLAND SPOILS FROM THE SITE.

4. MANHOLES NOTED TO BE ABANDONED SHALL HAVE THEIR CONES, TOPS AND COVERS REMOVED FROM THE SITE AND PROPERLY DISPOSED. THE EXISTING BASE MAY REMAIN AND EITHER BE FILLED WITH CLSM (MAXIMUM STRENGTH OF 150 PSI) OR PEA GRAVEL. IF THE CONTRACTOR ELECTS TO UTILIZE PEA GRAVEL, THE MANHOLE BASE SHALL HAVE HOLES DRILLED THROUGH THE BOTTOM TO ALLOW DRAINAGE. THE VOID ABOVE THE MANHOLE BASE SHALL BE BACKFILLED WITH NATIVE TOPSOIL FROM THE SITE.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN
RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

GENERAL NOTES

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
G-2
2 of 32

@	AT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
AB	ANCHOR BOLT
ABAN(D)	ABANDON(ED)
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE / ALCOHOL BY VOLUME
AC	ASPHALTIC CONCRETE
ACP	ASPHALTIC CONCRETE PAVING
ADJ	ADJUSTABLE
ADJC	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHR	ANCHOR
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APPVD	APPROVED
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B&S	BELL & SPIGOT
BC	BOLT CIRCLE
BD	BOARD
BETW	BETWEEN
BF	BOTH FACE
BFD	BACKFLOW PREVENTION DEVICE
BFILL	BACKFILL
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BKGD	BACKGROUND
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BENCHMARK / BEAM
BMP	BEST MANAGEMENT PRACTICES
BO	BLOW-OFF
BOC	BACK OF CURB
BS	BOTH SIDES
BSMT	BASEMENT
BTF	BOTTOM FACE
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BW	BOTH WAYS
C	CELSIUS
C TO C	CENTER TO CENTER
CARV	COMBINATION AIR RELEASE VALVE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CCP	CONCRETE CYLINDER PIPE
CCW	COUNTER CLOCKWISE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHAN	CHANNEL
CHEM	CHEMICAL
CHFR	CHAMFER
CHKV	CHECK VALVE
CI	CAST IRON
CIP	CAST IRON PIPE
CIPC	CAST IN PLACE CONCRETE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CL OR C/L	CENTER LINE
CL2	CHLORINE
CLG	CEILING
CLJ	CONTROL JOINT
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUATION
CONTR	CONTRACT(OR)
COORD	COORDINATE
COP	COPPER
CORP	CORPORATION
CORR	CORRUGATED
COS	CITY OF SHERWOOD
CP	CONTROL POINT
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	CRUSHED ROCK
CS	COMBINED SEWER
CSP	CONCRETE SEWER PIPE
CT	COURT
CTR	CENTER
CU	CUBIC
CULV	CULVERT
CV	CONTROL VALVE
CW	CLOCKWISE / COLD WATER
CWS	CLEAN WATER SERVICES
CY	CUBIC YARDS
CYL	CYLINDER LOCK
D	DRAIN
DC	DIRECT CURRENT
DEFL	DEFLECTION
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DIST	DISTANCE
DN	DOWN
DR	DRIVE
DS	DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
DWV	DRAIN WASTE AND VENT
DWY	DRIVEWAY
E OR ELEC	ELECTRICAL
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ENCL	ENCLOSURE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ESMT	EASEMENT
EW	EACH WAY
EXC	EXCAVATE
EXIST	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F	FAHRENHEIT
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLAT BAR
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIN	FINISH(ED)
FIPT	FEMALE IRON PIPE THREAD
FITG	FITTING
FL	FLOOR LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLL	FLOW LINE
FLR	FLOOR
FM	FORCE MAIN
FO	FIBER OPTIC
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET / FOOT
FTG	FOOTING
FUT	FUTURE
FXTR	FIXTURE
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GROOVED COUPLING
GFA	GROOVED FLANGE ADAPTER
GI	GALVANIZED IRON
GIP	GALVANIZED IRON PIPE
GJ	GRIP JOINT
GL	GLASS
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GR LN	GRADE LINE
GRTG	GRATING
GV	GATE VALVE
GRVL	GRAVEL
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDWE	HARDWARE
HGR	HANGER
HGT	HEIGHT
HH	HANDHOLD
HM	HOLLOW METAL
HMAC	HOT MIX ASPHALT CONCRETE
HNDRL	HANDRAIL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE / HORSEPOWER
HPG	HIGH PRESSURE GAS
HPT	HIGH POINT
HR	HOUR
HSB	HIGH STRENGTH BOLT
HV	HOSE VALVE
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWL	HIGH WATER LINE
HWY	HIGHWAY
HYD	HYDRANT
HYDR	HYDRAULIC
I&C	INSTRUMENTATION & CONTROL
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IMPVT	IMPROVEMENT
IN	INCH
INCC	INCLUDE(D)(ING)
INFL	INFLUENT
INJ	INJECTION
INSTL	INSTALLATION / INSTALL
INSUL	INSULATION
INTER	INTERCEPTOR
INTR	INTERIOR
INV	INVERT
IP	IRON PIPE
IPT	IRON PIPE THREAD
IR	IRON ROD
IRRIG	IRRIGATION
JT	JOINT
JUNC	JUNCTION
KPL	KICK PLATE
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWY	KEYWAY
L	LENGTH
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LF	LINEAR FOOT
LIN	LINEAL
LN	LANE
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW PRESSURE
LPT	LOW POINT
LRG	LARGE
LS	LONG SLEEVE / LUMP SUM
LT	LEFT
LVL	LEVEL
LWL	LOW WATER LINE
MAN	MANUAL
MAT	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MASTER CONTROL PANEL
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MON	MONUMENT / MONOLITHIC
MOT	MOTOR
MP	MILEPOST
MSL	MEAN SEAL LEVEL
MTD	MOUNTED
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO / NO.	NORMALLY OPEN / NUMBER
NOM	NOMINAL
NORM	NORMAL
NRS	NON-RISING STEM
NTS	NOT TO SCALE
O TO O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODOT	OREGON DEPARTMENT OF TRANSPORTATION
OF	OVERFLOW / OUTSIDE FACE
OHWM	ORDINARY HIGH WATER MARK
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OVHD	OVERHEAD
P&ID	PROCESS & INSTRUMENTATION DIAGRAM
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PCVC	POINT OF CURVATURE ON VERTICAL CURVE
PE	PLAIN END
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PG	PRESSURE GAUGE
PH	PIPE HANGER
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION ON VERTICAL CURVE
PKWY	PARKWAY
PL OR P/L	PROPERTY LINE / PLATE / PLASTIC
POC	POINT OF CURVATURE
POLY	POLYETHYLENE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREP	PREPARATION
PRESS	PRESSURE
PRKG	PARKING
PROP	PROPERTY
PRV	PRESSURE REDUCING VALVE
PS	PUMP STATION
PSIG	POUNDS PER SQUARE INCH GAUGE
PSL	PIPE SLEEVE
PSPT	PIPE SUPPORT
PT	POINT OF TANGENCY
PTVC	POINT OF TANGENCY ON VERTICAL CURVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QTY	QUANTITY
RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD / ROOF DRAIN
RDCR	REDUCER
REF	REFERENCE
REINF	REINFORCE(D)(ING)(MENT)
REQ'D	REQUIRED
RESTR	RESTRAINED
RFCA	RESTRAINED FLANGE COUPLING ADAPTER
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
R/W	RIGHT-OF-WAY
RPBPD	REDUCED PRESSURE BACKFLOW PREVENTION DEVICE
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RST	REINFORCED STEEL
RT	RIGHT
SALV	SALVAGE
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SD	STORM DRAIN
SDL	SADDLE
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SHLDR	SHOULDER
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SLV	SLEEVE
SOLN	SOLUTION
SP	SOIL PIPE / SEWER PIPE
SPCL	SPECIAL
SPEC(S)	SPECIFICATION(S)
SPG	SPACING
SPL	SPOOL
SPRT	SUPPORT
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRAIGHT
STRUCT	STRUCTURE / STRUCTURAL
SUBMG	SUBMERGED
SUCT	SUCTION
SV	SOLENOID VALVE
S/W	SIDEWALK
SWD	SIDEWATER DEPTH
SWGR	SWITCH GEAR
SYMM	SYMMETRICAL
SYS	SYSTEM
T OR TEL	TELEPHONE
T&B	TOP & BOTTOM
TAN	TANGENCY
TB	THRUST BLOCK
TBM	TEMPORARY BENCHMARK
TC	TOP OF CONCRETE / TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE / TEMPORARY
T&G	TONGUE & GROOVE
THK	THICK / THICKNESS
THRD	THREAD (ED)
THRU	THROUGH
TP	TEST PIT / TOP OF PAVEMENT / TURNING POINT
TRANS	TRANSITION
TSP	TRI-SODIUM PHOSPHATE
TST	TOP OF STEEL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UN	UNION
UON	UNLESS OTHERWISE NOTED
USGS	UNITED STATES GEOLOGIC SURVEY
V	VENT / VOLT
VAC	VACUUM
VB	VACUUM BREAKER
VBOX	VALVE BOX
VC	VERTICAL CURVE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VCP	VITRIFIED CLAY PIPE
VTR	VENT THROUGH ROOF
W	WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
W/W	WALL TO WALL
WD	WOOD
WF	WIDE FLANGE
WH	WATER HEATER
WI	WROUGHT IRON
WM	WATER METER
WP	WORKING POINT / WATERPROOFING
WS	WATER SERVICE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WT	WEIGHT
WTP	WATER TREATMENT PLANT
WTRT	WATERTIGHT
WWF	WELDED WIRE FABRIC
WWTF	WASTEWATER TREATMENT FACILITY
WWTP	WASTEWATER TREATMENT PLANT
X SECT	CROSS SECTION
XFMR	TRANSFORMER
YD	YARD DRAIN / YARD
YH	YARD HYDRANT
YR	YEAR
ZN	ZINC

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

ABBREVIATIONS

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET G-3

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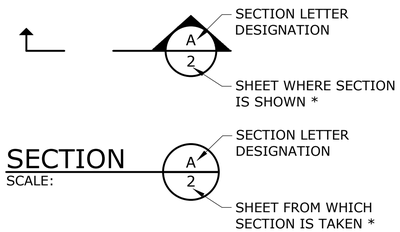
G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-G.dwg G-3 2/2/2021 1:44 PM JUSTIN.DEUEL 23.0s (LMS Tech)

SECTION AND DETAIL DESIGNATIONS

SECTION DESIGNATIONS



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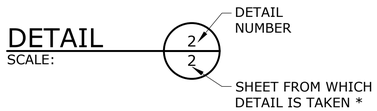

* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.

MISCELLANEOUS PIPING SYMBOLS

M	METER
SP	SLIP-ON JOINT PIPE
R	RESTRAINED JOINT PIPE

TOPOGRAPHIC LEGEND

	EXISTING	PROPOSED
WATERLINE	10"W	12"DI W
ELECTRICITY	E	E
GAS	4"G	4"G
TELEPHONE/TELEMETRY	T	T
CABLE TELEVISION	CATV	CATV
SANITARY SEWER LINE	8"SS	8"SS
SANITARY SEWER FORCE MAIN	6"FM	6"FM
STORM DRAIN	8"SD	8"SD
CULVERT		18"D
ABANDON PIPE		
DRAINAGE DITCH/FLOODWAY BOUNDARY		
ROCK CREEK OHWM		
VEGETATED CORRIDOR BOUNDARY	VC	
WETLAND BOUNDARY		
BARBED WIRE FENCE		
CHAINLINK FENCE		
CENTERLINE		
PROPERTY LINE		
EASEMENT		
RIGHT-OF-WAY		
EDGE OF PAVEMENT/AC		
EDGE OF GRAVEL		
CURB		
SIDEWALK	S/W	
STRUCTURE OR FACILITY		
CONTOUR MINOR		
CONTOUR MAJOR	200	200
MANHOLE		
CLEAN-OUT		
CATCH BASIN/FIELD INLET		
VALVE		
GEOTECHNICAL BORING W/ ID NO.		
FIRE HYDRANT ASSEMBLY		
WATER METER		
PULL BOX/JUNCTION BOX		
UTILITY POLE		
GUY WIRE		
LIGHT POST		
MAILBOX		
SIGN		
DEWATERING WELL		
TREE DECIDUOUS		
TREE CONIFEROUS		
TREE TO BE REMOVED		
SURFACE ELEVATION	+ 176.63	+ 176.63
MONUMENT		

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

SYMBOLS AND LEGEND

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET G-4

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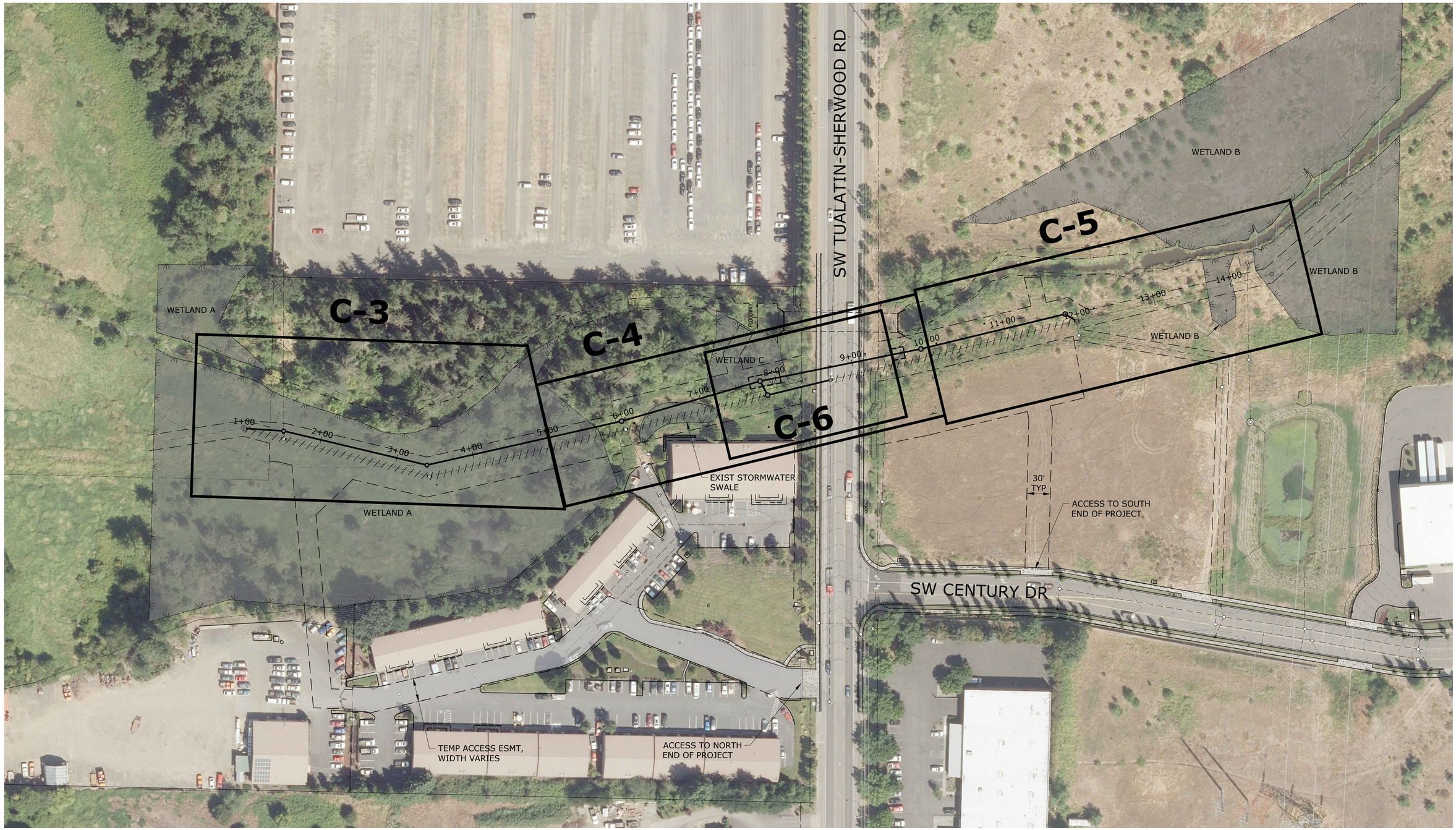

PLAN
SCALE: 1"=60'

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SITE/SHEET LAYOUT

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
G-5
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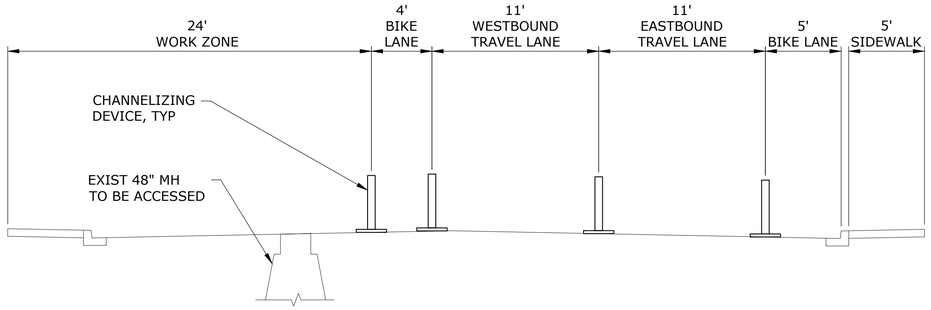
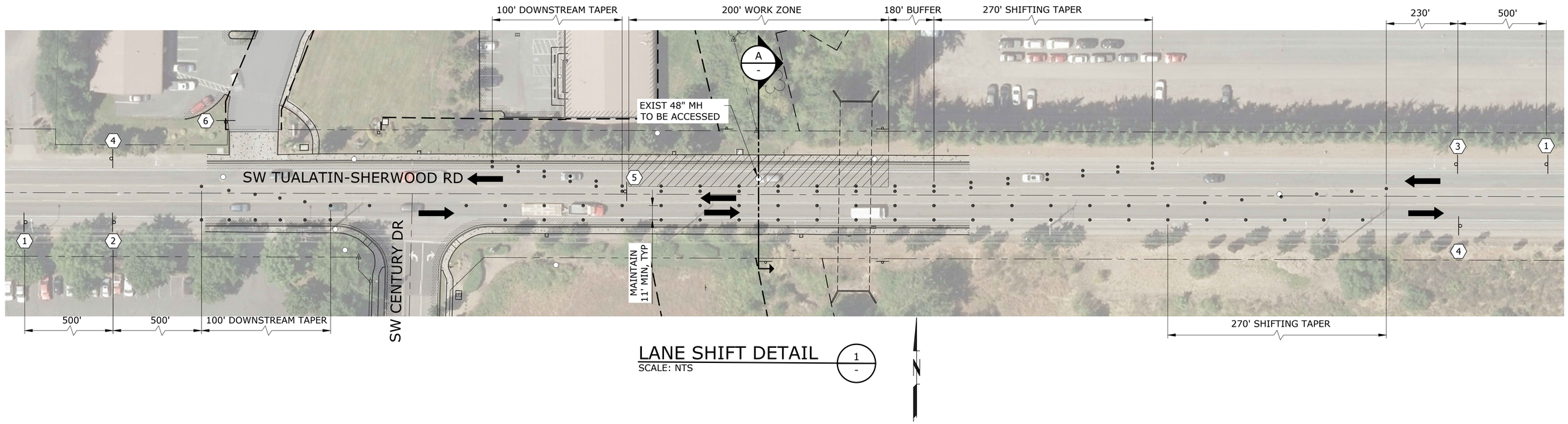


SECTION A
SCALE: NTS



LANE SHIFT DETAIL 1
SCALE: NTS

LEGEND

- TEMPORARY TRAFFIC CONTROL SIGN
- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- WORK SPACE

SIGN LEGEND

1	UTILITY WORK AHEAD	W21-7 36"x36"
2	CENTER LANE CLOSED AHEAD	W9-3 36"x36"
3		W24-1L 36"x36"
4	END ROAD WORK	G20-2 36"x18"
5	THRU TRAFFIC KEEP RIGHT	R4-3A 24"x36"
6		R3-2 24"x24"

NOTES:

1. TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY AND COUNTY REQUIREMENTS, AND THE LATEST VERSIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK, SPECIFICALLY DIAGRAM 430: DIVERSION INTO A CONTINUOUS LEFT TURN LANE.

2. ALL TRAFFIC CONTROL DEVICES (TCD'S) SHALL BE MUTCD COMPLIANT.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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RENEWS 12-31-22

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City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

TRAFFIC CONTROL PLAN
SW TUALATIN-SHERWOOD ROAD

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
TC-1
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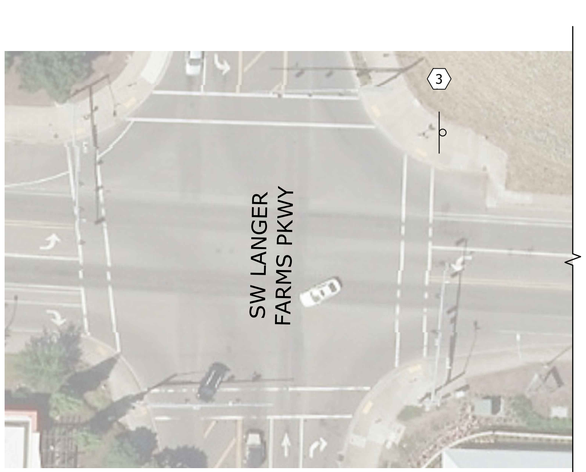
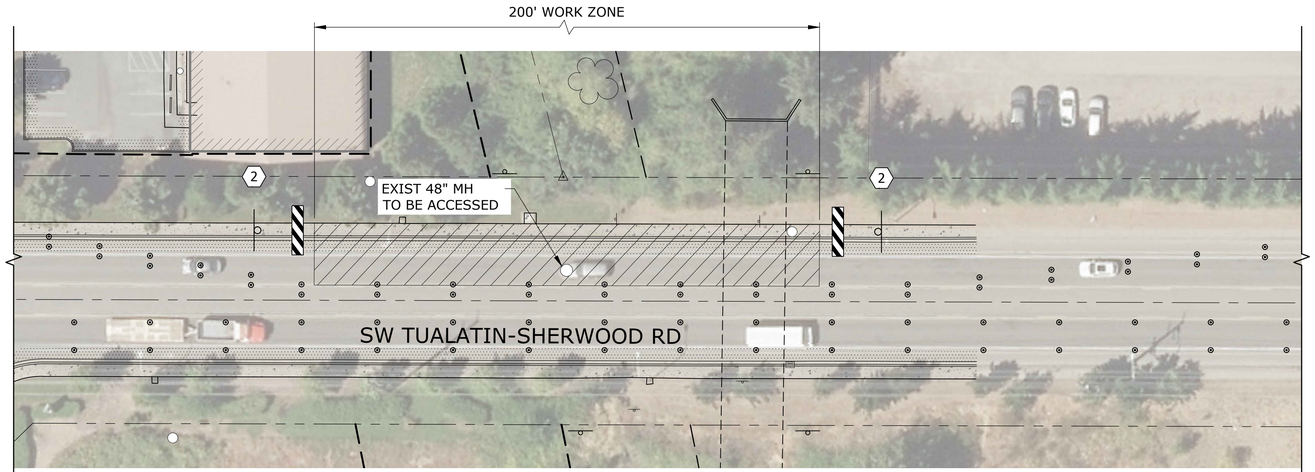
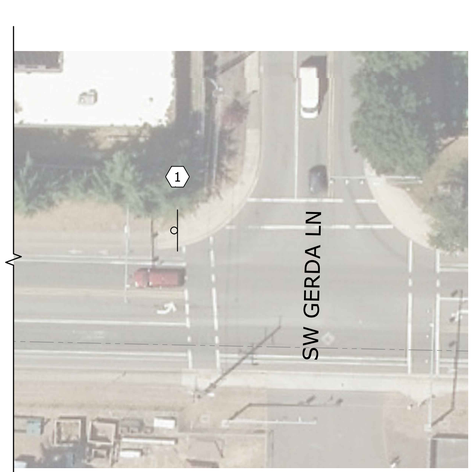


200' WORK ZONE





SIDEWALK DETOUR

SCALE: NTS

1
-

N

LEGEND

- TEMPORARY TRAFFIC CONTROL SIGN
- BARRIER, SEE NOTE 3
- WORK SPACE

SIGN LEGEND

1 — SIDEWALK CLOSED AHEAD / CROSS HERE — R9-11L 24"x18"

2 — SIDEWALK CLOSED — R9-9 24"x12"

3 — SIDEWALK CLOSED AHEAD / CROSS HERE — R9-11R 24"x18"

NOTES:

1. TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY AND COUNTY REQUIREMENTS, AND THE LATEST VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), SPECIFICALLY FIGURE 6H-28: SIDEWALK DETOUR OR DIVERSION.

