

### GENERAL ABBREVIATIONS

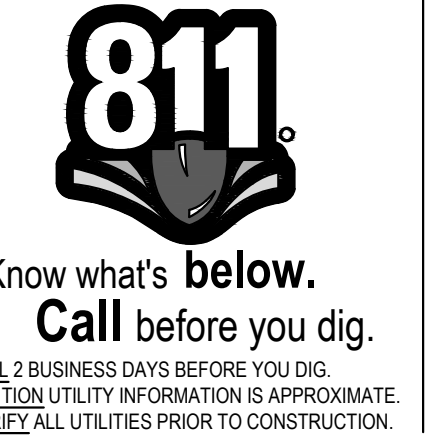
(E)	EXISTING
C	CONCRETE
CB	CATCH BASIN
CL	CENTERLINE
CNS	COMPACTED NATIVE SOIL
CO	CLEAN OUT
CR	CURB RETURN
D	DIRT / DRAINAGE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
G	NATURAL GAS (LOW PRESSURE)
GB	GRADE BREAK
HP	HIGH POINT
LF	LINEAR FOOT
LP	LOW POINT
MG	NATURAL GAS (MEDIUM PRESSURE)
MG	MATCH EXISTING GRADE
MH	MANHOLE
NS	NATIVE SOIL
NTS	NOT TO SCALE
P	PAVEMENT
PC	POINT OF CURVATURE
POC	POINT OF CONNECTION
POS	POINT OF SERVICE
PP	POWER POLE
PT	POINT OF TANGENCY
R	RADIUS
ROW	RIGHT OF WAY
S	SLOPE / SANITARY
SAN	SEWER SEWER
SSMH	SANITARY MANHOLE
STA	STATION
STM	STORM DRAIN
STMH	STORM MANHOLE
TBD	TO BE DETERMINED
TBL	TO BE RELOCATED BY RESPECTIVE UTILITY
TBR	TO BE REMOVED BY CONTRACTOR
TC	TOP OF CURB
TOE	TOE OF BANK
TOP	TOP OF BANK
TP	TELEPHONE POLE
U	UNDERGROUND
VIP	VERIFY IN FIELD PRIOR TO CONSTRUCTION
W	WATER MAIN

### SITE - ABBREVIATIONS

FFE	FIRST FLOOR FINISH ELEVATION
LLE	LOWER LEVEL FINISH ELEVATION
WO	WALKOUT
LO	LOOKOUT

### GRADING LEGEND / ABBREVIATIONS

TC: 391.49
FL: 390.99
TW: 391.49
BW: 380.99
GB: GRADE BREAK
LP: LOW POINT
HP: HIGH POINT
FC: FLUSH CURB
MG: MATCH GRADE
FL: FLOWLINE
SW: SIDEWALK
TC: TOP OF CURB
FG: FINISH GRADE (DEFAULT- IF NOT LABELED)



Revisions:


LINE IS 1" ON FULL SCALE DRAWING

Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com

Copyright 2023 By Windsor Engineers, LLC  
All Rights Reserved.



**CAMAS VALLEY STREET DUPLEX**  
CAMAS, WA

**ENGINEERING PLAN**  
Project No: 23228  
Issue Date: 10/27/2023

Project Manager CTM  
Drawn by ORL  
Checked by CTM

ISSUED FOR ENGINEERING PLAN REVIEW/APPROVAL ONLY

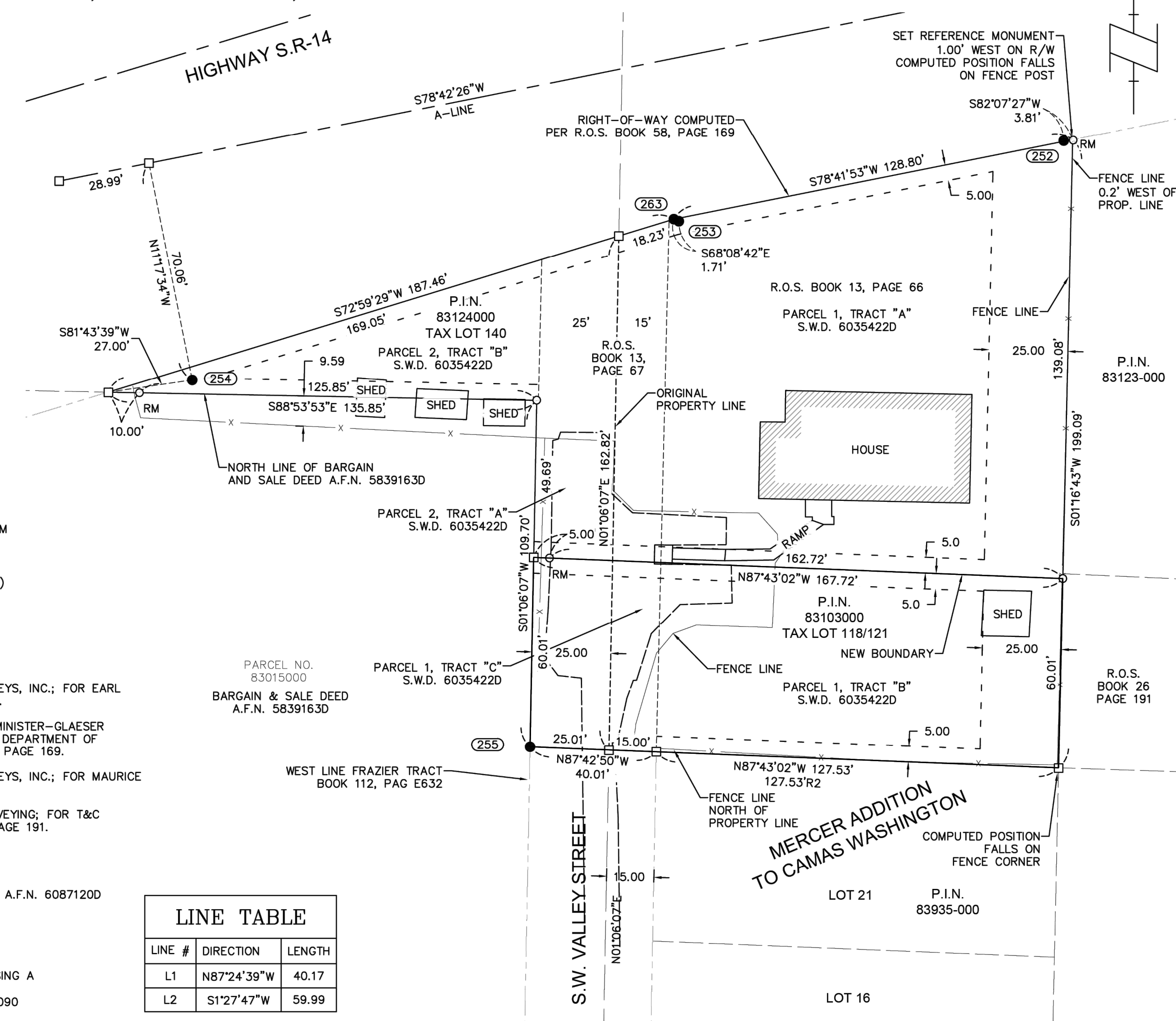