2. ALL TRAFFIC CONTROL DEVICES (TCD'S) SHALL BE MUTCD COMPLIANT.

3. BARRICADES SHALL BE TYPE 1 BARRICADES PER MUTCD FIGURE 6F-7 CHANNELIZING DEVICES.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN
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City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

PEDESTRIAN DETOUR PLAN
SW TUALTIN-SHERWOOD ROAD

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
TC-2
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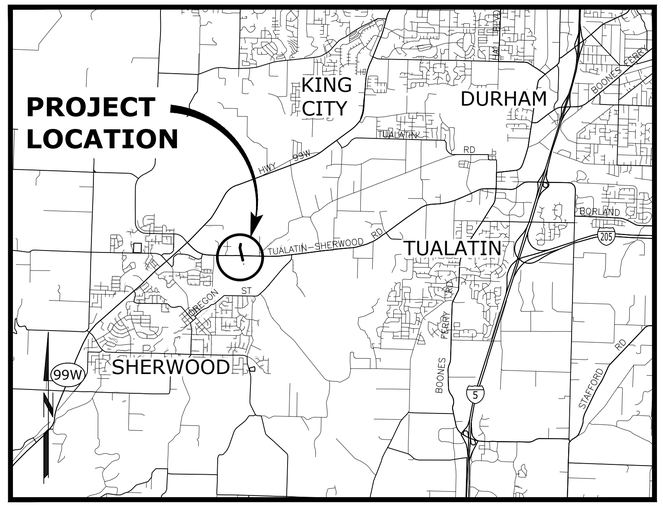
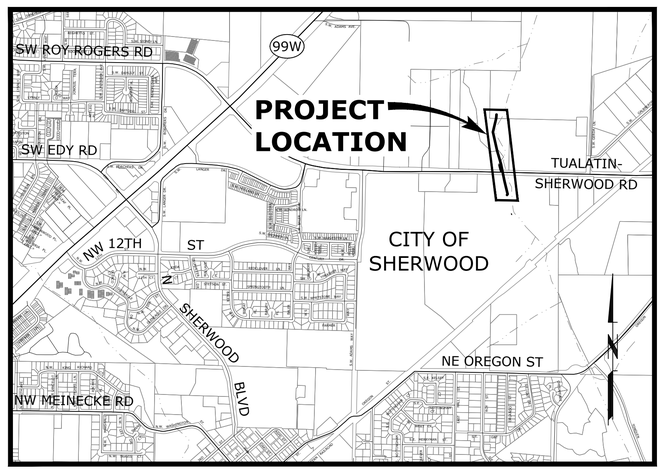
ESC PLAN FOR SITES 1 TO 5 ACRES



VICINITY MAP
SCALE: 1"=5,000'



SITE MAP
SCALE: 1"=1,000'

PROPERTY DESCRIPTIONS:

TAXLOTS 2S129A000301, 2S129A000400, AND 2S129D000150, AND SW TUALATIN-SHERWOOD RD R/W, LOCATED IN THE NORTHEAST AND SOUTHEAST 1/4'S OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON.

PROJECT LOCATIONS:

NORTH AND SOUTH OF SW TUALATIN-SHERWOOD RD, APPROXIMATELY 375 FEET EAST OF SW CENTURY DR, SHERWOOD, WASHINGTON COUNTY, OREGON.

LATITUDE: 45.367302°N, LONGITUDE: -122.828534°W

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

DEVELOPER

DEVELOPER: CITY OF SHERWOOD
CONTACT: BOB GALATI, PE
ADDRESS: 22560 SW PINE ST
CITY/STATE: SHERWOOD, OR 97140
PHONE/FAX: (503) 925-2308

PLANNING / ENGINEERING / SURVEYING FIRM

COMPANY: MURRAYSMITH, INC
CONTACT: BRENDAN O'SULLIVAN, P.E.
ADDRESS: 888 SW 5TH AVE, SUITE 1170
CITY/STATE: PORTLAND, OR 97204
PHONE: (503) 225-9010 FAX: (866) 274-9807

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS

CITY OF SHERWOOD UNDEVELOPED LAND CONTAINING AN 18" DIAMETER SANITARY SEWER LINE AND ASSOCIATED MANHOLE STRUCTURES, WETLANDS, AND FLOODPLAINS ASSOCIATED WITH ROCK CREEK; WASHINGTON COUNTY AND CITY OF SHERWOOD PAVED ROADWAY SURFACES AND RIGHT-OF-WAY

DEVELOPED CONDITIONS

SITE WILL BE RETURNED TO PRE-CONSTRUCTION CONDITIONS IMMEDIATELY AFTER CONSTRUCTION OF NEW 24" DIAMETER SANITARY SEWER LINE AND ASSOCIATED MANHOLE STRUCTURES AND ABANDONMENT OF EXISTING 18" DIAMETER SANITARY SEWER LINE. THIS INCLUDES THE PLANTING OF NATIVE TREES, SHRUBS, AND SEED MIXES AND REESTABLISHMENT OF EXISTING CONTOURS AND GRADES.

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

* CLEARING (FROM JUNE 1, 2020 TO NOVEMBER 11, 2020)
* MASS GRADING (FROM JUNE 1, 2020 TO SEPTEMBER 30, 2020)
* UTILITY INSTALLATION (FROM JUNE 1, 2020 TO NOVEMBER 11, 2020)
* FINAL STABILIZATION (FROM NOVEMBER 12, 2020 TO DECEMBER 31, 2022)

TOTAL SITE AREA:

3.9 ACRES (169,300 SQ FT)

TOTAL DISTURBED AREA:

2.0 ACRES (85,800 SQ FT)

IMPERVIOUS SURFACE AREA:

EXISTING IMPERVIOUS AREA = 24,100 SQ FT
PROPOSED IMPERVIOUS AREA = 0 SQ FT

SITE SOIL CLASSIFICATION:

5B - BRIEDWELL STONY SILT LOAM
14 - COVE CLAY
27 - LABISH MUCKY CLAY
37B, 37C - QUATAMA LOAM
43 - WAPATO SILTY CLAY LOAM

THE HAZARD OF EROSION OF ON-SITE SOILS IS SLIGHT. FILL MATERIAL WILL MAINLY BE GENERATED ON-SITE FROM UTILITY TRENCH EXCAVATIONS. THERE WILL BE SOME IMPORT OF GRANULAR MATERIAL USED TO BED THE PIPE AND BACKFILL AROUND MANHOLES. ANY UNUSED EXCAVATED MATERIALS WILL BE HAULED OFF-SITE.

RECEIVING WATER BODIES:

ROCK CREEK AND TUALATIN RIVER DRAINAGE BASINS

INSPECTION FREQUENCY

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	WEEKLY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOW MELT, IS OCCURRING. AT LEAST ONCE EVERY MONTH, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY MONTH
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.
5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS.	MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

- HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-CN PERMIT REQUIREMENTS.
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-CN PERMIT REQUIREMENTS.
- RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION.

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT.
2. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
3. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT.
4. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
5. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
6. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
7. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
8. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. DIRECT ALL WASH WATER INTO A PIT OR LEAK-PROOF CONTAINER. HANDLE WASH WATER AS WASTE, CONCRETE DISCHARGE TO WATERS OF THE STATE IS PROHIBITED.
9. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
10. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
11. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
12. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
13. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
14. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
15. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
16. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE.
17. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
18. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
19. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER OCTOBER 01 - MAY 31.
20. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
21. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND BEFORE BMP REMOVAL.
22. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT.
23. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
24. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS.
26. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAT SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS.
27. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP I.E. (FILTER BAG).
28. ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER PERIOD, OCTOBER 01 - MAY 31.
29. IF WATER OF THE STATE IS WITHIN THE PROJECT SITE OR WITHIN 50 FEET OF THE PROJECT BOUNDARY, MAINTAIN THE EXISTING NATURAL BUFFER WITHIN THE 50-FOOT ZONE FOR THE DURATION OF THE PERMIT COVERAGE, OR MAINTAIN LESS THAN THE ENTIRE EXISTING NATURAL BUFFER AND PROVIDE ADDITIONAL EROSION AND SEDIMENT CONTROL BMPS.

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200-CN PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-CN PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-CN PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

BMP MATRIX FOR CONSTRUCTION PHASES

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

	CLEARING	MASS GRADING	UTILITY INSTALLATION	STREET CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT. 1 - MAY 31ST)
EROSION PREVENTION						
PRESERVE NATURAL VEGETATION	** X	X	X		X	X
GROUND COVER			X		X	X
HYDRAULIC APPLICATIONS					X	
PLASTIC SHEETING		X	X			
MATTING					X	
DUST CONTROL	X	X	X		X	X
TEMPORARY/ PERMANENT SEEDING					X	X
BUFFER ZONE	** X	X	X		X	X
OTHER:						
SEDIMENT CONTROL						
SEDIMENT FENCE (PERIMETER)	** X	** X	X		X	X
SEDIMENT FENCE (INTERIOR)	** X	** X	X		X	X
STRAW WATTLES			X		X	X
FILTER BERM	** X	** X	X			
INLET PROTECTION	** X	** X	X		X	X
DEWATERING			X			X
SEDIMENT TRAP						
NATURAL BUFFER ENCROACHMENT	*X	*X	*X		*X	*X
COMPOST SOCK	** X	** X	**X		X	X
OTHER:						
RUN OFF CONTROL						
CONSTRUCTION ENTRANCE	** X	X	X		X	X
PIPE SLOPE DRAIN						
OUTLET PROTECTION						
SURFACE ROUGHENING					X	
CHECK DAMS						
OTHER:						
POLLUTION PREVENTION						
PROPER SIGNAGE	X	X	X		X	X
HAZ WASTE MGMT	X	X	X			
SPILL KIT ON-SITE	X	X	X		X	X
CONCRETE WASHOUT AREA			X			
OTHER:						

* SIGNIFIES ADDITIONAL BMP'S REQUIRED FOR WORK WITHIN 50' OF WATER OF THE STATE.
** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ's GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP's WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL _____

PERMITTEE'S SITE INSPECTOR: ANDY STIRLING
COMPANY/AGENCY: CITY OF SHERWOOD
PHONE: (503) 925-2307
FAX: N/A
E-MAIL: stirlinga@sherwoodoregon.gov
DESCRIPTION OF EXPERIENCE: CESCL CERTIFICATION ID# ECO-3-6071946
EXPIRES 7/7/2022

SHEET INDEX

EROSION AND SEDIMENT CONTROL PLANS

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2007 BRENDAN V. O'SULLIVAN
RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

EROSION AND SEDIMENT CONTROL COVER SHEET AND GENERAL NOTES

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
ESC-1
8 of 32

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LEGEND

DRAINAGE FLOW DIRECTION

SEDIMENT FENCING

COMPOST FILTER BERM

CONSTRUCTION ENTRANCE

INLET PROTECTION

CONCRETE WASHOUT

NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE; BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL; COMPOST SOCKS; STRAW WATTLES; OR OTHER APPROVED MATERIALS.

3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.

4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES AND DAILY STREET SWEEPING AND VACUUMING OF SW CENTURY DRIVE AND THE TEMPORARY ACCESS EASEMENT THROUGH BUSINESS PARK MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

6. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS, UNLESS OTHERWISE AUTHORIZED.

7. STOCKPILED SOIL SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

8. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.

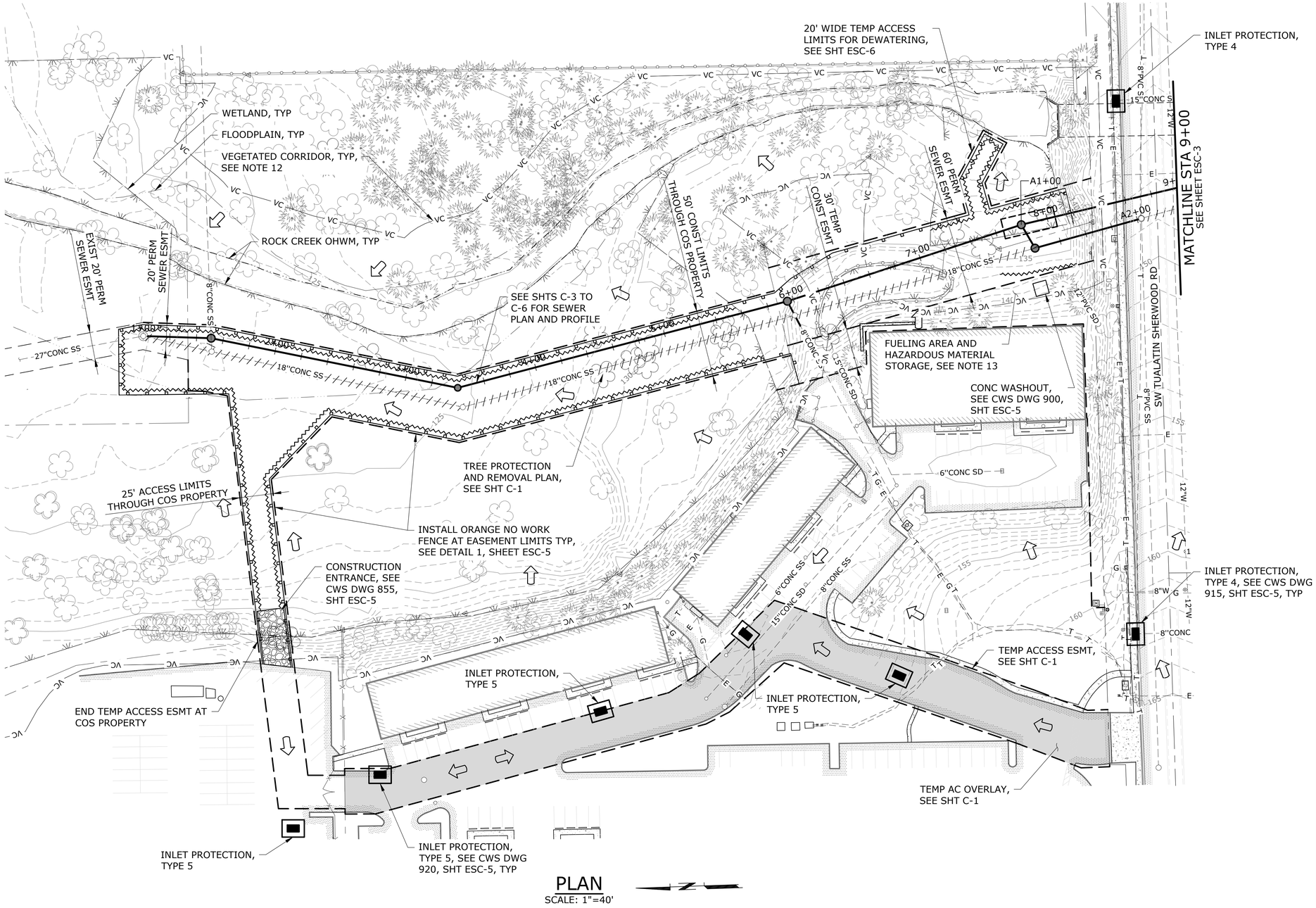
9. LIMIT SPEED OF VEHICLES ON SITE AND MOISTEN HAUL ROADS AS NECESSARY TO CONTROL DUST.

10. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.

11. CONTRACTOR SHALL INSTALL INLET PROTECTION ON ALL INLETS WITHIN AREA OF PROJECT IMPROVEMENTS AS SHOWN ON SHEET ESC-2 AND ESC-3. ADDITIONAL INLETS NOT SHOWN ON THIS PLAN MAY BE PRESENT.

12. VEGETATED CORRIDOR BOUNDARY IS NOT SHOWN FOR CLARITY WHERE IT SHARES A BOUNDARY WITH WETLAND AND/OR ROCK CREEK ORDINARY HIGH WATER MARK.

13. HAZARDOUS MATERIAL CONTAINMENT MEASURES AND MACHINERY FUELING PROCEDURES TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.



PLAN

SCALE: 1"=40'

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

EROSION AND SEDIMENT CONTROL PLAN - 1

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET ESC-2

9 of 32

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LEGEND

DRAINAGE FLOW DIRECTION

SEDIMENT FENCING

COMPOST FILTER BERM

CONSTRUCTION ENTRANCE

INLET PROTECTION

CONCRETE WASHOUT

NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE; BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL; COMPOST SOCKS; STRAW WATTLES; OR OTHER APPROVED MATERIALS.

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4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES AND DAILY STREET SWEEPING AND VACUUMING OF SW CENTURY DRIVE AND THE TEMPORARY ACCESS EASEMENT THROUGH BUSINESS PARK MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

6. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS, UNLESS OTHERWISE AUTHORIZED.

7. STOCKPILED SOIL SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

8. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.

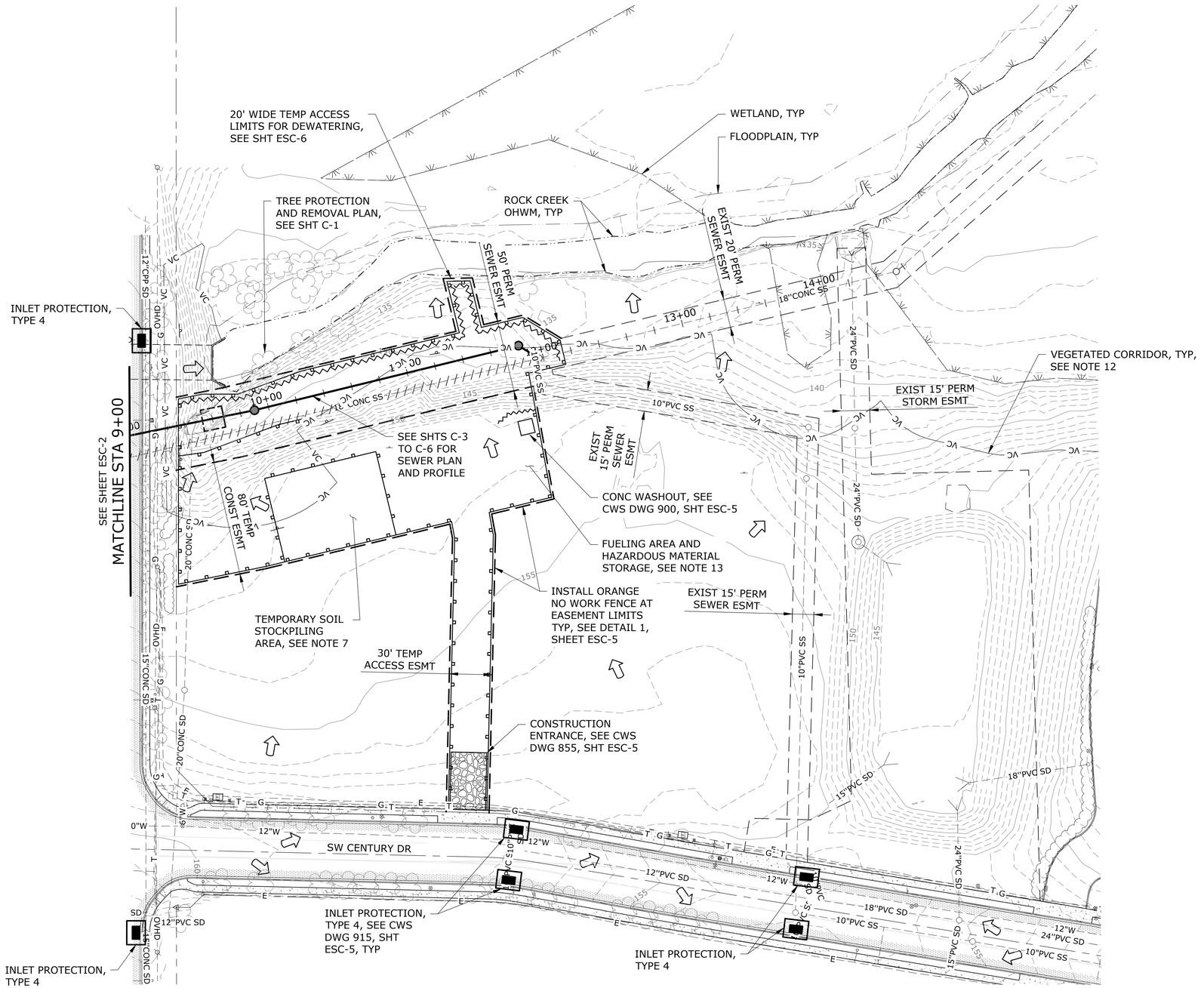
9. LIMIT SPEED OF VEHICLES ON SITE AND MOISTEN HAUL ROADS AS NECESSARY TO CONTROL DUST.

10. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.

11. CONTRACTOR SHALL INSTALL INLET PROTECTION ON ALL INLETS WITHIN AREA OF PROJECT IMPROVEMENTS AS SHOWN ON SHEET ESC-2 AND ESC-3. ADDITIONAL INLETS NOT SHOWN ON THIS PLAN MAY BE PRESENT.

12. VEGETATED CORRIDOR BOUNDARY IS NOT SHOWN FOR CLARITY WHERE IT SHARES A BOUNDARY WITH WETLAND AND/OR ROCK CREEK ORDINARY HIGH WATER MARK.

13. HAZARDOUS MATERIAL CONTAINMENT MEASURES AND MACHINERY FUELING PROCEDURES TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.



PLAN
SCALE: 1"=40'

NO.	DATE	BY	REVISION

NOTICE
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JJU DESIGNED
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REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

EROSION AND SEDIMENT CONTROL PLAN - 2

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET ESC-3

10 of 32

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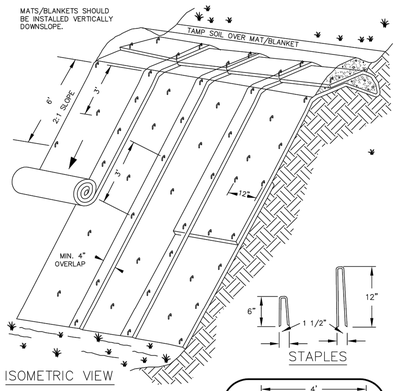


TYPICAL SLOPE SOIL STABILIZATION

NOTES:

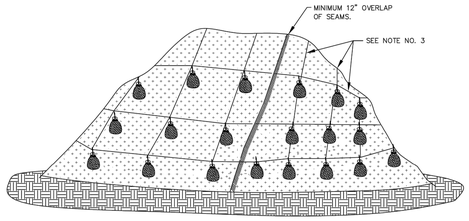
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

MATTING SLOPE INSTALLATION

DRAWING NO. 805 REVISED 10-31-19

CleanWater Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



PLASTIC SHEETING

NOTES:

1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. PERIMETER SEDIMENT CONTROL BMP TO BE INSTALLED A MINIMUM OF 3' FROM TOE OF STOCKPILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR APPROVED EQUAL ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
4. PLASTIC TO EXTEND MINIMUM 1' BEYOND TOE OF SLOPE.
5. AS APPROPRIATE, BMP'S SHALL BE INSTALLED TO CONVEY WATER DISCHARGE FROM STOCKPILE AREAS.

PLASTIC SHEETING

DRAWING NO. 810 REVISED 10-31-19

CleanWater Services

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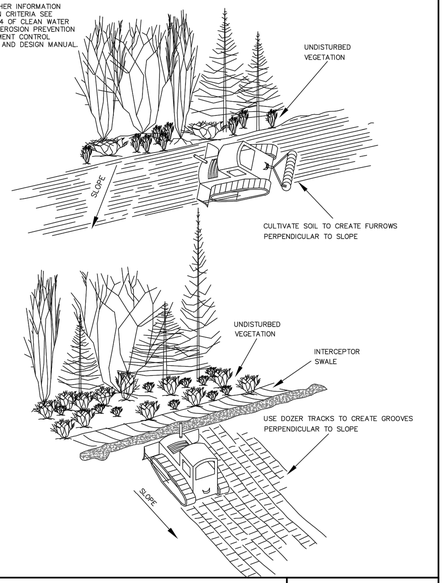
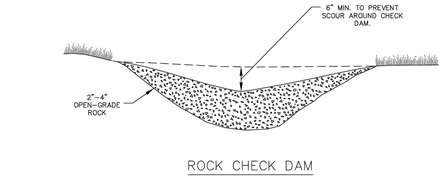


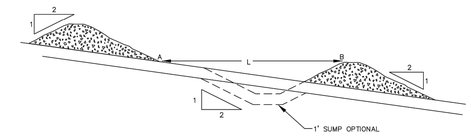
SURFACE ROUGHENING CAT TRACKING

DRAWING NO. 830 REVISED 10-31-19

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



ROCK CHECK DAM



SPACING BETWEEN CHECK DAMS

NOTES:

1. L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.
2. SEE DRAWING #940 FOR HEIGHT AND SPACING OF CHECK DAMS.

CHECK DAM ROCK

DRAWING NO. 840 REVISED 10-31-19

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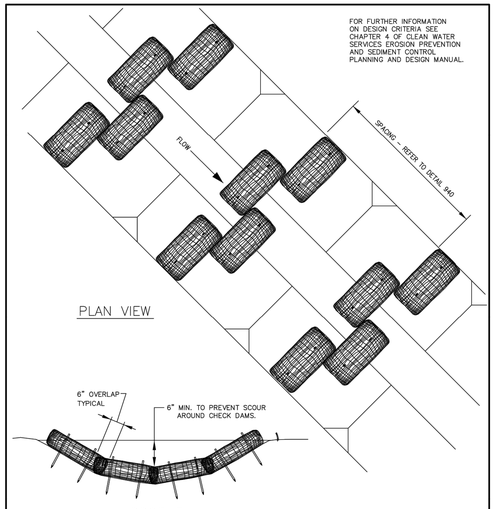


PROFILE

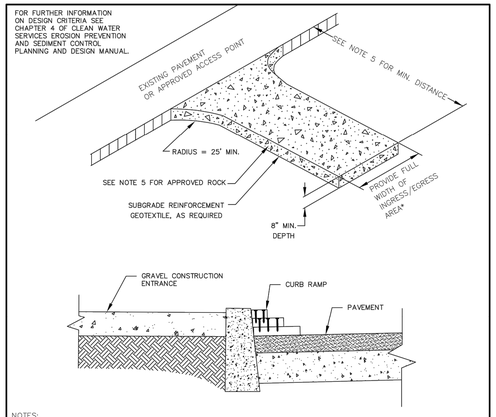
NOTES:

1. STAKING OF BAGS REQUIRED USING (2) 1"X2" WOOD STAKES OR APPROVED EQUAL PER BAG.
2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.
3. CHECK DAMS CAN BE CONSTRUCTED USING STRAW WATTLES OR OTHER MATERIALS AS APPROVED BY THE DISTRICT OR CITY.

CHECK DAM BIO-FILTER BAG

DRAWING NO. 845 REVISED 10-31-19

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



NOTES:

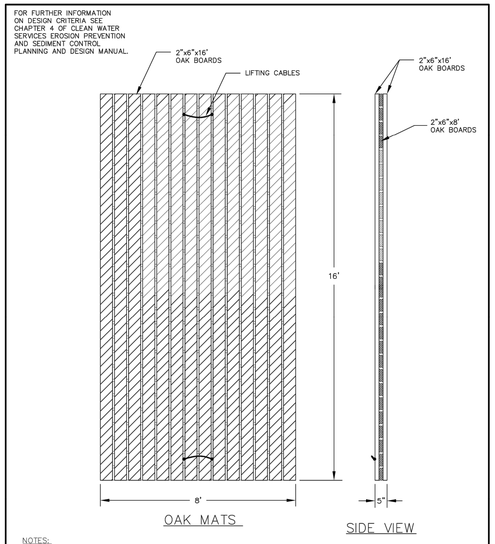
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL/SITE DEVELOPMENT
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

DRAWING NO. 855 REVISED 10-31-19

CleanWater Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



OAK MATS SIDE VIEW

NOTES:

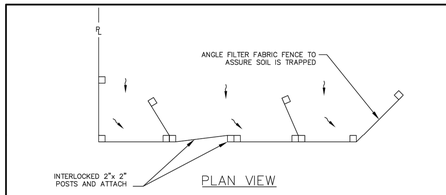
1. CONSTRUCTED OF 2"x6" OAK.
2. ALTERNATE MATTING SYSTEMS TO BE APPROVED BY CITY/DISTRICT.

OAK MATS

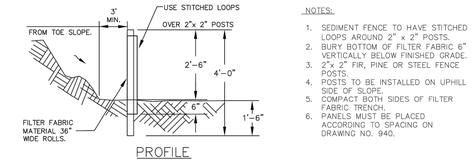
DRAWING NO. 860 REVISED 10-31-19

CleanWater Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



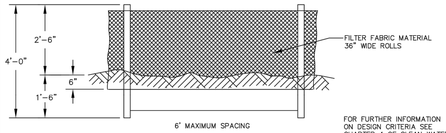
PLAN VIEW



PROFILE

NOTES:

1. SEDIMENT FENCE TO HAVE STITCHED LOOPS AROUND 2" x 2" POSTS.
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
4. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
5. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
6. PANELS MUST BE PLACED ACCORDING TO SPACING ON DRAWING NO. 940.



FRONT VIEW

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SEDIMENT FENCE

DRAWING NO. 875 REVISED 10-31-19

CleanWater Services

NO.	DATE	BY	REVISION

NOTICE

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JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

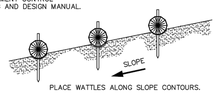
CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

EROSION AND SEDIMENT CONTROL DETAILS - 1

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

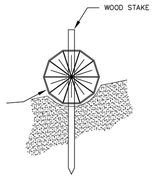
SHEET ESC-4

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

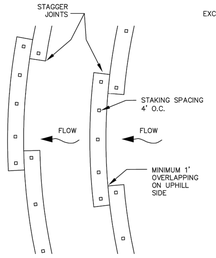


PLACE WATTLES ALONG SLOPE CONTOURS.

PROFILE



SECTION



PLAN VIEW

NOTES:

1. STAKING SPECIFICATIONS:
   a. 1"x2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 940.
3. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED WATTLES WILL HAVE DIRECT CONTACT WITH THE SOIL.
4. INSTALL THE WATTLES IN A 2" DEEP TRENCH, INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE WATTLE. THE ENDS OF ADJACENT WATTLES SHALL BE OVERLAPPED 1 FT. MINIMUM TO PREVENT SEDIMENT PASSING THROUGH THE FIELD JOINT.

WATTLES

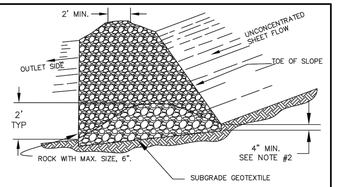
DRAWING NO. 880 REVISED 10-31-19

CleanWater Services

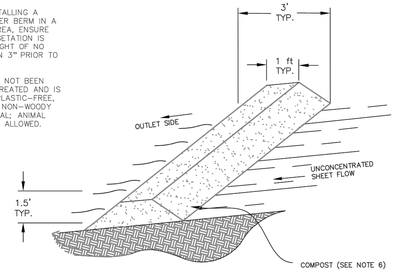
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

NOTES:

1. DIRECT THE OUTLET SIDE OF THE ROCK/COMPOST FILTER BERMS ONTO A STABILIZED AREA, SUCH AS VEGETATION AND/OR ROCK.
2. EMBED ROCK FILTER BERM A MIN. OF 4" INTO THE EXISTING GROUND/EMBANKMENT.
3. USE ROCK FILTER BERM ON 3H:1V OR FLATTER SIDE SLOPES. WITHIN THE SAFETY CLEAR ZONE, USE 6H:1V OR FLATTER ON SIDE SLOPES.
4. PLACE COMPOST FILTER BERMS ALONG OR ON THE GROUND CONTOUR WITH THE ENDS TURNED UP SLOPE.
5. PRIOR TO INSTALLING A COMPOST FILTER BERM IN A VEGETATED AREA, ENSURE THAT THE VEGETATION IS CUT TO A HEIGHT OF NO GREATER THAN 3" PRIOR TO INSTALLATION.
6. COMPOST HAS NOT BEEN CHEMICALLY TREATED AND IS WEED-FREE, PLASTIC-FREE, DECOMPOSED, NON-WOODY PLANT MATERIAL; ANIMAL WASTE IS NOT ALLOWED.



ROCK FILTER BERM



COMPOST FILTER BERM

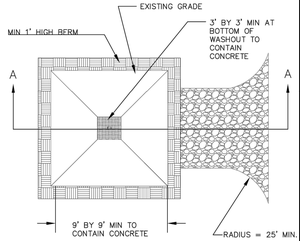
FILTER BERMS ROCK/COMPOST

DRAWING NO. 890 REVISED 10-31-19

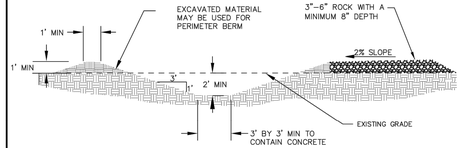
CleanWater Services

NOTES:

1. WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 12 INCHES.
2. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
3. IF THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FT FROM SENSITIVE AREAS INCLUDING OPEN DRAINAGE FACILITIES AND WATER SOURSES.
5. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
6. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FEET OF TEMPORARY CONCRETE WASHOUT FACILITY.
7. TEMPORARY CONCRETE WASHOUTS MAY BE A PREFABRICATED CONTAINER THAT IS PORTABLE AND REUSABLE.



PLAN

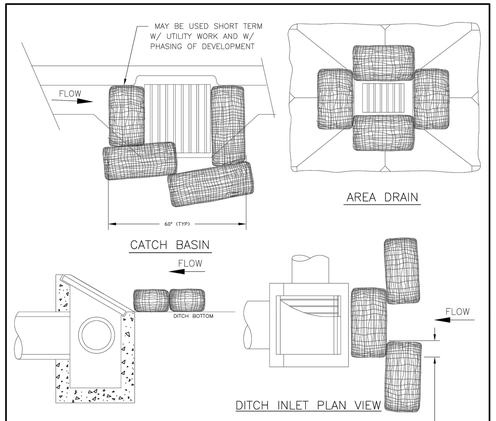


SECTION A-A

CONCRETE WASHOUT

DRAWING NO. 900 REVISED 10-31-19

CleanWater Services



NOTES:

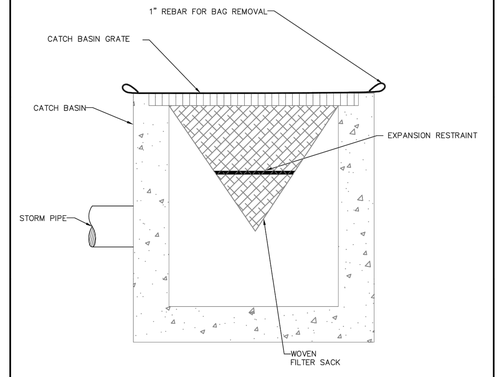
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION TYPE 4

DRAWING NO. 915 REVISED 10-31-19

CleanWater Services



CATCH BASIN INSERT

NOTE:

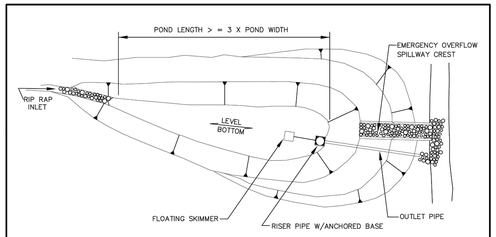
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

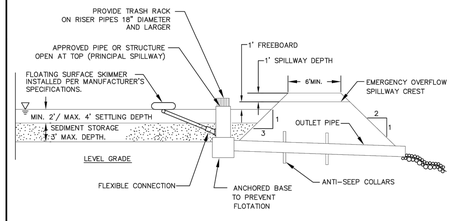
INLET PROTECTION TYPE 5

DRAWING NO. 920 REVISED 10-31-19

CleanWater Services



PLAN VIEW



PROFILE

NOTE:

1. 50' MINIMUM OF HIGHLY VEGETATED AREA AND/OR SEDIMENT FENCE IS REQUIRED PRIOR TO DISCHARGING TO STREAM OR WETLAND.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SEDIMENT BASIN

DRAWING NO. 935 REVISED 10-31-19

CleanWater Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SPACING FOR CHECK DAMS

DITCH GRADE	6 INCH	12 INCH	18 INCH
6%	NOT ALLOWED	16 FT O.C.	26 FT O.C.
5%	NOT ALLOWED	20 FT	30 FT
4%	NOT ALLOWED	26 FT	40 FT
3%	15 FT	33 FT	50 FT
2%	25 FT	50 FT	80 FT

BARRIER SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS

% SLOPE	SLOPE H:V	MAXIMUM SPACING ON SLOPE
10% OR FLATTER	10:1 OR FLATTER	300 FT
>10% OR <15%	>10:1 OR <7.5:1	150 FT
>15% OR <20%	>7.5:1 OR <5:1	100 FT
>20% OR <30%	>5:1 OR <3.5:1	50 FT
>30% OR <50%	>3.5:1 OR <2:1	25 FT

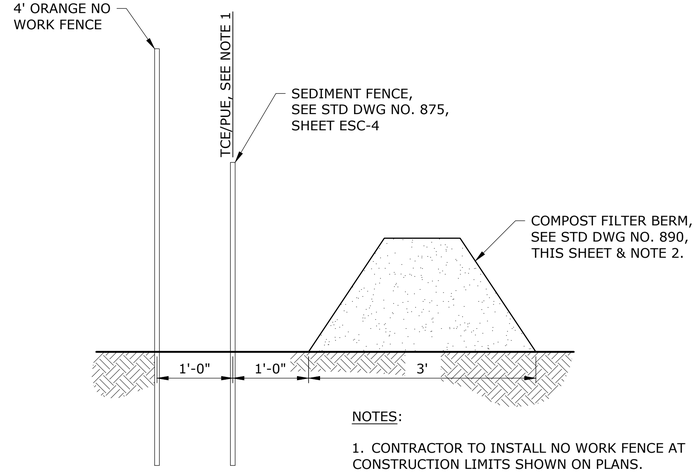
NOTE:

1. FOR MORE INFORMATION REGARDING THESE TABLES SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL DESIGN MANUAL.

SPACING TABLES

DRAWING NO. 940 REVISED 10-31-19

CleanWater Services



NOTES:

1. CONTRACTOR TO INSTALL NO WORK FENCE AT CONSTRUCTION LIMITS SHOWN ON PLANS.
2. ALTERNATIVE EROSION AND SEDIMENT CONTROL BMPS TO BE SUBMITTED TO ENGINEER FOR APPROVAL.

TYPICAL ESC BMP PLACEMENT

SCALE: NTS

1 / -

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2007 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

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City of Sherwood Oregon

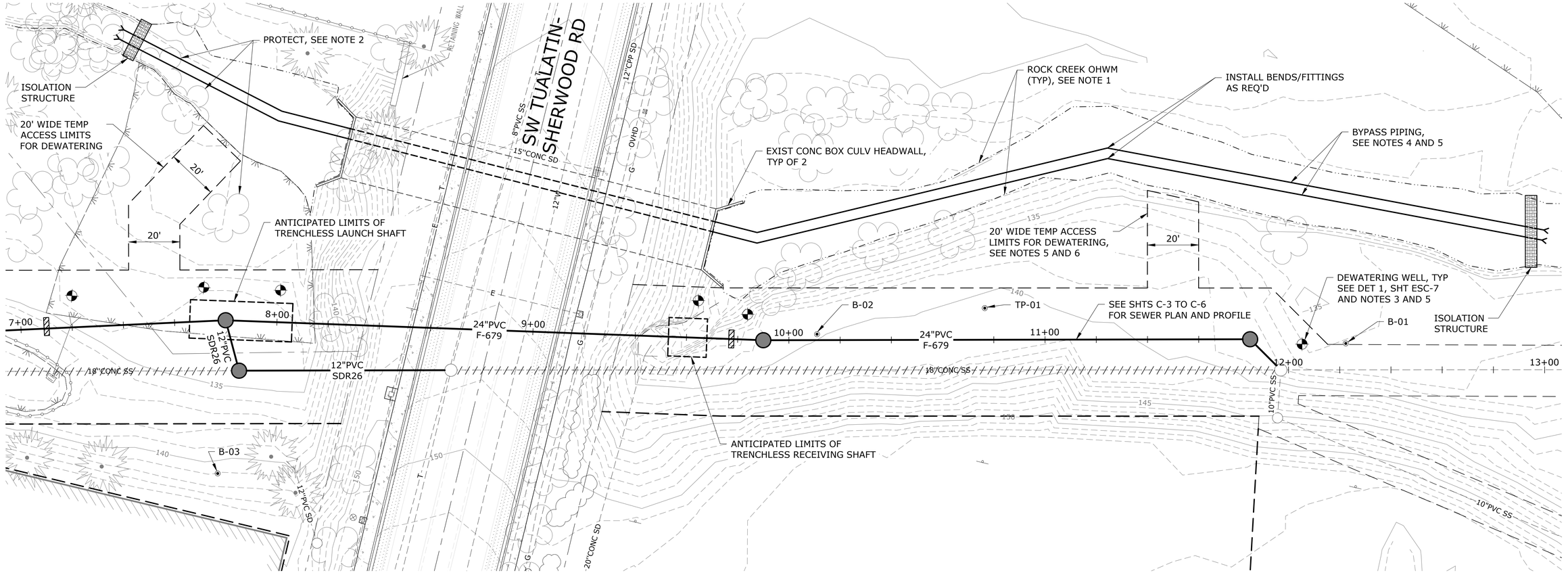
CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

EROSION AND SEDIMENT CONTROL DETAILS - 2

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET ESC-5

12 of 32



PLAN
SCALE: 1"=20'

NOTES:

1. ALL WORK PERFORMED WITHIN EXTENTS OF ROCK CREEK ORDINARY HIGH WATER MARK TO BE COMPLETED WITHOUT THE USE OF MECHANICAL MEANS.

2. ALL TREES SHOWN IN PLAN TO BE PROTECTED IN PLACE. SEE SHEETS C-1 AND C-2 FOR TREE PROTECTION AND REMOVAL PLAN.

3. LOCATIONS OF DEWATERING WELLS SHOWN ARE APPROXIMATE. CONTRACTOR TO DECOMISSION ALL DEWATERING WELLS IN ACCORDANCE WITH ALL STATE OF OREGON LAWS AND REGULATIONS, SEE SPECIFICATIONS.

4. TURBIDITY MONITORING SHALL BE CONDUCTED AND RECORDED DURING IN-WATER WORK PER NATIONWIDE SECTION 401 WATER QUALITY CERTIFICATION (401 WQC) 2013-128-1, SEE SPECIFICATIONS.

5. ALL DEWATERING WORK SHALL BE PERFORMED IN ACCORDANCE WITH JURISDICTIONAL AGENCY REQUIREMENTS, SEE SPECIFICATIONS.

6. EROSION AND SEDIMENT CONTROL BMPS NOT SHOWN FOR CLARITY, SEE SHEET ESC-2 AND ESC-3.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN
RENEWS 12-31-22

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City of Sherwood Oregon

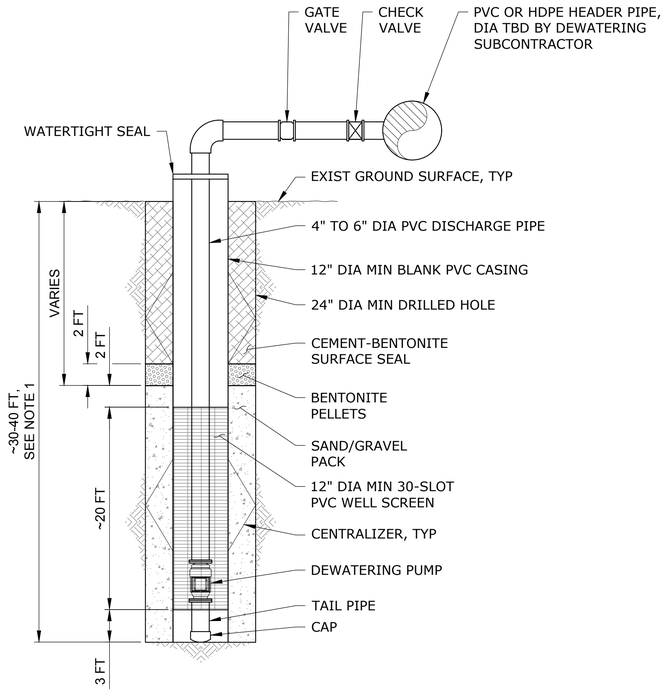
CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

DEWATERING PLAN

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
ESC-6
13 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-ESC-6.dwg ESC-6 3/11/2021 8:05 AM JUSTIN.DEUEL 23.0s (LMS Tech)



DEWATERING WELL DETAIL (1 / -)
SCALE: NTS

NOTES:

1. LOCATIONS, DIMENSIONS AND DETAILS OF DEWATERING WELLS ARE APPROXIMATE AND SCHEMATIC IN NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, OPERATION AND MAINTENANCE OF THE DEWATERING SYSTEM, SEE SPECIFICATIONS FOR REQUIREMENTS.

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN
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ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

DEWATERING DETAILS

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
ESC-7
14 of 32

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LEGEND

REMOVE TREE

TREE PROTECTION FENCING

TEMP AC OVERLAY

NOTES:

1. TREE PROTECTION FENCING SHALL BE PLACED AT OR OUTSIDE OF DRIPLINE.

2. INSTALL ORANGE NO WORK FENCE AT EASEMENT AND CONSTRUCTION LIMITS PER DETAIL 1, SHEET ESC-5, TYPICAL.

3. TREE TRUNK DIAMETER MEASURED AT BREAST HEIGHT. TREE REMOVAL SCHEDULE ENTRIES WITH MULTIPLE DIAMETERS LISTED DENOTE TREES WITH MULTIPLE TRUNKS.

4. STAGING OF MATERIALS, EQUIPMENT AND STOCKPILING OF NATIVE AND IMPORTED FILL SHALL NOT BE ALLOWABLE WITHIN THE TEMPORARY CONSTRUCTION AREA ON THE DEPARTMENT OF THE INTERIOR PROPERTY.

5. TAPER THICKNESS OF OVERLAY NEAR AT GRADE APPURTENANCES TO MAINTAIN ACCESS DURING CONSTRUCTION. SEE SHEET C-12 FOR DETAILS.

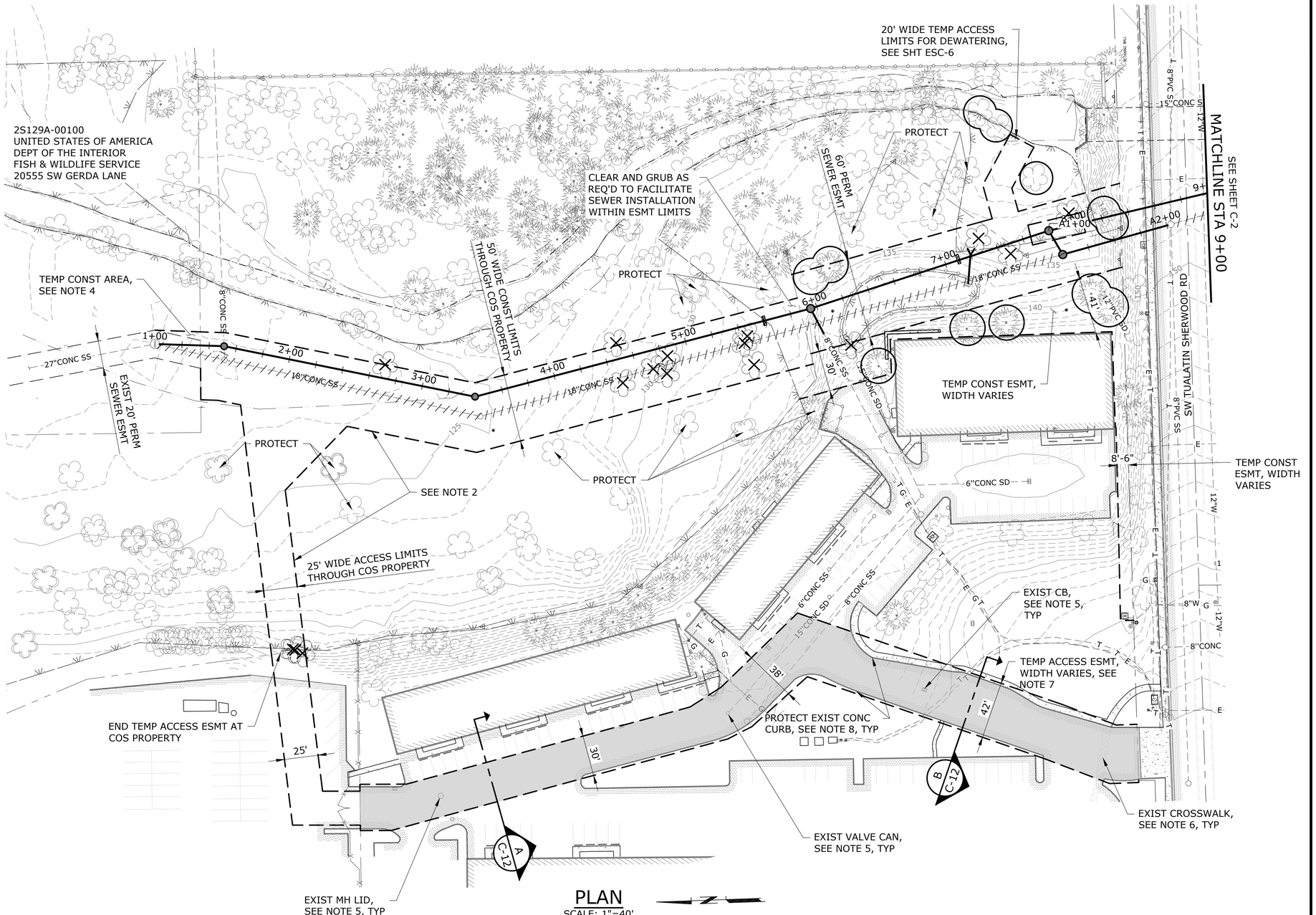
6. TAPER THICKNESS OF OVERLAY AS REQUIRED TO COMPLY WITH ADA REQUIREMENTS. SEE SHEET C-12 FOR DETAILS.

7. SEE SPECIFICATIONS FOR REQUIREMENTS WITHIN TEMPORARY ACCESS EASEMENT.

8. CONTRACTOR TO PROTECT EXISTING CONCRETE CURB. CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AT NO COST TO OWNER.

TREE REMOVAL SCHEDULE

TREE TYPE	QUANTITY (EA)	TREE TRUNK DIA (IN), SEE NOTE 3
DECIDUOUS	7	6
DECIDUOUS	1	6 / 6
DECIDUOUS	1	6.5
DECIDUOUS	2	7
DECIDUOUS	1	9.5
DECIDUOUS	1	11
DECIDUOUS	1	12
DECIDUOUS	1	15 / 16
DECIDUOUS	1	17



PLAN
SCALE: 1"=40'

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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RENEWS 12-31-22

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CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SITE ACCESS, TREE PROTECTION AND REMOVAL PLAN - 1

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
C-1
15 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C.dwg C-1 3/10/2021 3:47 PM JUSTIN.DEUEL 23.0s (LMS Tech)

LEGEND

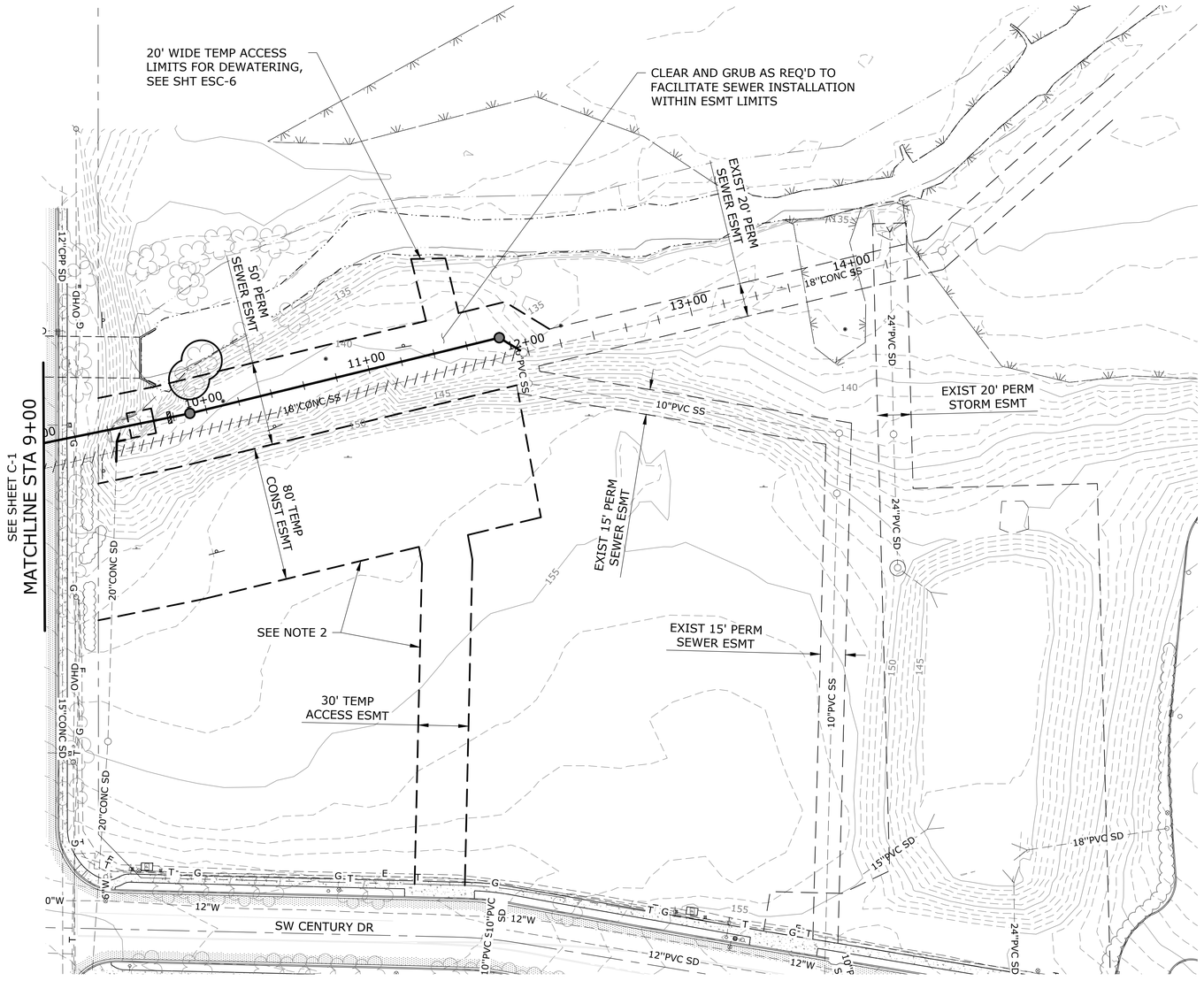
REMOVE TREE

TREE PROTECTION FENCING

NOTES:

1. TREE PROTECTION FENCING SHALL BE PLACED AT OR OUTSIDE OF DRIPLINE.

2. INSTALL ORANGE NO WORK FENCE AT EASEMENT AND CONSTRUCTION LIMITS PER DETAIL 1, SHEET ESC-5, TYPICAL.



PLAN
SCALE: 1"=40'

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

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SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SITE ACCESS, TREE PROTECTION AND REMOVAL PLAN - 2

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-2

16 of 32

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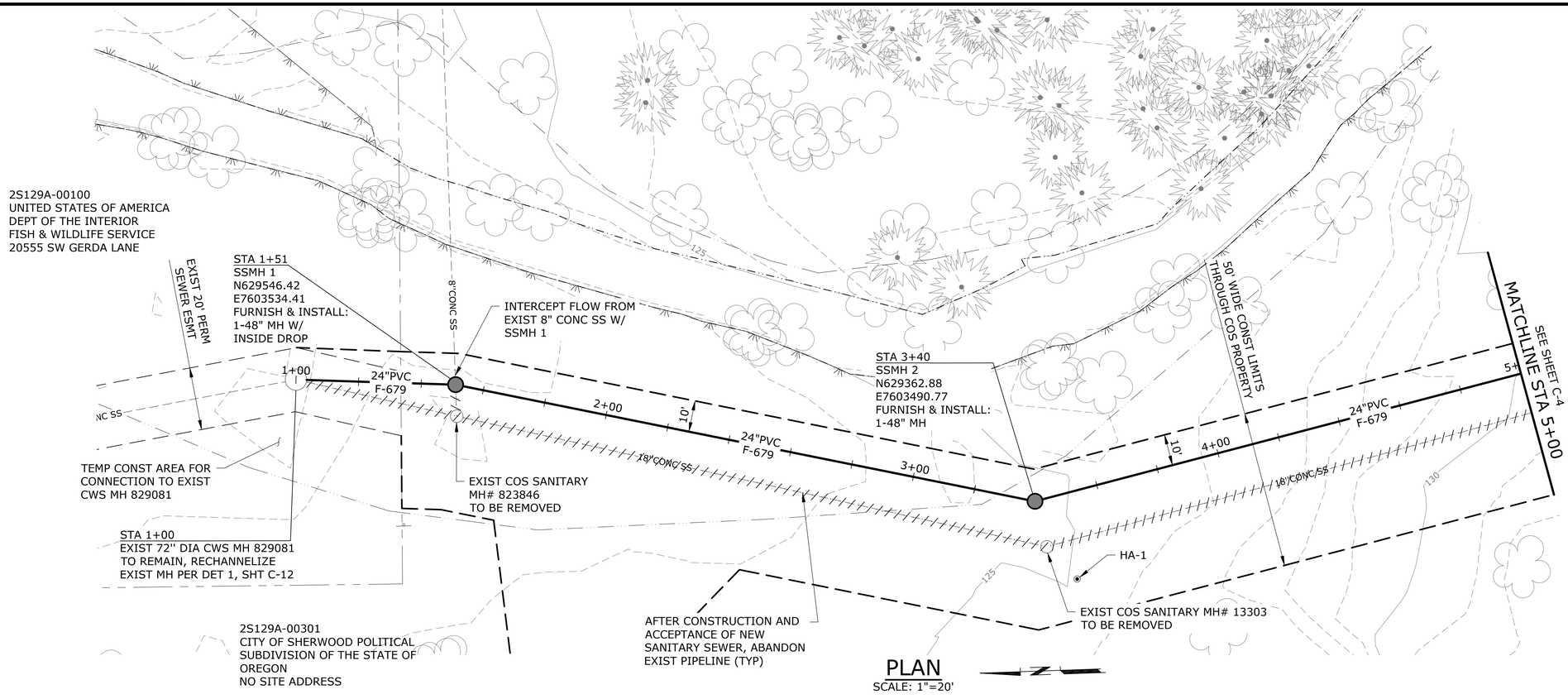
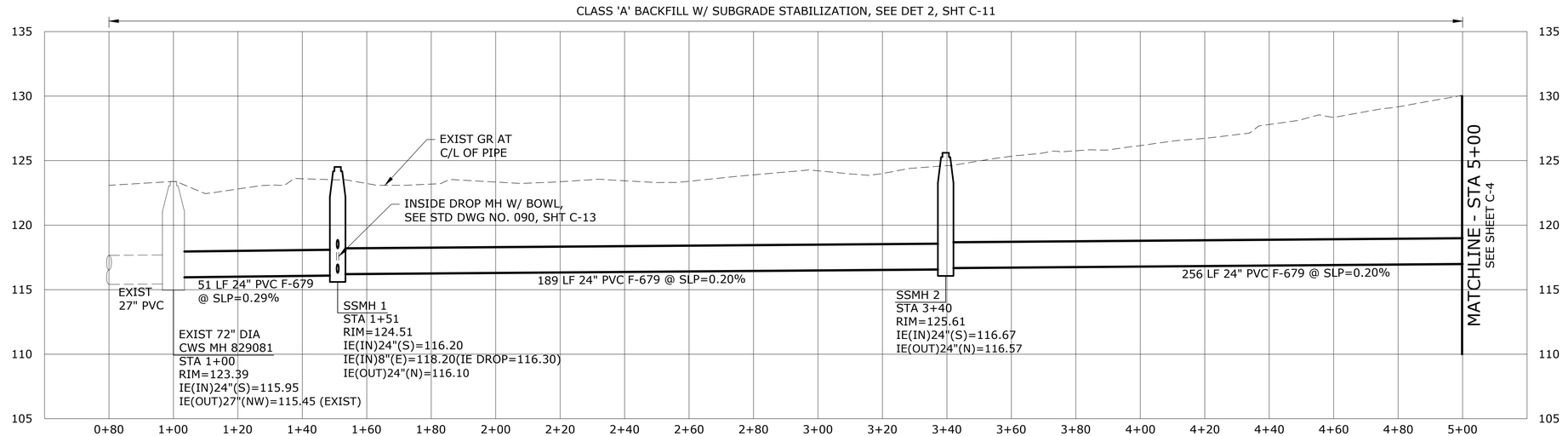


PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

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RENEWS 12-31-22

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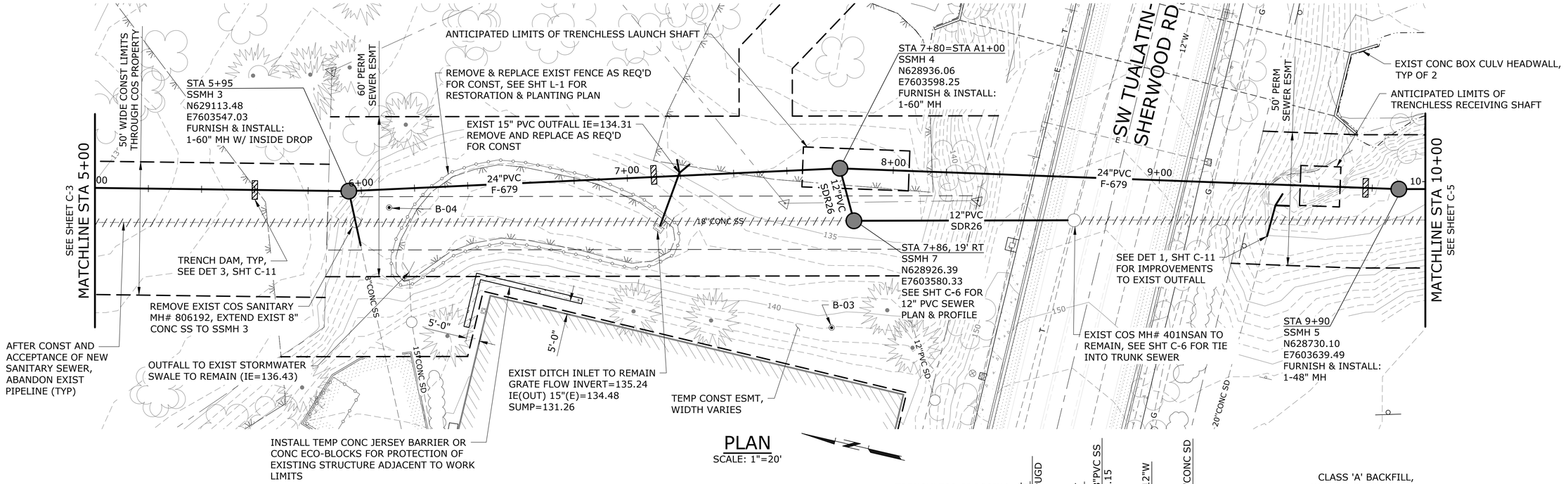
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SEWER PLAN AND PROFILE
STA 1+00 TO STA 5+00

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-3
17 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C.dwg C-3 3/10/2021 3:47 PM JUSTIN.DEUEL 23.0s (LMS Tech)



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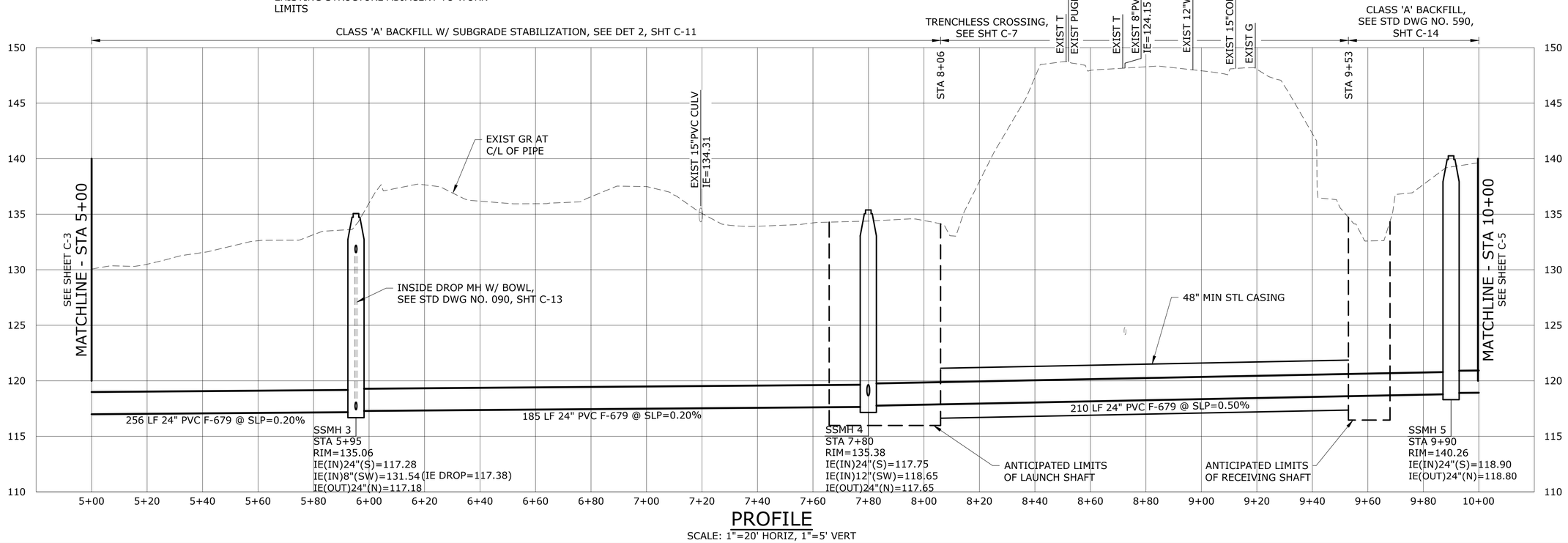

PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

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SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

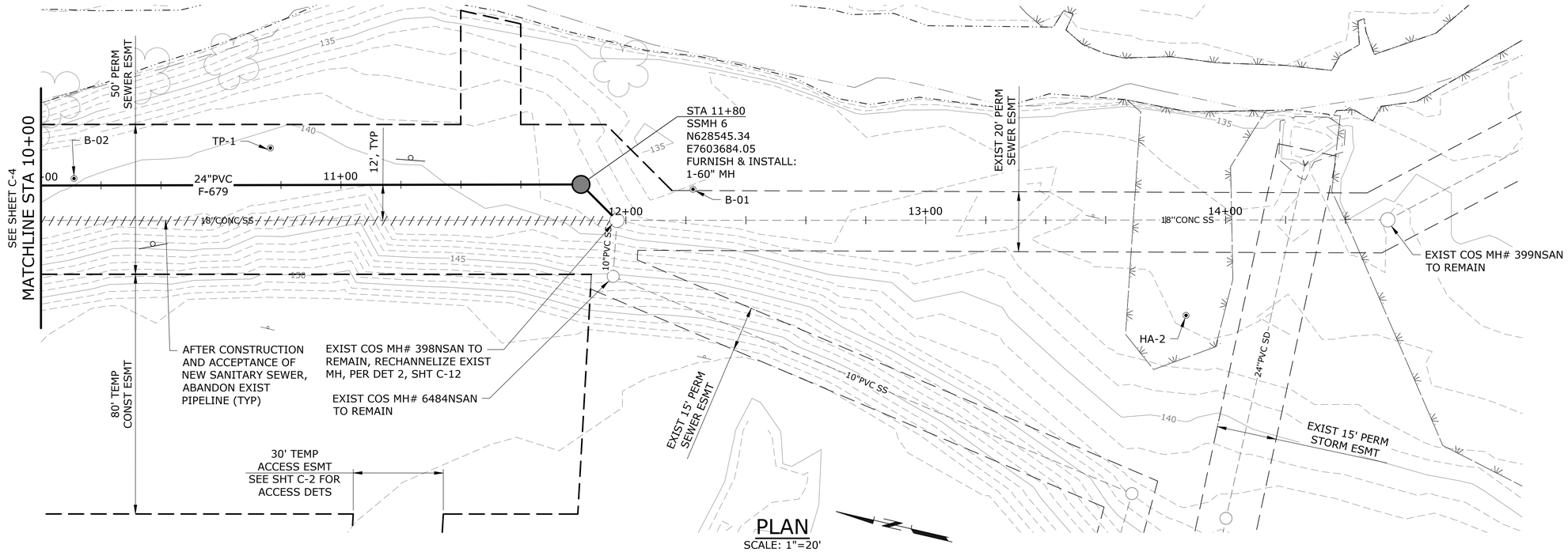
SEWER PLAN AND PROFILE STA 5+00 TO STA 10+00

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-4

18 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C.dwg C-4 3/10/2021 3:47 PM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN

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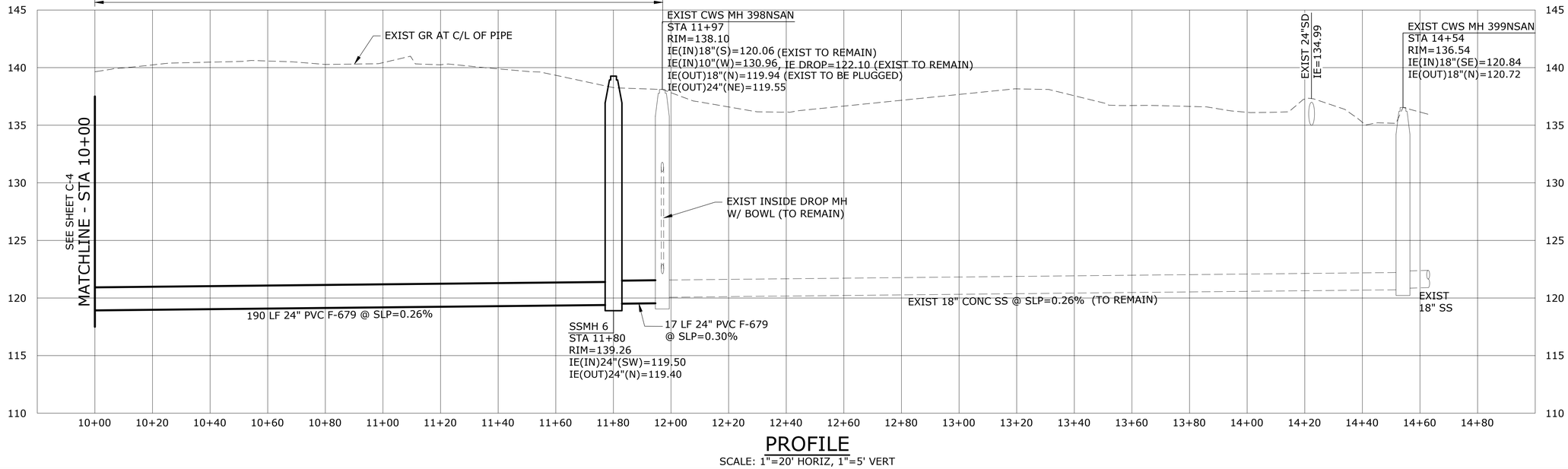

PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

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ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

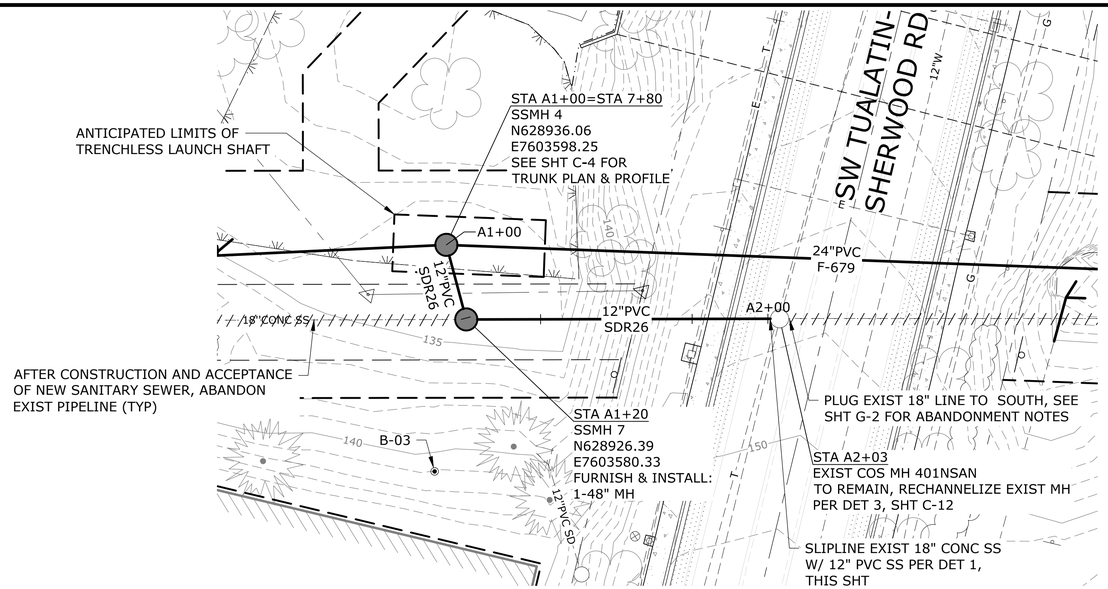
SEWER PLAN AND PROFILE STA 10+00 TO STA 14+54

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

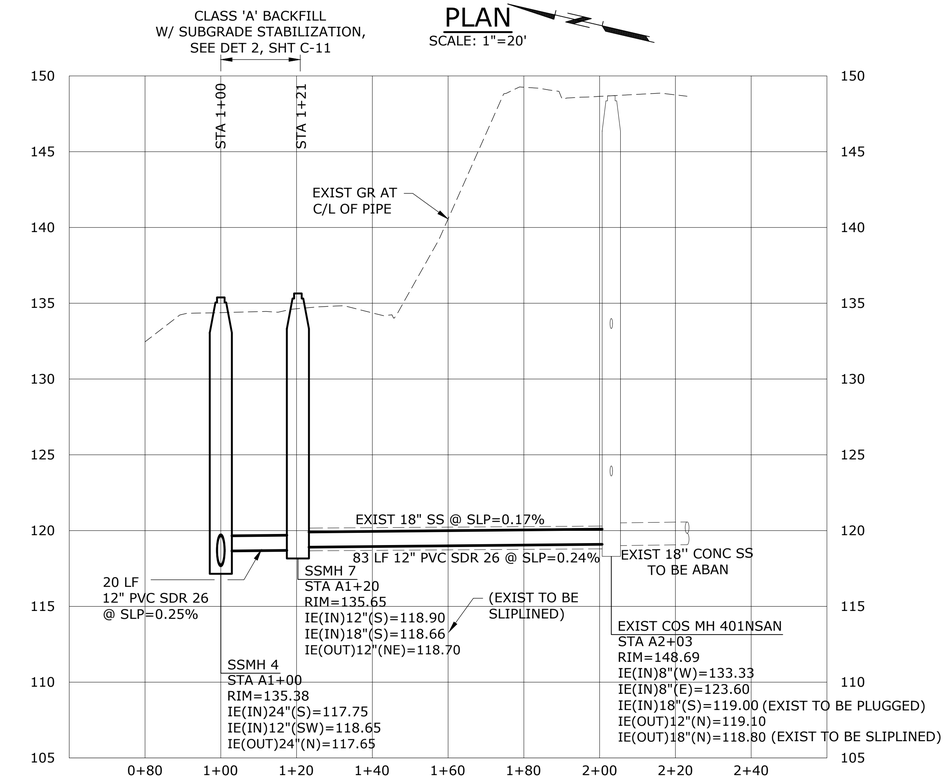
SHEET C-5

19 of 32

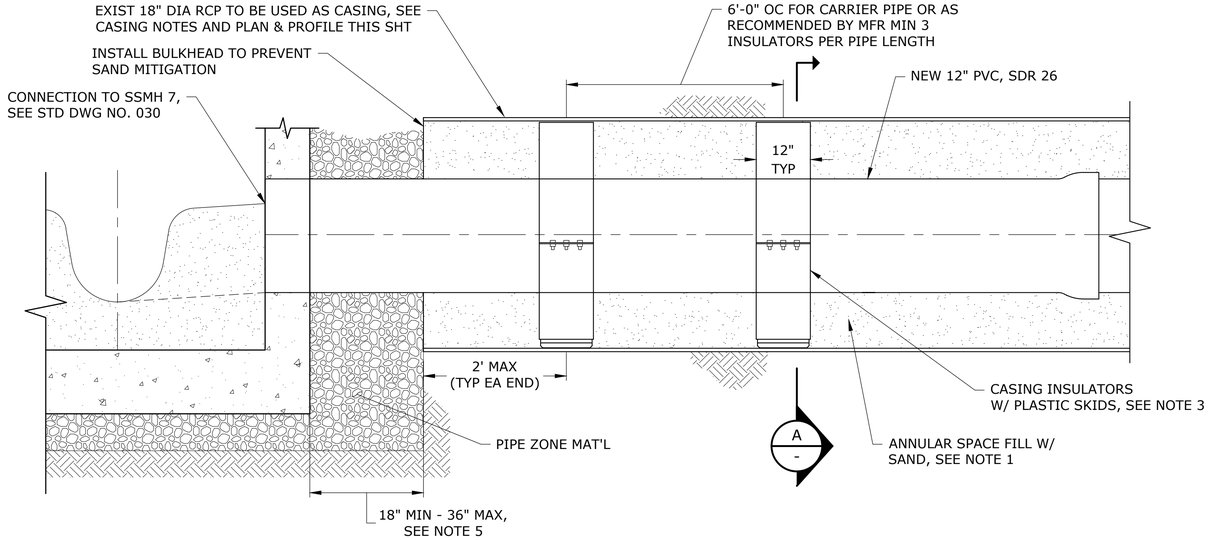
G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C.dwg C-5 3/10/2021 3:47 PM JUSTIN.DEUEL 23.0s (LMS Tech)

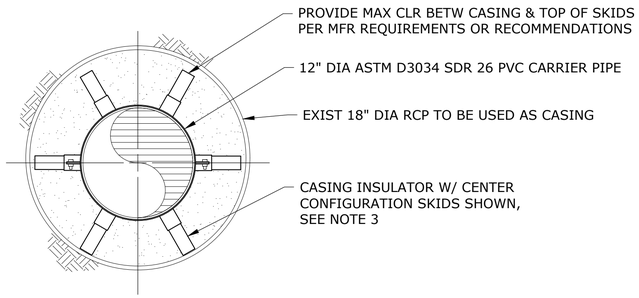


PLAN
SCALE: 1"=20'



PROFILE 'A'
SCALE: 1"=20' HORIZ, 1"=5' VERT





SECTION A
SCALE: NTS

CASING NOTES:

1. ANNULAR SPACE BETWEEN 18" DIAMETER RCP AND 12" DIAMETER PVC CARRIER PIPE TO BE FILLED WITH SAND PER SPECIFICATIONS. CONTRACTOR TO INSTALL MINIMUM 12" THICK NON-SHRINK GROUT BULK HEAD AT EACH END OF 18" DIAMETER CASING TO PREVENT SAND MIGRATION.

2. PROVIDE 2" MINIMUM CLEARANCE BETWEEN CASING AND CARRIER PIPE BELLS AND APPURTENANCES.

3. CONTRACTOR TO VERIFY CASING SIZES PRIOR TO SIZING AND ORDERING CASING INSULATORS. CUSTOM CASING INSULATORS WILL BE REQUIRED TO ACHIEVE SPECIFIED GRADE, SEE SPECIFICATIONS.

4. MANHOLE BENCH AND CHANNEL TO BE CONSTRUCTED FOR NEW SEWER INVERT ELEVATIONS, SEE DETS, SHT C-12.

5. INSTALL ¾"-0 CRUSHED ROCK WITHIN PIPE ZONE BETWEEN BULKHEAD AND MANHOLE WALL.

SLIPLINE DETAIL 1
SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED
EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2007 BRENDAN V. O'SULLIVAN
RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SEWER PLAN AND PROFILE
STA A1+00 TO STA A2+18
AND SLIPLINE DETAIL

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

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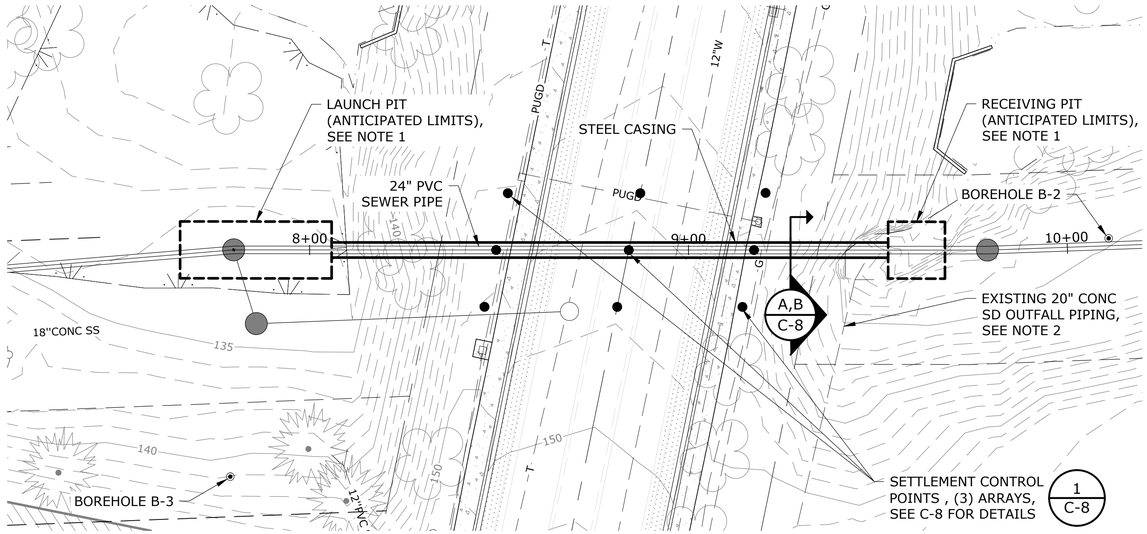
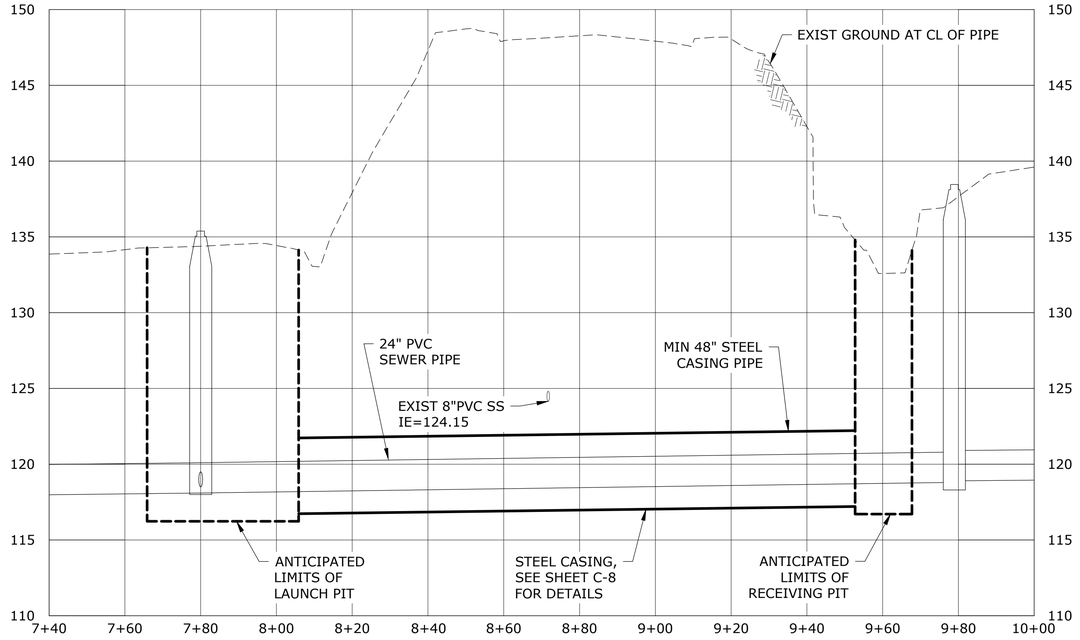


CROSSING PLAN STA 7+40 TO 10+00

SCALE: 1"=20'



CROSSING PROFILE STA 7+40 TO 10+00

SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. CONTRACTOR TO DETERMINE SIZE AND CONFIGURATION OF LAUNCH AND RECEIVING PITS BASED ON SELECTED MEANS AND METHODS FOR CONSTRUCTION.
2. COORDINATE RECEIVING PIT EXCAVATION WITH IMPROVEMENTS TO EXISTING OUTFALL. EXTEND OR RELOCATE THE EXISTING 20" CONCRETE SD OUTFALL PIPING TEMPORARILY OR PROVIDE MEASURES TO PREVENT FLOW FROM EXISTING OUTFALL PIPING FLOWING INTO RECEIVING PIT DURING CONSTRUCTION AS NECESSARY.

McMILLEN JACOBS ASSOCIATES

NO.	DATE	BY	REVISION

NOTICE
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DESIGNED
CAD
DRAWN
CHECKED

REGISTERED PROFESSIONAL ENGINEER
85861PE
OREGON
NOVEMBER 8, 2011
LUKE B. ERICKSON
EXPIRES: 12/31/2021

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT -
PHASE 1

SW TUALATIN-SHERWOOD RD
TRENCHLESS CROSSING
PLAN AND PROFILE

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2020

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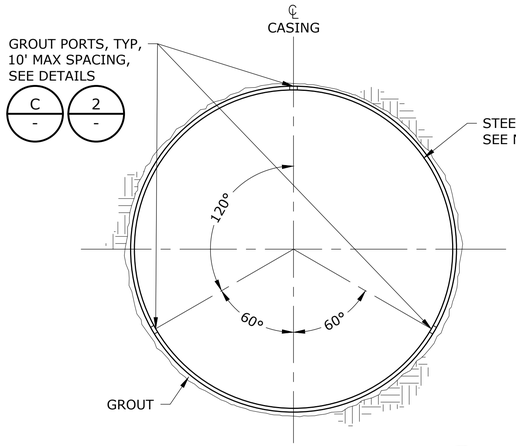
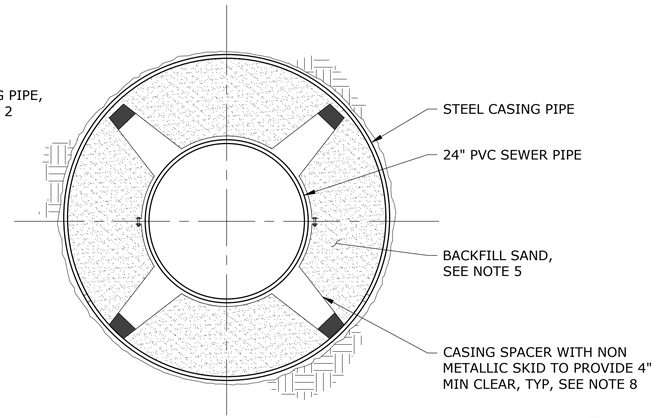
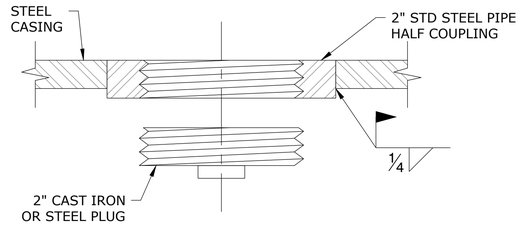


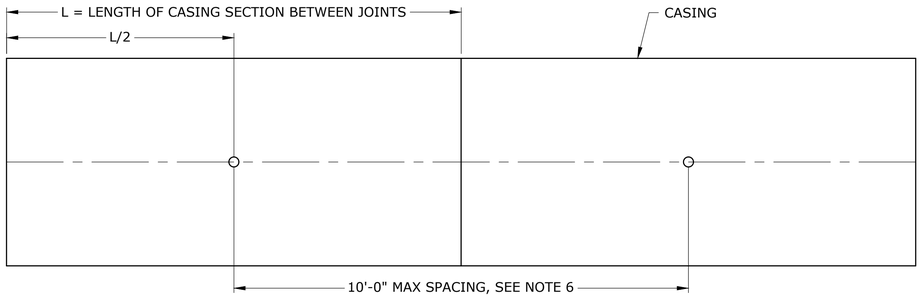
STEEL CASING SECTION (A / C-7)
SCALE: NTS



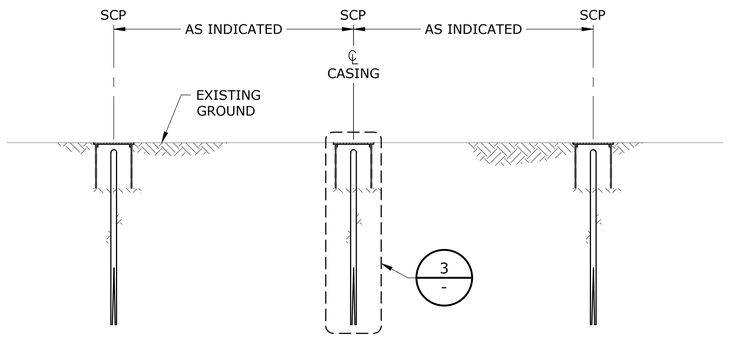
STEEL CASING AND CARRIER PIPE SECTION (B / C-7)
SCALE: NTS



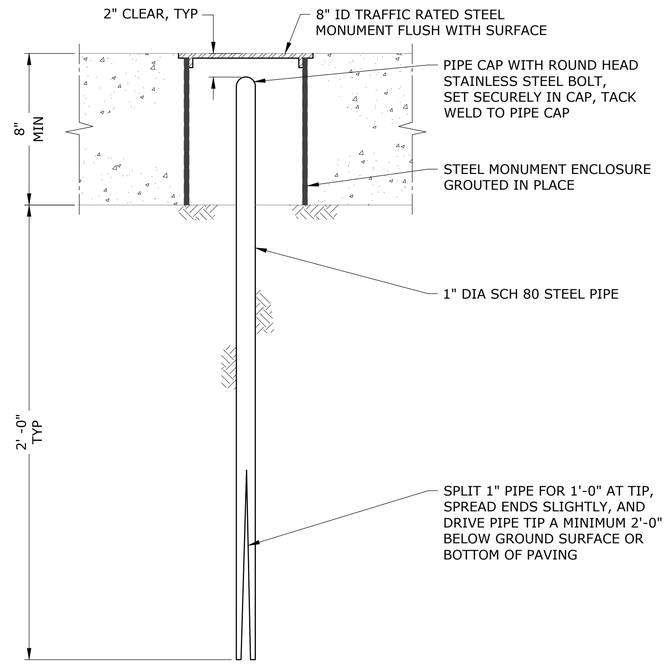
STEEL CASING GROUT PORT DETAIL (C / -)
SCALE: NTS



GROUT PORT SPACING DETAIL (2 / -)
SCALE: NTS



SETTLEMENT CONTROL POINT (SCP) DETAIL (1 / C-7)
SCALE: NTS



SCP WITH SURFACE MONUMENT (3 / -)
SCALE: NTS

STEEL CASING AND GROUT PORT NOTES:

1. STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.5". MINIMUM CASING PIPE THICKNESS HAS BEEN SIZED FOR ANTICIPATED EARTH PRESSURES AND LIVE LOADS. CONTRACTOR IS RESPONSIBLE FOR INCREASING THE THICKNESS FOR INSTALLATION LOADS AS NECESSARY BASED ON THE CONTRACTOR'S SELECTED MEANS AND METHODS.
2. THE DIAMETER OF THE STEEL CASING SHALL BE MINIMUM 48" IN ORDER TO ALLOW FOR PERSONNEL ACCESS TO BREAK UP AND REMOVE BOULDERS. CONTRACTOR SHALL UPSIZE CASING AS NECESSARY BASED ON SELECTED MEANS AND METHODS.
3. SEE SPECIAL PROVISION S-52 FOR STEEL CASING PIPE REQUIREMENTS.
4. SEE SPECIAL PROVISION S-52 FOR TRENCHLESS INSTALLATION REQUIREMENTS.
5. MINIMUM ANNULAR CLEARANCE BETWEEN CASING AND SEWER PIPE SHALL BE 4" AND FILLED WITH SAND. CONTRACTOR TO INSTALL NON-SHRINK GROUT BULKHEAD AT EACH END OF CASING TO PREVENT SAND MIGRATION AND TO PREVENT GROUNDWATER FROM ENTERING CASING. SEE PIPE SEAL DETAIL (DRAWING NO. 610) ON SHEET C-13.
6. PROVIDE ONE SET OF 3 GROUT PORTS PER CASING SECTION OR 10' ON CENTER WHICHEVER RESULTS IN A CLOSER SPACING.
7. GROUT ANULAR SPACE OUTSIDE CASING PER REQUIREMENTS IN SPECIAL PROVISION S-52.
8. CASING SPACERS SHALL BE ADJUSTABLE TO ALLOW SEWER PIPE TO BE INSTALLED AT THE REQUIRED LINE AND GRADE WHILE MAINTAINING MINIMUM BACKFILL REQUIREMENTS.

SETTLEMENT CONTROL POINT NOTES:

1. INSTRUMENTATION INSTALLATION METHODS, EQUIPMENT, MATERIALS, TIMING, TOLERANCES AND INSTRUMENTATION MONITORING, AND THE REPORTING RESULTS SHALL COMPLY WITH THE REQUIREMENTS OF SPECIAL PROVISION S-52.
2. MONITORING OF THE SETTLEMENT CONTROL POINTS SHALL BE CONTINUED AT LEAST 2 WEEKS AFTER THE CASING INSTALLATION. THEN THE SETTLEMENT CONTROL POINTS SHALL BE REMOVED AND BACKFILLED TO RESTORE THE ORIGINAL SURFACE CONDITION.
3. ADJUST INSTRUMENT AND MONITORING LOCATIONS AS APPROVED OR DIRECTED BY THE OWNER'S REPRESENTATIVE TO AVOID EXISTING UTILITIES AND MINIMIZE CONFLICTS WITH CONSTRUCTION OPERATIONS.
4. PRIOR TO CONSTRUCTION, OBTAIN PERMITS AND COMPLY WITH REQUIREMENTS OF THE AGENCIES, OWNERS, UTILITIES, AND OTHER ENTITIES WITH JURISDICTION OVER ACCESS AND INSTALLATION OF THE INSTRUMENTATION.

McMILLEN JACOBS ASSOCIATES

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED
CAD
DRAWN
CHECKED

REGISTERED PROFESSIONAL ENGINEER
85861PE
OREGON
NOVEMBER 9, 2007
LUKE B. ERICKSON
EXPIRES: 12/31/2021

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

TRENCHLESS & SETTLEMENT INSTRUMENTATION SECTIONS & DETAILS

PROJECT NO.: 19-2481.402 | SCALE: NOT TO SCALE | DATE: FEBRUARY 2020

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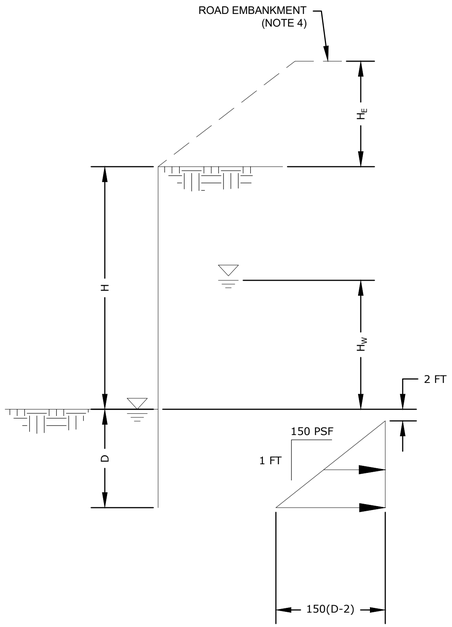
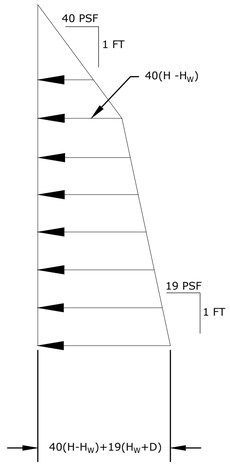
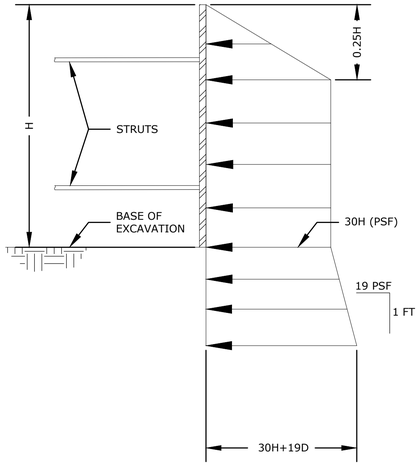


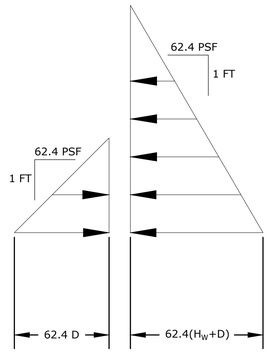
PASSIVE PRESSURE



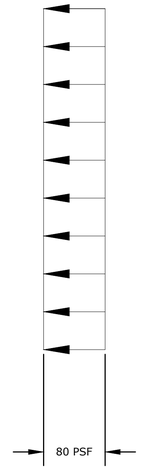
ACTIVE EARTH PRESSURE FOR CANTILEVER WALLS (NOTE 2)



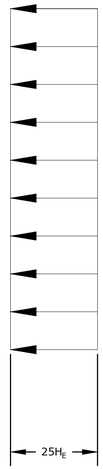
APPARENT EARTH PRESSURE FOR BRACED WALLS (NOTE 2)



HYDROSTATIC PRESSURE



TEMPORARY SURCHARGE PRESSURE (NOTE 3)



ROADWAY EMBANKMENT SURCHARGE PRESSURE (NOTE 4)

LATERAL EARTH PRESSURES FOR TEMPORARY EXCAVATION SHORING

1 / -

SCALE: NTS

NOTES:

1. THE ACTIVE AND APPARENT EARTH PRESSURES ARE THE MINIMUM TO BE USED FOR DESIGN OF THE TRENCHLESS CROSSING LAUNCHING AND RECEIVING SHAFTS EXCAVATION SUPPORT SYSTEM. THE LOADS DO NOT INCLUDE ANY FACTOR OF SAFETY THAT MUST BE APPLIED IN THE EXCAVATION SYSTEM DESIGN. CONTRACTOR IS RESPONSIBLE FOR EVALUATING ACTUAL LOADS, BUT IN NO CASE SHALL BE LESS THAN THOSE SHOWN.
2. DEPENDING ON SUPPORT OF EXCAVATION DESIGN, USE EITHER ACTIVE OR APPARENT EARTH PRESSURE. USING BOTH SIMULTANEOUSLY IS NOT REQUIRED.
3. THE TEMPORARY SURCHARGE LOAD SHOWN IS THE MINIMUM REQUIRED. CONTRACTOR SHALL DEVELOP SPECIFIC SURCHARGE PRESSURES BASED ON ACTUAL EQUIPMENT USED.
4. SHORING SIDE IMMEDIATELY ADJACENT TO THE ROAD EMBANKMENT SHALL BE DESIGNED TO CONSIDER EMBANKMENT SURCHARGE LOAD.
5. SEE SPECIAL PROVISION S-51 FOR SHAFT DESIGN & CONSTRUCTION REQUIREMENTS.

LEGEND:

- H HEIGHT OF EXCAVATION (TEMPORARY) IN FEET
- H_W DISTANCE FROM BASE OF EXCAVATION TO WATER LEVEL
- D DEPTH OF EMBEDMENT
- H_E HEIGHT OF EMBANKMENT

McMILLEN JACOBS ASSOCIATES

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
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DESIGNED
CAD
DRAWN
CHECKED

REGISTERED PROFESSIONAL ENGINEER
80569PE
OREGON
June 7, 2012
JEFFREY P. QUINN
EXPIRES: 12/31/2022

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

EARTH PRESSURE DIAGRAM

PROJECT NO.: 19-2481.402 | SCALE: NOT TO SCALE | DATE: FEBRUARY 2020

SHEET
C-9
23 of 32

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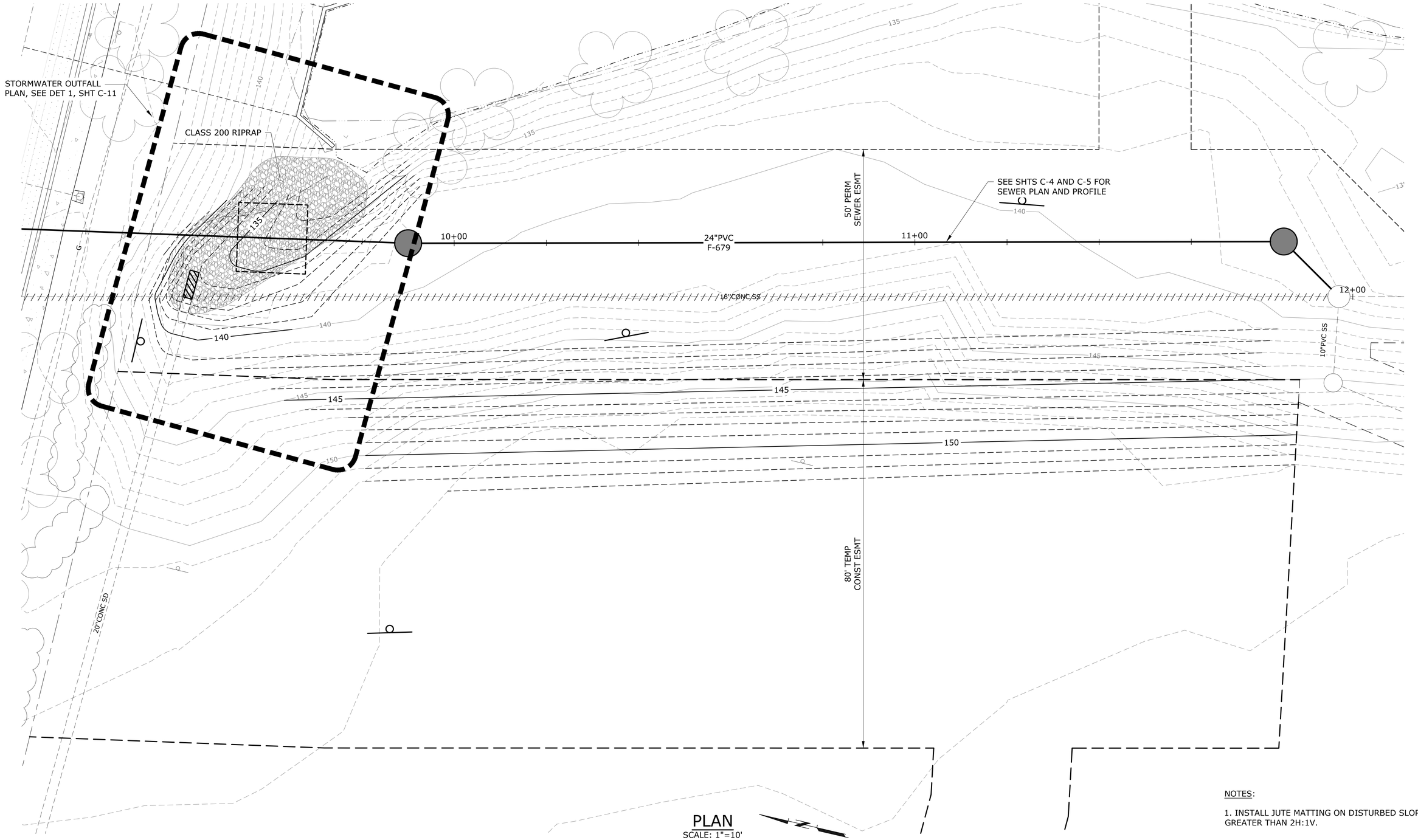

PLAN
SCALE: 1"=10'

NOTES:

1. INSTALL JUTE MATTING ON DISTURBED SLOPES GREATER THAN 2H:1V.

NO.	DATE	BY	REVISION

NOTICE
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EJJ DRAWN
BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2005 BRENDAN V. O'SULLIVAN
RENEWS 12–31–22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

SITE GRADING PLAN

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

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C-10
24 of 32

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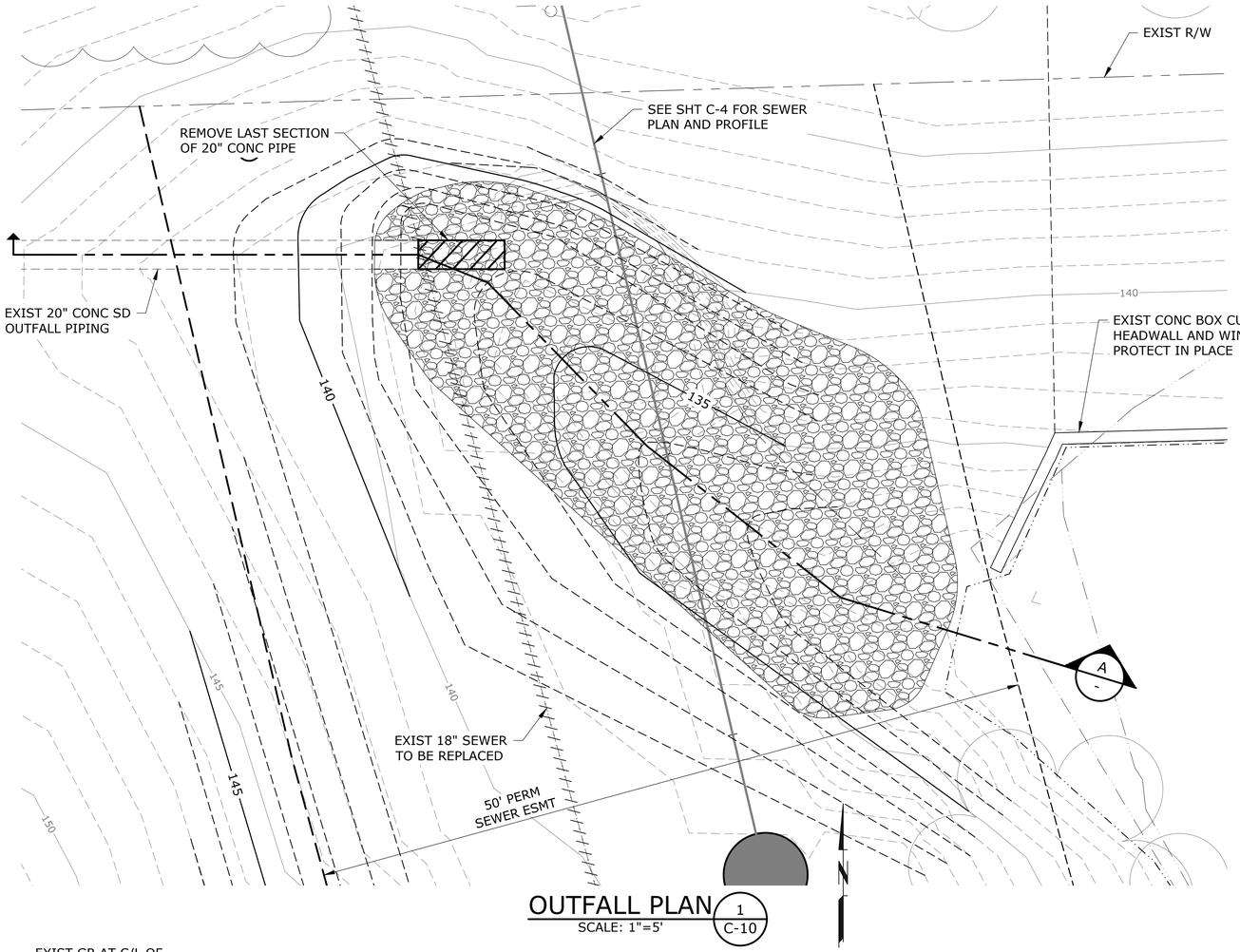
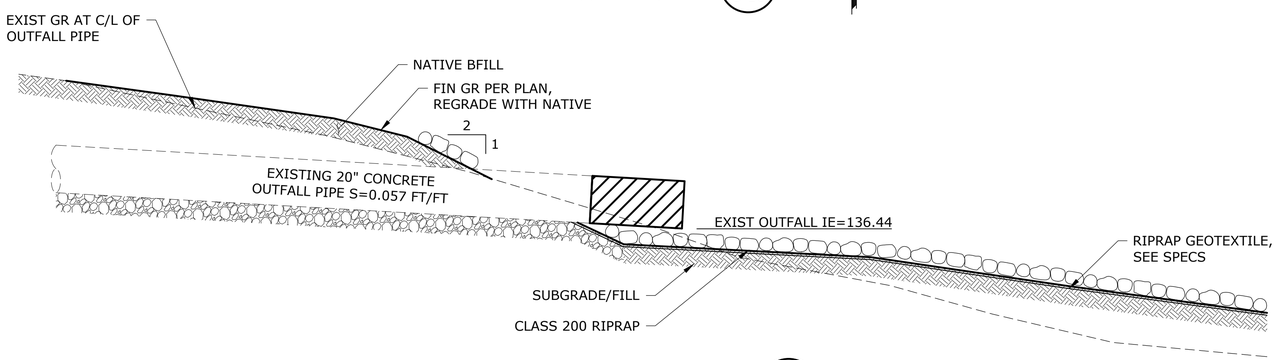


OUTFALL PLAN

SCALE: 1"=5'

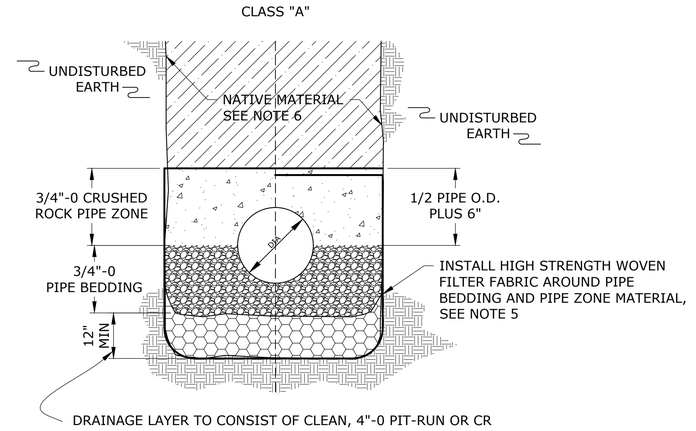
1 / C-10



OUTFALL SECTION

SCALE: NTS

A / -



1. BEDDING AND PIPE ZONE MATERIAL SHALL BE COMPACTED TO 90% OF THE MODIFIED PROCTOR DRY DENSITY VALUE (ASTM D1557). COMPACTION OF BEDDING MATERIAL SHALL BE ACCOMPLISHED WITHOUT VIBRATORY COMPACTION METHODS.

2. THE TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER.

3. THE MINIMUM TRENCH WIDTH IN THE PIPE ZONE SHALL PROVIDE A CLEAR WORKING SPACE OF SIX INCHES OUTSIDE THE MAXIMUM OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.

4. IN ALL CASES, TRENCHES SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR SHORING, PROPER JOINING OF PIPE, AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE.

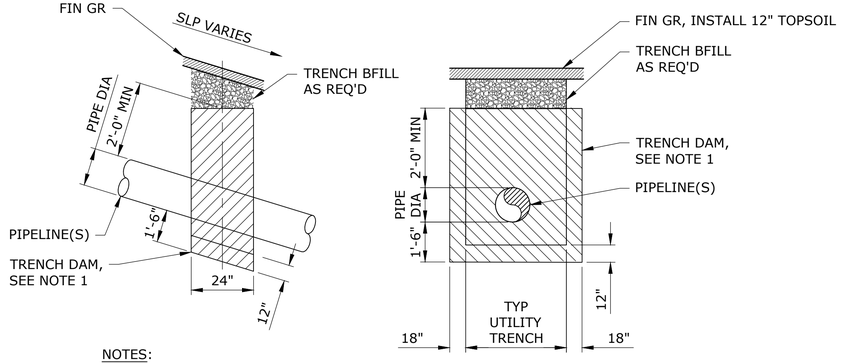
5. HIGH STRENGTH WOVEN FILTER FABRIC SHALL BE MIRAFI RS280i OR APPROVED EQUAL.

6. SEE STANDARD DRAWING 590 FOR COMPACTION AND SURFACE RESTORATION. REQUIREMENTS.

TRENCH WITH SUBGRADE STABILIZATION

SCALE: NTS

2 / -



NOTES:

1. CONSTRUCT TRENCH DAMS WITH BENTONITE, DO NOT USE TOPSOIL FOR FILLING BENTONITE.

2. TRENCH DAMS SHALL BE INSTALLED IN PIPELINE TRENCH. APPROX LOCATION OF TRENCH DAMS ARE SHOWN ON PLAN SHEETS. COORDINATE EXACT LOCATION W/ FIELD ENGINEER.

TYPICAL TRENCH DAM

SCALE: NTS

3 / -

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

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JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD ROCK CREEK SANITARY TRUNK LINE UPSIZING PROJECT - PHASE 1

CIVIL DETAILS - 1

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-11

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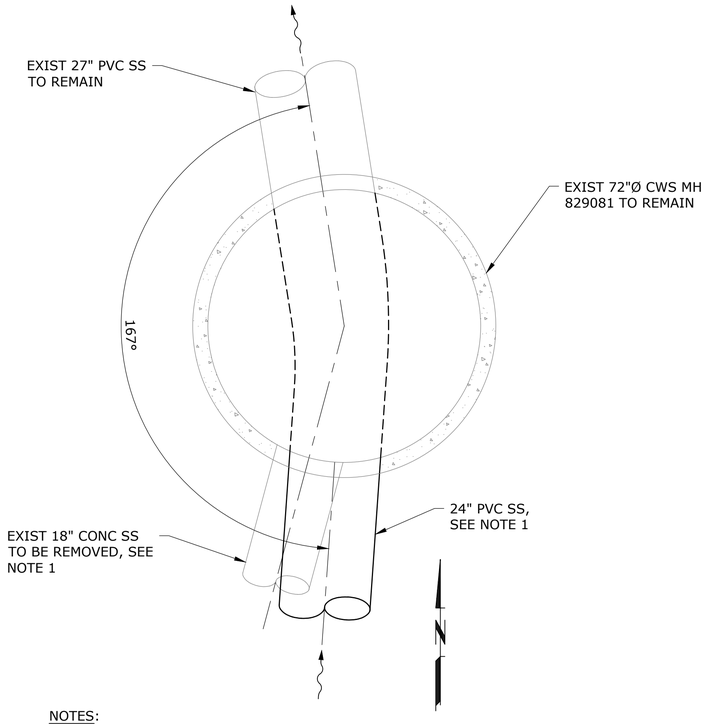
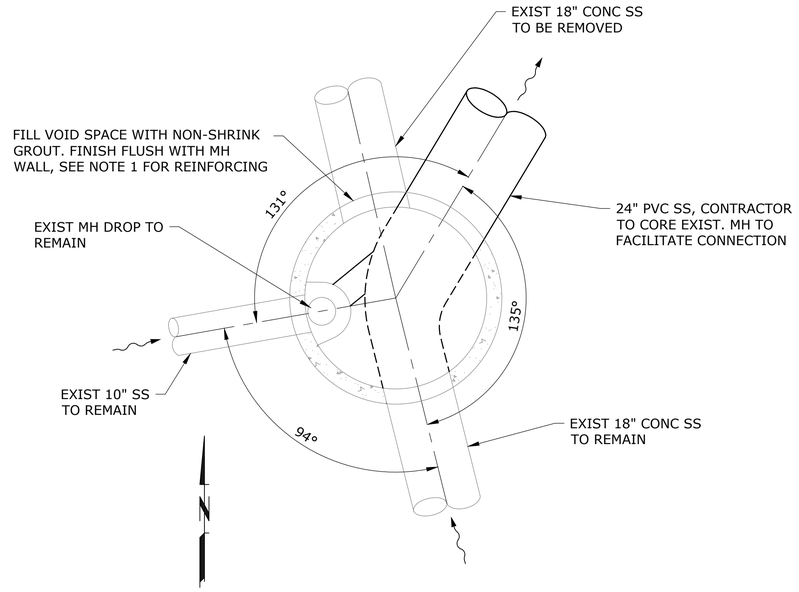


NOTES:

1. EXISTING MANHOLE CORING FOR 18" SEWER LINE TO BE RE-CORED FOR 24" SEWER LINE CONNECTION TO CWS MH 829081. CONTRACTOR TO INSTALL BYPASS PIPING AS REQUIRED TO FACILITATE CONNECTION.

EXISTING CWS MH 829081 RECHANNELIZATION (1 / -)

SCALE: NTS

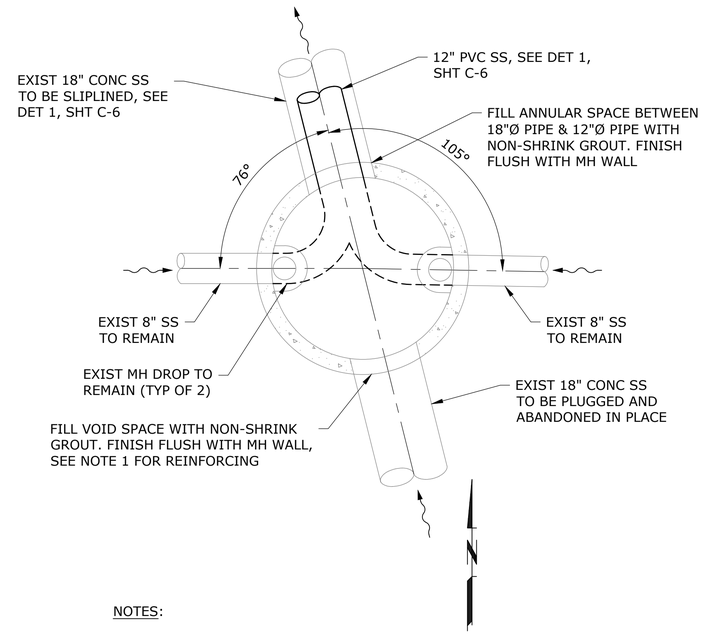


NOTES:

1. DRILL INTO MH WALL AND INSTALL #3 BARS AT 6" OC EACH WAY W/ HILTI HIT-RE-500-SD EPOXY, MINIMUM 4" EMBED. PROVIDE MINIMUM 12" LAP SPLICE.

EXISTING COS MH 398NSAN RECHANNELIZATION (2 / -)

SCALE: NTS



NOTES:

1. DRILL INTO MH WALL AND INSTALL #3 BARS AT 6" OC EACH WAY W/ HILTI HIT-RE-500-SD EPOXY, MINIMUM 4" EMBED. PROVIDE MINIMUM 12" LAP SPLICE.

EXISTING COS MH 401NSAN RECHANNELIZATION (3 / -)

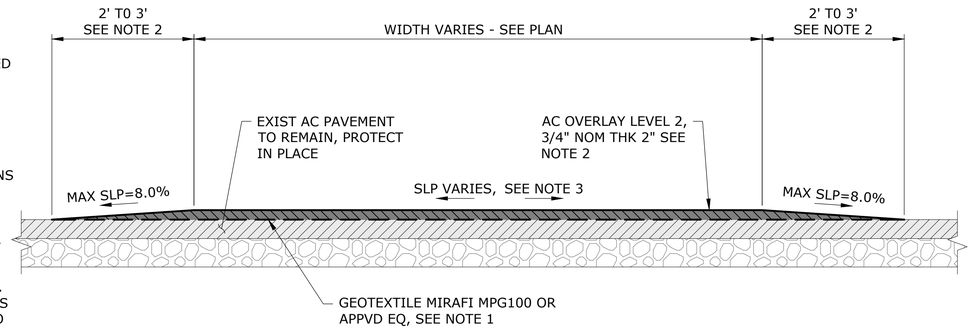
SCALE: NTS

NOTES:

1. EXISTING PAVEMENT SHALL BE CLEANED AND FULL WIDTH OF ROADWAY SHALL BE TACKED PRIOR TO INSTALLATION OF GEOTEXTILE. INSTALL GEOTEXTILE ACCORDING TO MANUFACTURER INSTALLATION GUIDELINES.

2. TAPER OVERLAY THICKNESS FOR TIE-INS TO EXISTING CONCRETE DRIVEWAYS, AT-GRADE APPURTENANCES, PAVEMENT WHERE EXISTING CURB IS NOT PRESENT AND CROSSWALKS TO COMPLY WITH ADA REQUIREMENTS.

3. MATCH EXISTING SLOPE OF PAVEMENT. CONSIDER EXISTING DRAINAGE PATTERNS WHEN FEATHERING OVERLAY SURFACE TO MATCH EXISTING PAVEMENT SURFACE.



SECTION (A / C-1)

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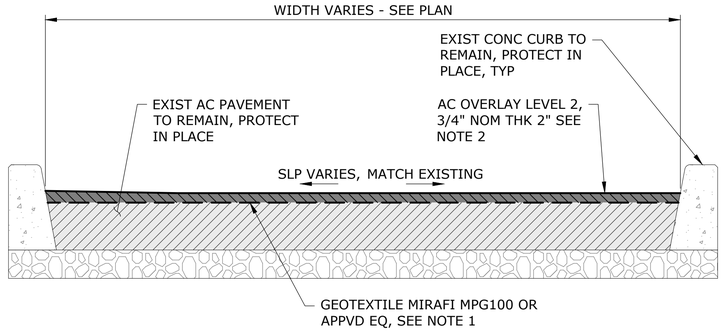


SECTION (B / C-1)

SCALE: NTS

NOTES:

1. EXISTING PAVEMENT SHALL BE CLEANED AND FULL WIDTH OF ROADWAY SHALL BE TACKED PRIOR TO INSTALLATION OF GEOTEXTILE. INSTALL GEOTEXTILE ACCORDING TO MANUFACTURER INSTALLATION GUIDELINES.

2. TAPER OVERLAY THICKNESS FOR TIE-INS TO EXISTING CONCRETE DRIVEWAYS, AT-GRADE APPURTENANCES, AND CROSSWALKS TO COMPLY WITH ADA REQUIREMENTS.

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

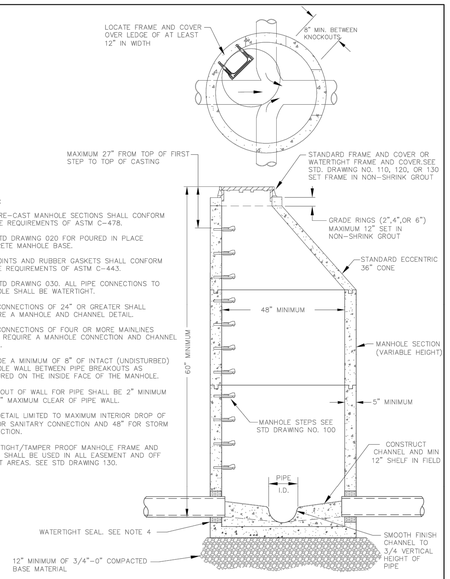
CIVIL DETAILS - 2

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-12

26 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C DETS.dwg C-12 3/11/2021 9:33 AM JUSTIN.DEUEL 23.0s (LMS Tech)



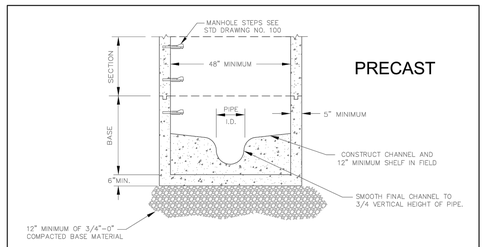
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. SEE STD DRAWING 020 FOR POURED IN PLACE CONCRETE MANHOLE BASE.
3. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
4. SEE STD DRAWING 030, ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
5. PIPE CONNECTIONS OF 24" OR GREATER SHALL REQUIRE A MANHOLE AND CHANNEL DETAIL.
6. PIPE CONNECTIONS OF FOUR OR MORE MAINLINES SHALL REQUIRE A MANHOLE CONNECTION AND CHANNEL DETAIL.
7. PROVIDE A MINIMUM OF 8" OF INTACT (UNDISTURBED) MANHOLE WALL BETWEEN PIPE BREAKOUTS AS MEASURED ON THE INSIDE FACE OF THE MANHOLE.
8. BREAKOUT OF WALL FOR PIPE SHALL BE 2" MINIMUM AND 4" MAXIMUM CLEAR OF PIPE WALL.
9. THIS DETAIL LIMITED TO MAXIMUM INTERIOR DROP OF 12" FOR SANITARY CONNECTION AND 48" FOR STORM CONNECTION.
10. WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS. SEE STD DRAWING 130.

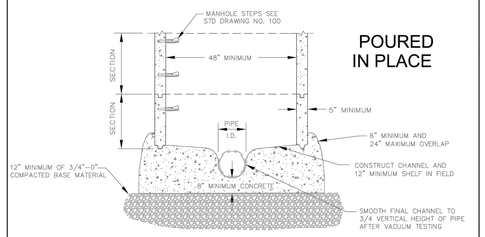
STANDARD MANHOLE

DRAWING NO. 010 REVISED 10-31-19

CleanWater Services



PRECAST



POURED IN PLACE

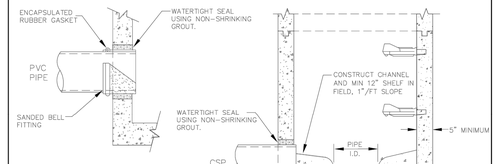
NOTES:

1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING NO. 010.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".

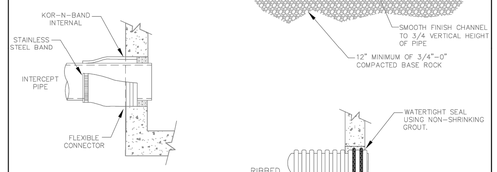
PRE-CAST/POURED IN PLACE MANHOLE BASE

DRAWING NO. 020 REVISED 10-31-19

CleanWater Services



PVC SANDED BELL



KOR-N-SEAL BOOT

RIBBED PIPE WITH GASKETS

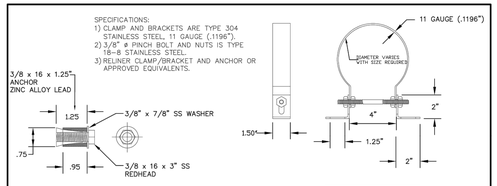
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD DRAWING NO. 010.
2. ALTERNATE METHODS TO BE APPROVED BY CITY/DISTRICT.
3. BOOTS TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS/SPECIFICATIONS.

MANHOLE CONNECTIONS

DRAWING NO. 030 REVISED 10-31-19

CleanWater Services

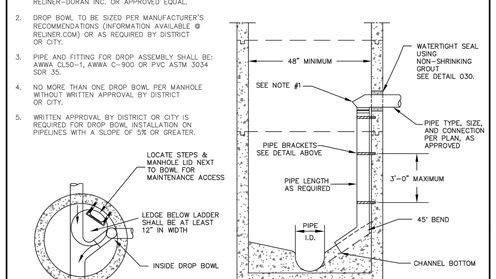


ANCHOR DETAIL
N.T.S.

CLAMP DETAIL
N.T.S.

NOTES:

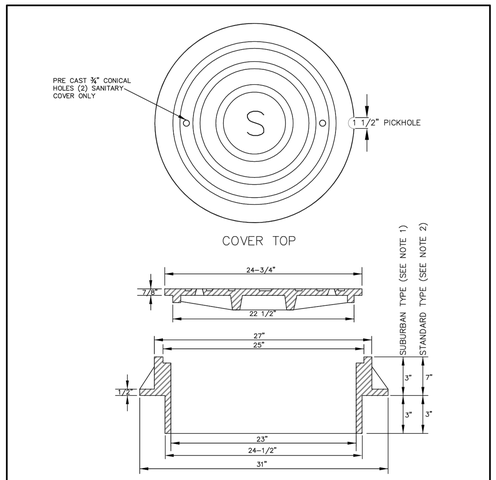
1. DROP BOWL AS MANUFACTURED BY RELINER-DURAN INC. OR APPROVED EQUAL.
2. DROP BOWL TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS (INFORMATION AVAILABLE @ RELINER.COM) OR AS REQUIRED BY DISTRICT OR CITY.
3. PIPE AND FITTING FOR DROP ASSEMBLY SHALL BE: AWWA C-150-1, AWWA C-900 OR PVC ASTM 3034 SDR 35.
4. NO MORE THAN ONE DROP BOWL PER MANHOLE WITHOUT WRITTEN APPROVAL BY DISTRICT OR CITY.
5. WRITTEN APPROVAL BY DISTRICT OR CITY IS REQUIRED FOR DROP BOWL INSTALLATION ON PIPELINES WITH A SLOPE OF 5% OR GREATER.



INSIDE DROP MANHOLE W/BOWL

DRAWING NO. 090 REVISED 10-31-19

CleanWater Services



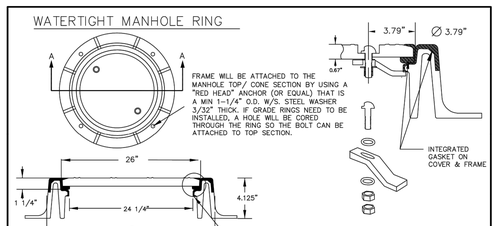
NOTES:

1. SUBURBAN TYPE FOR USE IN TRAFFIC AREAS OF LOCAL AND NEIGHBORHOOD STREETS.
2. STANDARD TYPE FOR USE IN TRAFFIC AREAS OF COLLECTOR AND ARTERIAL STREETS.
3. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
4. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
5. 1 1/2" PICKHOLE IN LID FOR LIFTING HOOK.

SUBURBAN AND STANDARD MANHOLE FRAME AND COVER SANITARY

DRAWING NO. 110 REVISED 10-31-19

CleanWater Services



SECTION A-A

BOLT-DOWN DETAIL

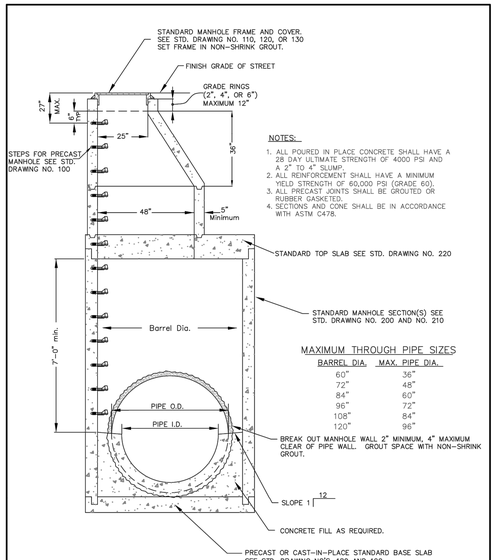
NOTES:

1. COMPOSITE WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS.
2. THE WATERTIGHT MANHOLE COVER FRAME SHALL BE GMI 2600 SERIES COMPOSITE FRAME AND COVER MANUFACTURED BY TITUS INDUSTRIAL GROUP, INC. OR ITS EQUAL.
3. THE LOCKING MECHANISM SHALL BE A TWISTLIFT® MANUFACTURED BY TITUS INDUSTRIAL GROUP, INC.OR ITS EQUAL.
4. THE TWISTLIFT® COMPOSITE ACCESS COVER LOCK IS DESIGNED AS A SECURITY BOLT REQUIRING A SPECIAL TOOL TO OPERATE THE QUARTER TURN BOLT AND LIFT THE COVER FROM THE FRAME. IT FUNCTIONS WITH EITHER THE STANDARD CAM LOCK QUARTER TURN PADDLE, OR THE EXTENDED "SURCHARGE" PADDLE.
5. THE BOLT SHALL BE MACHINED FROM 316 STAINLESS STEEL.
6. THE BOLT FEATURES A DOMED HEAD WITH 3 EQUALLY SPACED 'J' SLOTS RUNNING HORIZONTALLY AROUND THE BOLT HEAD.
7. STANDARD BOLT SIZES ARE 14 MM COARSE THREAD WITH A FLAT MACHINED ON TWO SIDES TO ENGAGE PADDLE.
8. THE PADDLE IS DIE CAST FROM 304 STAINLESS STEEL AND ALSO AVAILABLE IN BOTH STANDARD CAM LOCK DESIGN, OR EXTENDED SURCHARGE CONFIGURATION.
9. THE BOLT AND PADDLE WILL BE ASSEMBLED USING TWO STAINLESS STEEL 14 MM NUT'S, THE BOTTOM NUT IS A STANDARD NUT THAT WILL BE TORQUE TO 35 FT. LBS. TO GIVE THE DESIRED TENSION ON THE BOLT. A SECOND NYLOCK™ LOCK NUT IS USED AS A JAM NUT, AND TORQUE TO 90 FT. LBS. STAINLESS STEEL WASHERS ARE USED TO PROVIDE CONSISTENT TURNING RESISTANCE.
10. A 5/16 STAINLESS STEEL SET SCREW, SET IN A THREADED HOLE IN THE COVER PROVIDES FOR A STOP AT ¼ TURN OF OPERATION.
11. THE BOLT WILL BE OPERATED BY MEANS OF A SPECIALLY MADE OPENING KEY CONSISTING OF A SPECIAL SOCKET ATTACHED TO A 'T' HANDLE USED TO BOTH TURN THE BOLT, AND LIFT OUT THE COVER.
12. ONE SET OF REPLACEMENT OPENING KEYS WILL BE PROVIDED TO CLEAN WATER SERVICES AT TIME OF INSTALLATION.
13. THE BOLT HEAD IS PROTECTED BY A WEATHER RESISTANT PLASTIC DEBRIS CAP. THE CAP IS INCLUDED WITH EACH LOCK.
14. SEE LOCAL JURISDICTION REQUIREMENTS FOR USE IN TRAFFIC AREAS.

WATERTIGHT MANHOLE FRAME AND COVER

DRAWING NO. 130 REVISED 10-31-19

CleanWater Services



NOTES:

1. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY ULTIMATE STRENGTH OF 4000 PSI AND A 2" TO 4" SLUMP.
2. ALL REINFORCEMENT SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI (GRADE 60).
3. ALL PRECAST JOINTS SHALL BE GROUTED OR RUBBER GASKETED.
4. SECTIONS AND CONE SHALL BE IN ACCORDANCE WITH ASTM C478.

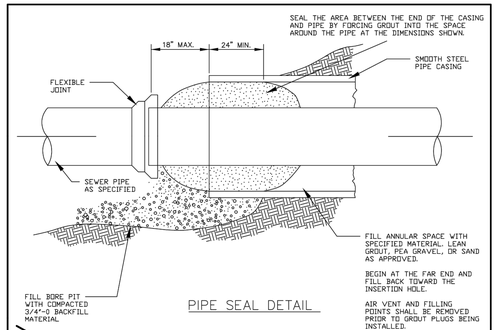
MAXIMUM THROUGH PIPE SIZES

BARREL DIA.	MAX. PIPE DIA.
60"	36"
72"	48"
84"	60"
96"	72"
108"	84"
120"	96"

LARGE PRECAST CONCRETE MANHOLE

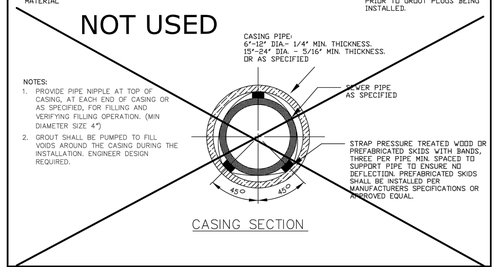
DRAWING NO. 160 REVISED 10-31-19

CleanWater Services



PIPE SEAL DETAIL

NOT USED



NOTES:

1. PROVIDE PIPE NIPPLE AT TOP OF CASING, AT EACH END OF CASING OR AS SPECIFIED, FOR FILLING AND VERIFYING FILLING OPERATION. (MIN DIAMETER SIZE 4")
2. GROUT SHALL BE PUMPED TO FILL VOIDS AROUND THE CASING DURING THE INSTALLATION. ENGINEER DESIGN REQUIRED.

CASING SECTION

BORE DETAIL

DRAWING NO. 610 REVISED 10-31-19

CleanWater Services

NO.	DATE	BY	REVISION

NOTICE

0 ½ 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JJU DESIGNED

EJJ DRAWN

BVO CHECKED

REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN

RENEWS 12-31-22

murraysmith

City of Sherwood Oregon

CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

CLEAN WATER SERVICES STANDARD DETAILS - 1

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET C-13

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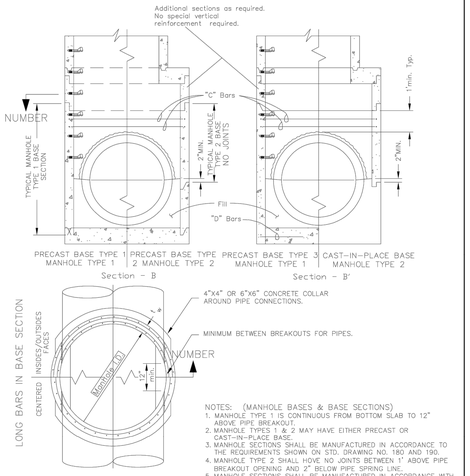
G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C DETS.dwg C-13 3/11/2021 9:33 AM JUSTIN.DEUEL 23.0s (LMS Tech)

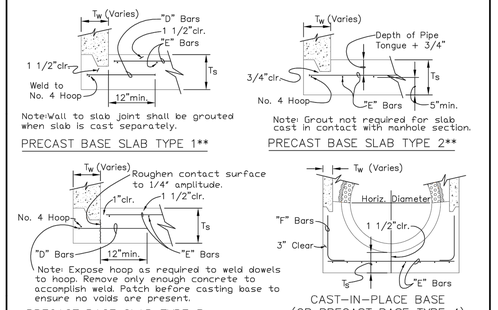


NOTES: (MANHOLE BASES & BASE SECTIONS)
1. MANHOLE TYPE 1 IS CONTINUOUS FROM BOTTOM SLAB TO 12" ABOVE PIPE BREAKOUT.
2. MANHOLE TYPES 1 & 2 MAY HAVE EITHER PRECAST OR CAST-IN-PLACE BASE.
3. MANHOLE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE TO THE REQUIREMENTS SHOWN ON STD. DRAWING NO. 180 AND 190.
4. MANHOLE TYPE 2 SHALL HOVE NO JOINTS BETWEEN 1' ABOVE PIPE BREAKOUT OPENING AND 2' BELOW PIPE SPRING LINE.
5. MANHOLE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C76 OR C478 EXCEPT LONGITUDINAL (VERT.) STEEL SHALL MEET OR EXCEED THAT SHOWN ON STD. DRAWING NO. 190.

LARGE PRECAST CONCRETE MANHOLE – BASES

Drawing NO. 170 REVISED 10–31–19

CleanWater Services



SIZE		60"		72"		84"		96"	
Type	Depth*	0'–15'	15'–30'	0'–15'	15'–30'	0'–15'	15'–30'	0'–15'	15'–30'
1	T_S	8.0"	9.0"	8.0"	9.0"	9.0"	10.0"	9.0"	11.0"
	D Bars	#3 @ 12"	#3 @ 12"	#3 @ 12"	#4 @ 10"	#3 @ 10"	#4 @ 11"	#3 @ 9"	#4 @ 11"
	E Bars	#4 @ 12"	#4 @ 9"	#4 @ 9"	#5 @ 8"	#4 @ 6"	#5 @ 8"	#4 @ 7"	#5 @ 8"
2	T_S	11.0"	12.0"	11.0"	12.0"	12.0"	13.0"	12.0"	14.0"
	E Bars	#4 @ 12"	#4 @ 8"	#4 @ 9"	#5 @ 8"	#4" @ 7"	NO.5 @ 7"	#4 @ 5"	#5 @ 6"
3	T_S	7.0"	9.0"	7.0"	9.0"	8.0"	10.0"	9.0"	11.0"
	D Bars	#3 @ 12"	#3 @ 12"	#3 @ 12"	#4 @ 10"	#3 @ 10"	#4 @ 11"	#3 @ 9"	#4 @ 11"
	E Bars	#4 @ 12"	#4 @ 9"	#4 @ 9"	#4 @ 6"	#4 @ 8"	#5 @ 9"	#4" @ 7"	#5 @ 8"
4	T_S	7.0"	9.0"	7.0"	9.0"	8.0"	10.0"	9.0"	11.0"
	E Bars	#4 @ 12"	#4 @ 9"	#4 @ 9"	#4 @ 6"	#4 @ 8"	#5 @ 9"	#4" @ 7"	#5 @ 8"
	F Bars	#4 @ 12"	#4 @ 9"	#4 @ 9"	#4 @ 6"	#4 @ 8"	#5 @ 9"	#4" @ 7"	#5 @ 8"

*Invert to Street Grade

Concrete: f'_c =4,000 psi
Steel: f =Grade 60

**Fabricator required to cast lifting loops in base slab for handling Type 1 & 2 bases.

LARGE PRECAST CONCRETE MANHOLE – TYPES

DRAWING NO.180 REVISED 10–31–19

CleanWater Services

60"ø Manhole Section		NOTE: MAX. LONG. BAR SPACING IS 12" C.–C.								
	INVERT TO STREET GRADE	T_w =5.0"			T_w = 6.0"			T_w =6.75"		
		OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.
TYPE 1	0 Ft to 15 Ft	0.16	0.15	0.24	0.16	0.09	0.20	0.13	0.08	0.17
	15 Ft to 30 Ft	0.32	0.18	0.53	0.25	0.19	0.42	0.22	0.16	0.36
TYPE 2	0 Ft to 15 Ft	0.17	0.15	0.28	0.19	0.09	0.22	0.16	0.08	0.20
	15 Ft to 30 Ft	0.37	0.18	0.63	0.28	0.19	0.48	0.24	0.16	0.42

'C' Bars–1 No. 4 hoop req'd. for less than 2'–0" clr. between blockout and top of section.

72"ø Manhole Section		NOTE: MAX. LONG. BAR SPACING IS 12" C.–C.								
	INVERT TO STREET GRADE	T_w =6.0"			T_w = 7.0"			T_w =7.75"		
		OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.
TYPE 1	0 Ft to 15 Ft	0.19	0.19	0.26	0.17	0.16	0.22	0.16	0.14	0.20
	15 Ft to 30 Ft	0.33	0.28	0.58	0.27	0.23	0.48	0.26	0.26	0.42
TYPE 2	0 Ft to 15 Ft	0.19	0.13	0.28	0.18	0.15	0.23	0.16	0.17	0.28
	15 Ft to 30 Ft	0.36	0.13	0.65	0.29	0.15	0.52	0.26	0.17	0.46

'C' Bars– 2 NO. 5 HOOPS 2" CLR. OF TOP OF MH BARREL } REQ'D. FOR LESS THAN 2'–0" CLR.
2 NO. 3 HOOPS 2" CLR. OVER PIPE BLOCKOUTS } BETWEEN BLOCKOUT AND TOP OF SECTION.

84"ø Manhole Section		NOTE: MAX. LONG. BAR SPACING IS 12" C.–C.								
	INVERT TO STREET GRADE	T_w =7.0"			T_w = 8.0"			T_w =8.75"		
		OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.
TYPE 1	0 Ft to 15 Ft	0.20	0.13	0.26	0.17	0.12	0.22	0.15	0.10	0.20
	15 Ft to 30 Ft	0.33	0.23	0.59	0.28	0.26	0.50	0.30	0.23	0.45
TYPE 2	0 Ft to 15 Ft	0.23	0.15	0.33	0.21	0.17	0.28	0.19	0.19	0.25
	15 Ft to 30 Ft	0.36	0.15	0.65	0.30	0.17	0.55	0.30	0.19	0.49

'C' Bars– 2 NO. 5 HOOPS 2" CLR. OF TOP OF MH BARREL } REQ'D. FOR LESS THAN 2'–0" CLR.
2 NO. 3 HOOPS 2" CLR. OVER PIPE BLOCKOUTS } BETWEEN BLOCKOUT AND TOP OF SECTION.

96"ø Manhole Section		NOTE: MAX. LONG. BAR SPACING IS 12" C.–C.								
	INVERT TO STREET GRADE	T_w =8.0"			T_w = 9.0"			T_w =9.75"		
		OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.	OUTSIDE	INSIDE	ON CTR.
TYPE 1	0 Ft to 15 Ft	0.25	0.18	0.33	0.21	0.16	0.29	0.21	0.14	0.27
	15 Ft to 30 Ft	0.41	0.26	0.77	0.35	0.30	0.66	0.37	0.27	0.59
TYPE 2	0 Ft to 15 Ft	0.26	0.17	0.34	0.22	0.19	0.30	0.20	0.21	0.28
	15 Ft to 30 Ft	0.43	0.17	0.82	0.37	0.19	0.70	0.34	0.21	0.63

'C' Bars– 2 NO. 5 HOOPS 2" CLR. OF TOP OF MH BARREL } REQ'D. FOR LESS THAN 2'–0" CLR.
2 NO. 3 HOOPS 2" CLR. OVER PIPE BLOCKOUTS } BETWEEN BLOCKOUT AND TOP OF SECTION.

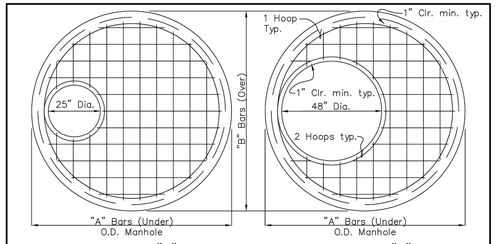
PROVIDE MIN. LONG/TUD. REINF. AS SHOWN, 1" CLR. OF INSIDE AND OUTSIDE FACES, OR AT CENTER OF WALL.

AREAS ARE IN^2/FT OF CIRCUMFERENCE AND MAY BE WELDED WIRE FABRIC, BARS OR A COMBINATION OF BOTH.

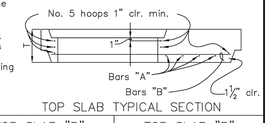
LARGE PRECAST CONCRETE MANHOLE– LONG. BASE SECTION REINF.

DRAWING NO. 200 REVISED 10–31–19

CleanWater Services



NOTES:
1. All concrete shall have a 28 day ultimate compressive strength of 4,000 psi.
2. All reinforcement shall have a minimum yield strength of 60,000 psi, (Grade 60).
3. All lap splices shall be 24 bar diameters unless noted otherwise.
4. Add steps as required by Standard Drawing NO. 010



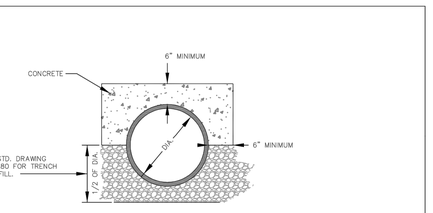
TOP SLAB TYPICAL SECTION

	TOP SLAB "A"		TOP SLAB "B"			TOP SLAB "B"		
	COVER DEPTH							
	6" to 12"			4'–0" to 7'–0"			7'–1" to 22'–0"	
Size	T	"A" Bars	"B" Bars	T	"A" Bars	"B" Bars	T	"A" Bars	"B" Bars
60"	8"	No.5 @ 7½"	No.5 @ 7½"	12"	No.5 @ 9"	No.5 @ 9"	12"	No.5 @ 9"	No.5 @ 9"
72"	10"	No.5 @ 7"	No.5 @ 7"	12"	No.5 @ 9"	No.5 @ 9"	12"	No.5 @ 7"	No.5 @ 7"
84"	11"	No.5 @ 7"	No.5 @ 7"	12"	No.5 @ 6"	No.5 @ 6"	12"	No.6 @ 6"	No.5 @ 7"
96"	12"	No.5 @ 6"	No.5 @ 6"	12"	No.5 @ 6"	No.5 @ 6"	14"	No.6 @ 6"	No.5 @ 6"
108"	N/A	N/A	N/A	12"	No.6 @ 8"	No.6 @ 8"	16"	No.7 @ 9"	No.7 @ 9"
120"	N/A	N/A	N/A	12"	No.6 @ 7"	No.6 @ 7"	16"	No.7 @ 8"	No.7 @ 8"

LARGE PRECAST CONCRETE MANHOLE TOP SLABS

DRAWING NO. 220 REVISED 10–31–19

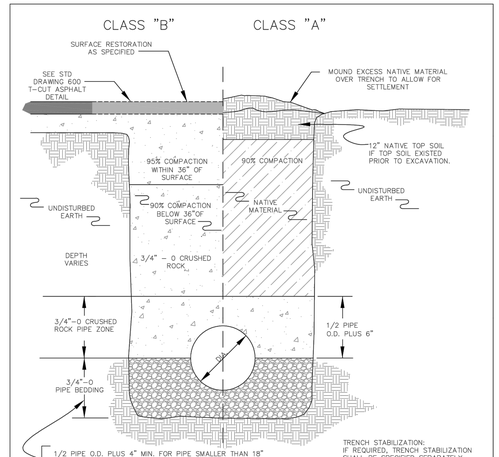
CleanWater Services



CONCRETE CAP

DRAWING NO. 550 REVISED 10–31–19

CleanWater Services



NOTE:
1. ALL COMPACTION REQUIREMENTS PER AASHTO T–99 AND ODOT/APWA SPEC 00405.
2. THE TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER.
3. THE MINIMUM TRENCH WIDTH IN THE PIPE ZONE SHALL PROVIDE A CLEAR WORKING SPACE OF SIX INCHES OUTSIDE THE MAXIMUM OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.
4. IN ALL CASES, TRENCHES SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR SHORING, PROPER JOINING OF PIPE, AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE.

TRENCH BACKFILL DETAILS

DRAWING NO. 590 REVISED 10–31–19

CleanWater Services

RIPRAP:
- ROCK FOR RIPRAP SHALL BE ANGULAR IN SHAPE.
- THICKNESS OF A SINGLE ROCK SHALL NOT BE LESS THAN ONE-THIRD ITS LENGTH.
- ROUNDED ROCK WILL NOT BE ACCEPTED UNLESS APPROVED BY THE DISTRICT.

RIPRAP INSTALLATION:
- EXCAVATE BELOW FINISH GRADE TO DEPTH & DIMENSIONS SHOWN ON APPROVED PLANS.
- INSTALL WOVEN GEOTEXTILE FABRIC.
- PLACE RIP RAP TO FINISH GRADE.

- GRADE RIPRAP SHALL BE THE CLASS AND SIZE OF ROCK ACCORDING TO THE FOLLOWING:

CLASS 50	CLASS 100	CLASS 200	CLASS 700	CLASS 2000	
		WEIGHT OF ROCK (LBS)			PERCENT (BY WEIGHT)
50-30	100-60	200-140	700-500	2000-1400	20
30-15	60-25	140-80	500-200	1400-700	30
15-2	25-2	80-8	200-20	700-40	40
2-0	2-0	8-0	20-0	40-0	10

RIP RAP DETAILS

DRAWING NO. 790 REVISED 10–31–19

CleanWater Services

NOTE:

SIGNS TO BE MOUNTED ON POSTS, AND AT FREQUENCIES & LOCATIONS AS APPROVED BY DISTRICT OR CITY.

12"X18" SIGNS SHALL BE PLACED IN A MANNER AS TO CLEARLY IDENTIFY THE SENSITIVE AREA AND VEGETATED CORRIDOR. THIS WILL INCLUDE ALL POINTS OF ENTRY SUCH AS THE BEGINNING OF PATHS. TRAIL HEADS AND ANY PLACE THAT THE PUBLIC MAY WANT OR BE ABLE TO ENTER AREA.

4"X4" SIGNS SHALL BE USED FOR AREAS WHERE A LARGE NUMBER OF SIGNS ARE NEEDED SUCH AS THE BACK OR SIDE YARDS ON EACH LOT ADJACENT TO THE SENSITIVE AREA OR VEGETATED CORRIDOR IN NEW SUBDIVISIONS OF PARTITIONS.

VEGETATED CORRIDOR SIGNAGE

DRAWING NO. 794 REVISED 10–31–19

CleanWater Services

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NOTICE
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REGISTERED PROFESSIONAL ENGINEER 75681 OREGON JUNE 29, 2009 BRENDAN V. O'SULLIVAN
RENEWS 12–31–22

murraysmith

City of Sherwood Oregon

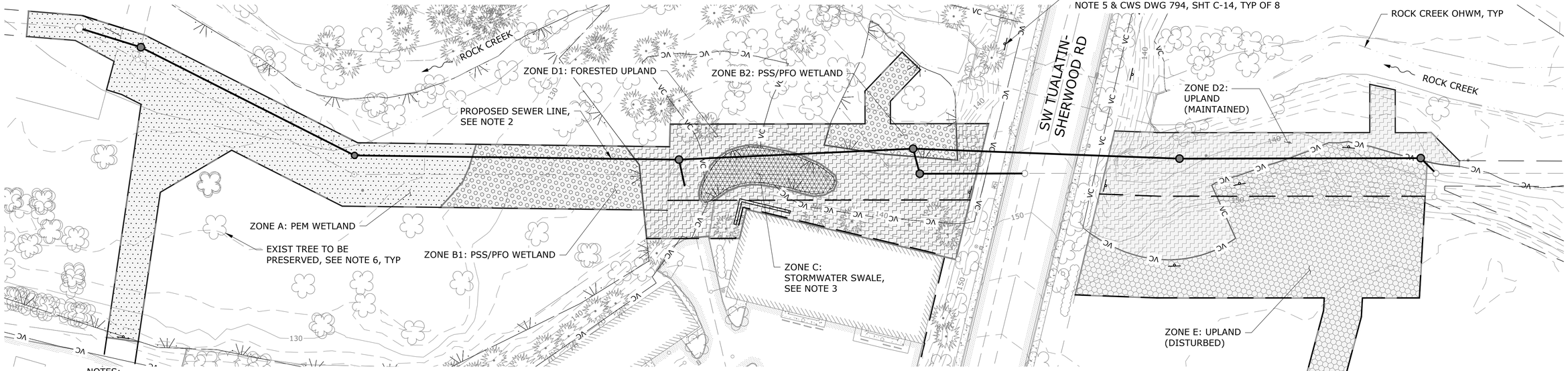
CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

CLEAN WATER SERVICES
STANDARD DETAILS - 2

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
C-14
28 of 32

G:\PDX_Projects\19\2481 - Rock Creek Trunk Upsizing Phase 1\CAD\Sheets\19-2481-OR-C DETS.dwg C-14 3/11/2021 9:33 AM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=40'

NOTES:

1. ALL SHRUBS SHALL BE 1 GALLON WITH 1.5' MINIMUM HEIGHT AT TIME OF PLANTING. ALL TREES SHALL BE 2 GALLON WITH 2' MINIMUM HEIGHT AT TIME OF PLANTING. SEE DETAIL 5, SHEET L-4 FOR PLANTING PATTERN.

2. PROVIDE MINIMUM 10' CLEAR SPACE FROM ALL TREE PLANTINGS TO PROPOSED SANITARY SEWER INFRASTRUCTURE.

3. RESTORE EXISTING STORMWATER SWALE TO PRE-CONSTRUCTION GRADE. SEE SHEET C-4 FOR EXISTING STORMWATER SWALE INFRASTRUCTURE TO REMAIN.

4. REMOVE EXISTING WEEDS AND INVASIVE SPECIES FROM RESTORATION EXTENTS PRIOR TO BEGINNING SITE RESTORATION AND PLANTING.

5. FINAL LOCATIONS OF VEGETATED CORRIDOR SIGNAGE TO BE COORDINATED WITH AND DETERMINED BY ENGINEER.

6. ALL EXISTING TREES SHOWN ON THIS SHEET ARE TO BE PRESERVED DURING CONSTRUCTION. SEE SHEET C-1 FOR TREE PROTECTION AND REMOVAL REQUIREMENTS.

SEED MIXES LEGEND

SEED MIX	COMMON NAME (BOTANICAL NAME)	QUANTITY (LBS/ACRE)	QUANTITY (LBS SEEDS/ LBS SEED MIX)
WETLAND	TUFTED HAIRGRASS (DESCHAMPSIA CESPITOSA)	1.67	0.29
	SLENDER HAIRGRASS (DESCHAMPSIA ELONGATA)	1.00	0.18
	SLENDER RUSH (JUNCUS TENUIS)	1.39	0.24
	SPIKE BENTGRASS (AGROSTIC EXARATA)	1.67	0.29
UPLAND	WESTERN YARROW (ACHILLEA MILLEFOLIUM)	0.47	0.02
	CALIFORNIA OATGRASS (DANTHONIA CALIFORNICA)	4.65	0.18
	BLUE WILDRYE (ELYMUS GLAUCUS)	9.30	0.38
	MEADOW BARLEY (HORDEUM BRACHYANTHERUM)	9.30	0.38
	MEADOW CHECKERBLOOM (SIDALCEA CAMPESTRIS)	0.93	0.04

PLANTING ZONES LEGEND

PLANTING ZONE	AREA (ACRES)	SYMBOL
A	0.514	
B1	0.159	
B2	0.083	
C	0.070	
D1	0.397	
D2	0.305	
E	0.634	

PLANTING SCHEDULE

		QUANTITY																
		SEED MIX (LBS)		SHRUB (EA), SEE NOTE 1								TREE (EA), SEE NOTE 1						
		WETLAND	UPLAND	DOUGLAS SPIRAEA (SPIRAEA DOUGLASII)	RED OSIER DOGWOOD (CORNUS ALBA)	PACIFIC NINEBARK (PHYSOCARPUS CAPITATUS)	OCEANSPRAY (HOLODISCUS DISCOLOR)	BLACK TWINBERRY (LONICERA INVOLUCRATA)	NOOTKA ROSE (ROSA NUTKANA)	RED ELDERBERRY (SAMBUCUS RACEMOSA)	SNOWBERRY (SYMPHORICARPOS ALBUS)	OREGON ASH (FRAXINUS LATIFOLIA)	BLACK HAWTHORN (CRATAEGUS DOUGLASII)	PACIFIC WILLOW (SALIX LUCIDA)	RED ALDER (ALNUS RUBRA)	PACIFIC CRABAPPLE (MALUS FUSCA)	BITTER CHERRY (PRUNUS EMARGINATA)	WESTERN RED CEDAR (THUJA PLICATA)
PLANTING ZONE	A	3.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	B1	1.0	--	20	20	20	--	--	--	--	--	2	2	2	--	--	--	--
	B2	0.5	--	3	3	3	--	--	--	--	--	1	1	1	--	--	--	--
	C	0.4	--	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--
	D1	--	9.8	--	--	97	97	96	97	97	90	--	--	--	30	28	28	30
	D2	--	7.5	--	--	113	113	111	113	111	120	--	--	--	35	33	33	34
	E	--	15.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NO.	DATE	BY	REVISION

NOTICE
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RENEWS 12-31-22

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CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

WORK ZONE RESTORATION AND PLANTING PLAN

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET
L-1
29 of 32

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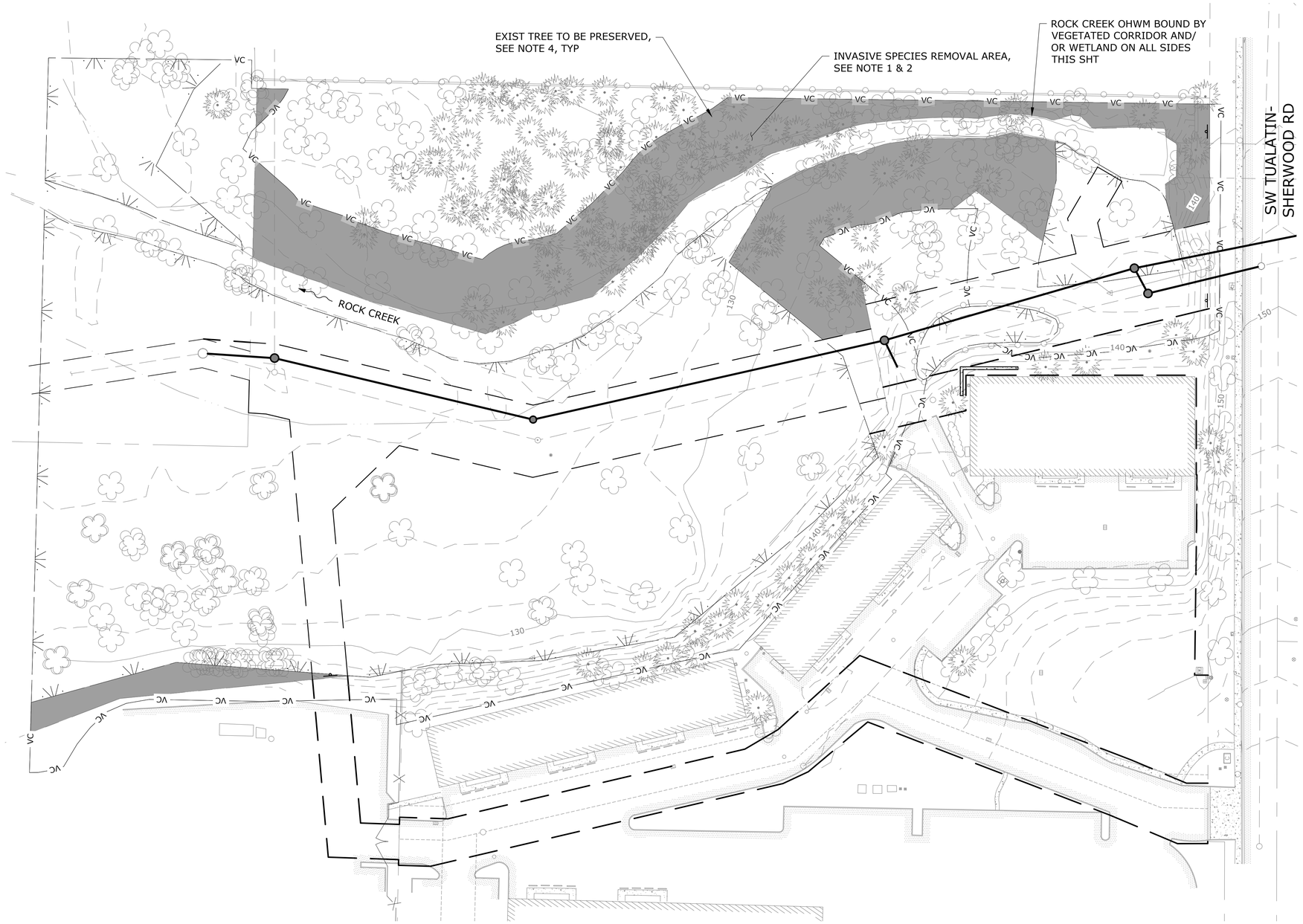

PLAN
SCALE: 1"=40'

LEGEND

INVASIVE SPECIES REMOVAL AREA, SEE NOTE 3

NOTES:

1. REMOVAL OF INVASIVE SPECIES OUTSIDE OF CONSTRUCTION ZONE TO BE COMPLETED BY HAND OR WITH THE USE OF SMALL MECHANICAL HAND TOOLS AS APPROVED BY ENGINEER.

2. INSTALL EROSION CONTROL MATTING AND UPLAND SEED MIX USING LOW IMPACT METHODS IN ALL CLEARED AREAS LARGER THAN 25 SQUARE FEET, SEE DETAIL 6, SHEET L-4. UPLAND SEED MIX PER SEED MIXES LEGEND ON SHEET L-1.

3. VEGETATED CORRIDOR REQUIRING INVASIVE SPECIES REMOVAL TO BE CLEARLY MARKED IN THE FIELD BY CONTRACTOR. SEE CWS SPL CONDITION 21 FOR REQUIREMENTS.

4. ALL EXISTING TREES SHOWN ON THIS SHEET ARE TO BE PRESERVED DURING CONSTRUCTION. SEE SHEET C-1 FOR TREE PROTECTION AND REMOVAL REQUIREMENTS.

NO.	DATE	BY	REVISION

NOTICE
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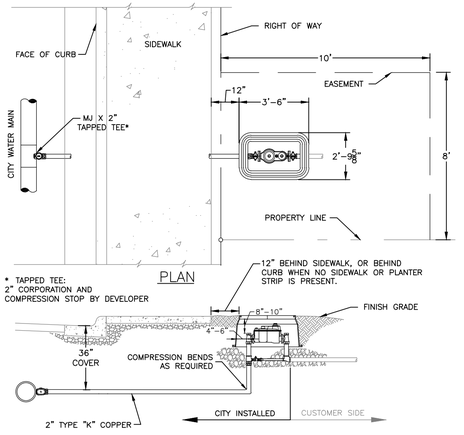
CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

INVASIVE NON-NATIVE SPECIES REMOVAL AND RESTORATION

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

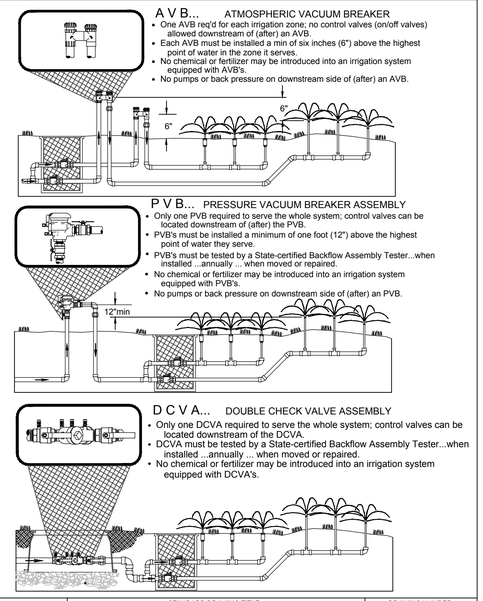
SHEET
L-2
30 of 32



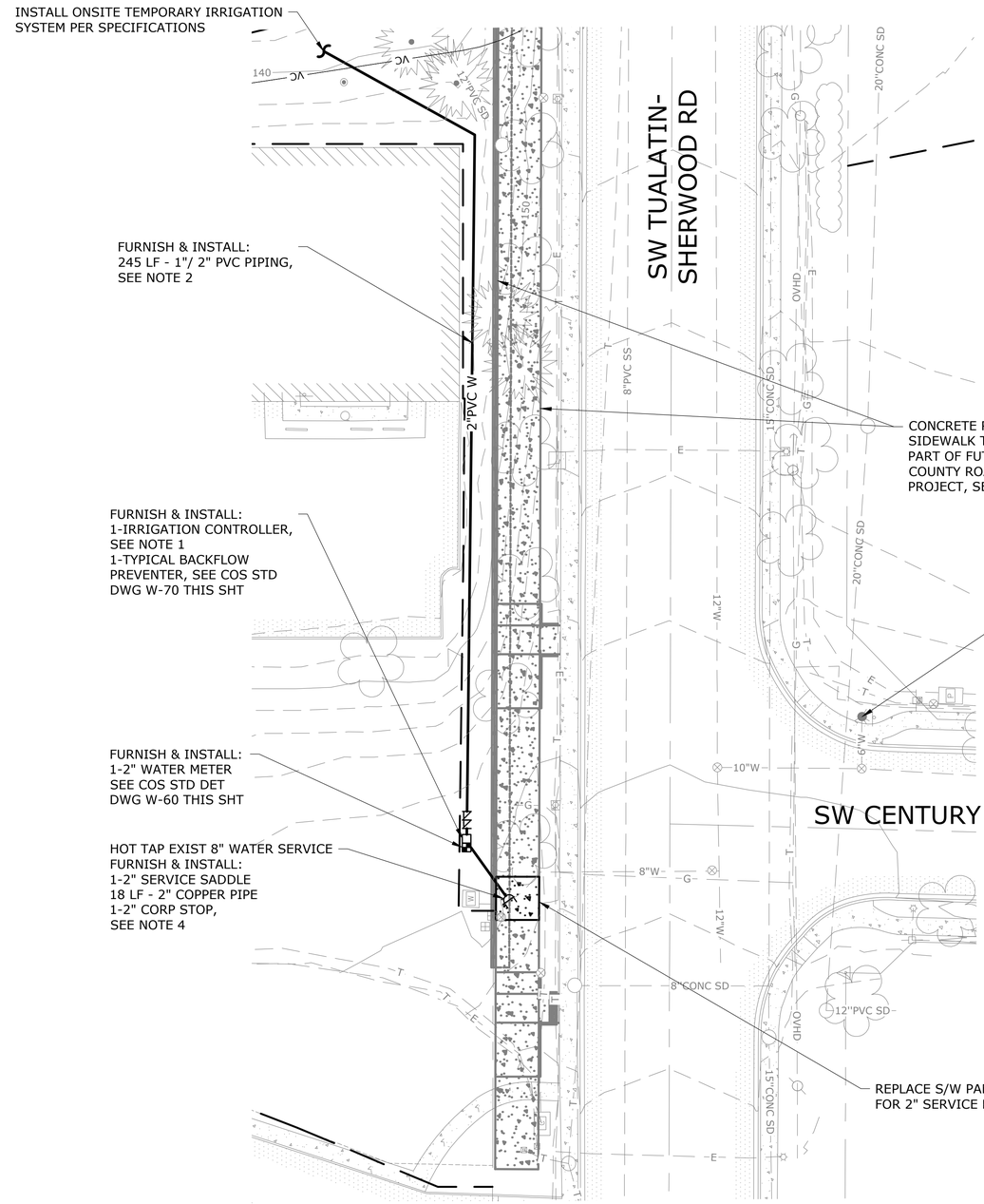
NOTES:

1. DEVELOPER'S SURVEYOR SHALL SET A LATH AT THE INTERSECTION OF THE PROPERTY LINE AND THE PUBLIC UTILITY EASEMENT. DEVELOPER'S SURVEYOR SHALL ALSO MARK THE PROPERTY LINE AND LOT NUMBERS ON THE FACE OF CURB WITH WHITE PAINT.
2. IF PROPERTY CORNER MONUMENTS HAVE NOT BEEN SET AT THE TIME OF WATER SERVICE INSTALLATION, THE DEVELOPER'S SURVEYOR SHALL SET A LATH AT THE PROPERTY CORNER LOCATION ON THE RIGHT-OF-WAY LINE.
3. ORS 92.044(7) PROHIBITS LOCATING ANY UTILITY INFRASTRUCTURE WITHIN 1 FOOT OF A SURVEY MONUMENT. DEVELOPER SHALL PAY FOR ANY RELOCATION OF SERVICES AND/OR METER BOXES FOUND TO FALL WITHIN 1 FOOT OF A SURVEY MONUMENT LOCATION.
4. METER SHALL NOT BE INSTALLED WITHIN HARDSCAPE AREAS.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	1-1/2" & 2" METER INSTALLATION	W-60
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: MAR '16



City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	TYPICAL BACKFLOW PREVENTERS FOR LAWN SPRINKLER SYSTEMS	W-70
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



PLAN
SCALE: 1"=20'

NOTES:

1. IRRIGATION CONTROLLER TO BE BATTERY POWERED WITH A MINIMUM TWO-YEAR BATTERY LIFE SPAN, MULTI-ZONE MODEL IS ACCEPTABLE.
2. TEMPORARY IRRIGATION PIPING MAY BE INSTALLED ABOVE GRADE FROM BACKFLOW PREVENTER TO ONSITE IRRIGATION SYSTEM.
3. INSTALL UPLAND SEED MIX USING LOW IMPACT METHODS IN ANY DISTURBED AREAS ASSOCIATED WITH TEMPORARY IRRIGATION INSTALLATION. UPLAND SEED MIX PER SEED MIXES LEGEND ON SHEET L-1.
4. CONTRACTOR TO REMOVE TEMPORARY IRRIGATION PIPING, IRRIGATION CONTROLLER, BACKFLOW PREVENTER, WATER METER, AND COPPER PIPING UP TO EXISTING WATER MAIN AFTER PLANT ESTABLISHMENT PERIOD ACCEPTANCE. INSTALL 2" PLUG IN SERVICE SADDLE.
5. PROTECT EXISTING RETAINING WALL IN PLACE DURING 2-INCH SERVICE REMOVAL.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANNUAL HYDRANT PERMIT FROM CITY OF SHERWOOD, AS REQUIRED FOR TEMPORARY IRRIGATION.

NO.	DATE	BY	REVISION

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CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

TEMPORARY IRRIGATION PLAN

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET L-3

31 of 32

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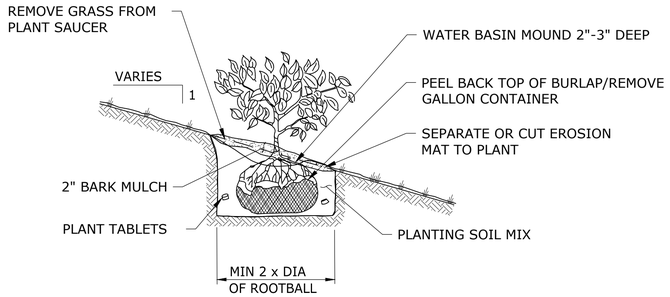
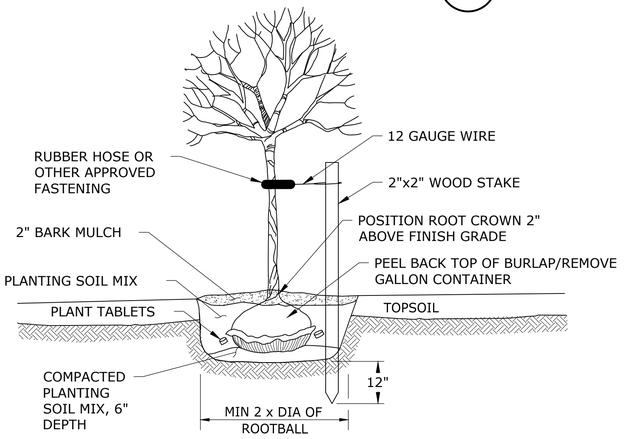


SMALL SHRUB PLANTING

1 / -

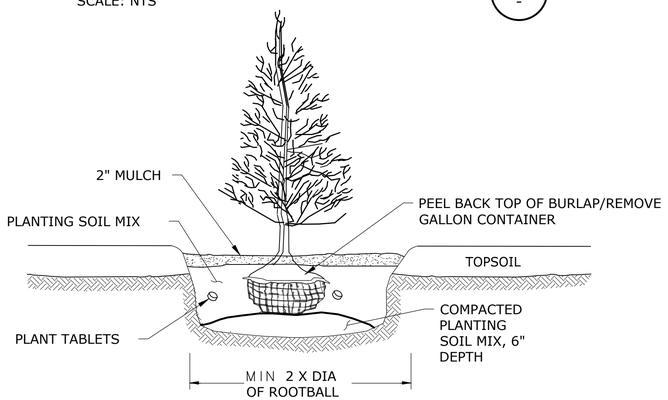
SCALE: NTS



DECIDUOUS TREE PLANTING

2 / -

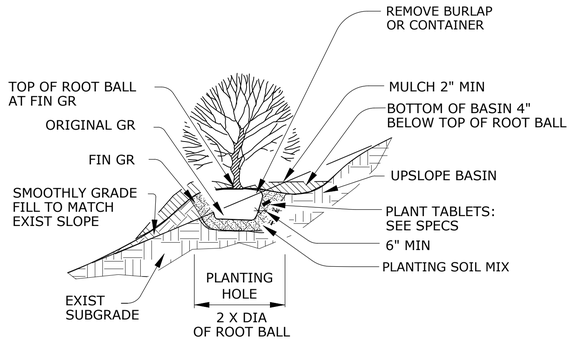
SCALE: NTS



EVERGREEN TREE PLANTING

3 / -

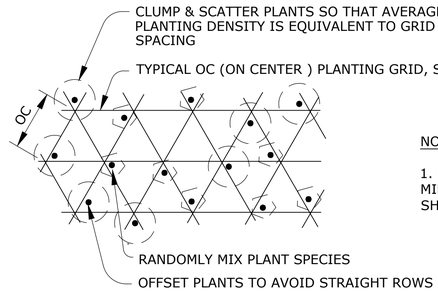
SCALE: NTS



SLOPED AREA SHRUB PLANTING

4 / -

SCALE: NTS



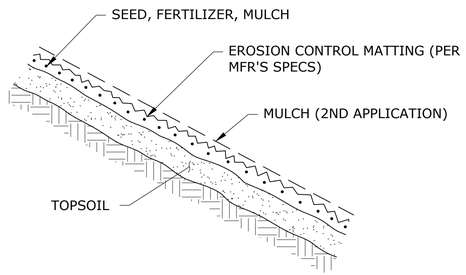
NOTE:

1. MINIMUM SPACING BETWEEN TREES TO BE 8 FEET. MINIMUM SPACING BETWEEN SHRUBS OR TREES AND SHRUBS TO BE 5 FEET.

RANDOM PLANTING PATTERN

5 / -

SCALE: NTS



EROSION CONTROL MATTING INSTALLATION

6 / -

SCALE: NTS

GENERAL LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL EXAMINE FINISH SURFACE, GRADES, TOPSOIL QUALITY AND DEPTH. DO NOT START ANY WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. VERIFY LIMITS OF WORK BEFORE STARTING.

2. CONTRACTOR TO REPORT ALL DAMAGES TO EXISTING CONDITIONS AND INCONSISTENCIES WITH PLANS TO THE ENGINEER.

3. IMPROVE EXISTING SOIL WITH ORGANIC MATTER BY ADDING 4" COMPOST AND TILL INTO TOP 12" OF TOPSOIL PRIOR TO PLANTING AT LOCATIONS DETERMINED BY ENGINEER.

4. PLANTINGS SHALL BE TAGGED FOR DORMANT SEASON IDENTIFICATION AND SHALL REMAIN ON PLANT MATERIAL AFTER PLANTING FOR MONITORING PURPOSES.

5. TREES AND SHRUBS PLANTED IN UPLAND AREAS SHAL BE MULCHED A MINIMUM OF THREE INCHES IN DEPTH AND 18 INCHES IN DIAMETER.

7. BACKFILL MATERIAL FOR TREE AND SHRUB PLANTING SHALL CONTAIN: ONE-PART FINE GRADE COMPOST TO ONE-PART TOPSOIL BY VOLUME, BONE MEAL PER MANUFACTURER'S RECOMMENDATION, AND SLOW RELEASE FERTILIZER PER MANUFACTURER'S RECOMMENDATION.

8. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ALL PLANT MATERIAL SUBSTITUTIONS FROM THE ENGINEER PRIOR TO INSTALLATION. PLANT SUBSTITUTIONS WITHOUT PRIOR WRITTEN APPROVAL THAT DO NOT COMPLY WITH THE DRAWINGS AND SPECIFICATIONS MAY BE REJECTED AT NO COST TO THE OWNER. THESE ITEMS MAY BE REQUIRED TO BE REPLACED WITH PLANT MATERIALS THAT ARE IN COMPLIANCE WITH THE DRAWINGS.

9. ALL PLANT MATERIALS SHALL BE NURSERY GROWN WITH HEALTHY ROOT SYSTEMS AND FULL BRANCHING, DISEASE AND INSECT FREE AND WITHOUT DEFECTS SUCH AS SUN SCALD, ABRASIONS, INJURIES AND DISFIGUREMENT.

10. ALL PLANT MATERIAL SHALL BE INSTALLED AT THE SIZE AND QUANTITY SPECIFIED. WITHOUT APPROVAL, THE ENGINEER IS NOT RESPONSIBLE FOR SUB-STANDARD RESULTS CAUSED BY REDUCTION IN SIZE AND/OR QUANTITY OF PLANT MATERIALS.

11. NEW TREES THAT ARE PLANTED TO MEET THE EFFECTIVE CANOPY REQUIREMENTS SHALL CONFORM TO THE APPLICABLE STANDARDS OF CLEAN WATER SERVICES. THEY SHALL BE PLANTED IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARDS FOR TREE PLANTING (A300, PART 6) AND ADDITIONAL STANDARDS ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD. NURSERY STOCK SHALL MEET THE REQUIREMENTS OF THE AMERICAN ASSOCIATION OF NURSERYMEN FOR NURSERY STOCK (ANSI Z60.1) FOR GRADE NO. 1 OR BETTER. DOUBLE STAKE TREES IF NEEDED FOR STABILITY DURING THE ESTABLISHMENT PERIOD.

12. CONTRACTOR SHALL PROVIDE TWO-YEAR PLANT ESTABLISHMENT PERIOD TO MAINTAIN PLANTS IN A VIGOROUS GROWING CONDITION. INSURE PLANTING AREAS ARE FREE OF INVASIVE WEEDS. PLANTS SHALL BE FREE OF INSECTS AND DISEASES WHILE SHOWING SIGNS OF CONTINUING HEALTH. THE PLANT ESTABLISHMENT PERIOD BEGINS IMMEDIATELY AFTER THE COMPLETION OF ALL PLANTING OPERATION AND WRITTEN NOTIFICATION TO THE ENGINEER.

NO.	DATE	BY	REVISION

NOTICE

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CITY OF SHERWOOD
ROCK CREEK
SANITARY TRUNK LINE
UPSIZING PROJECT - PHASE 1

RESTORATION AND PLANTING DETAILS

PROJECT NO.: 19-2481.402 | SCALE: AS SHOWN | DATE: FEBRUARY 2021

SHEET L-4

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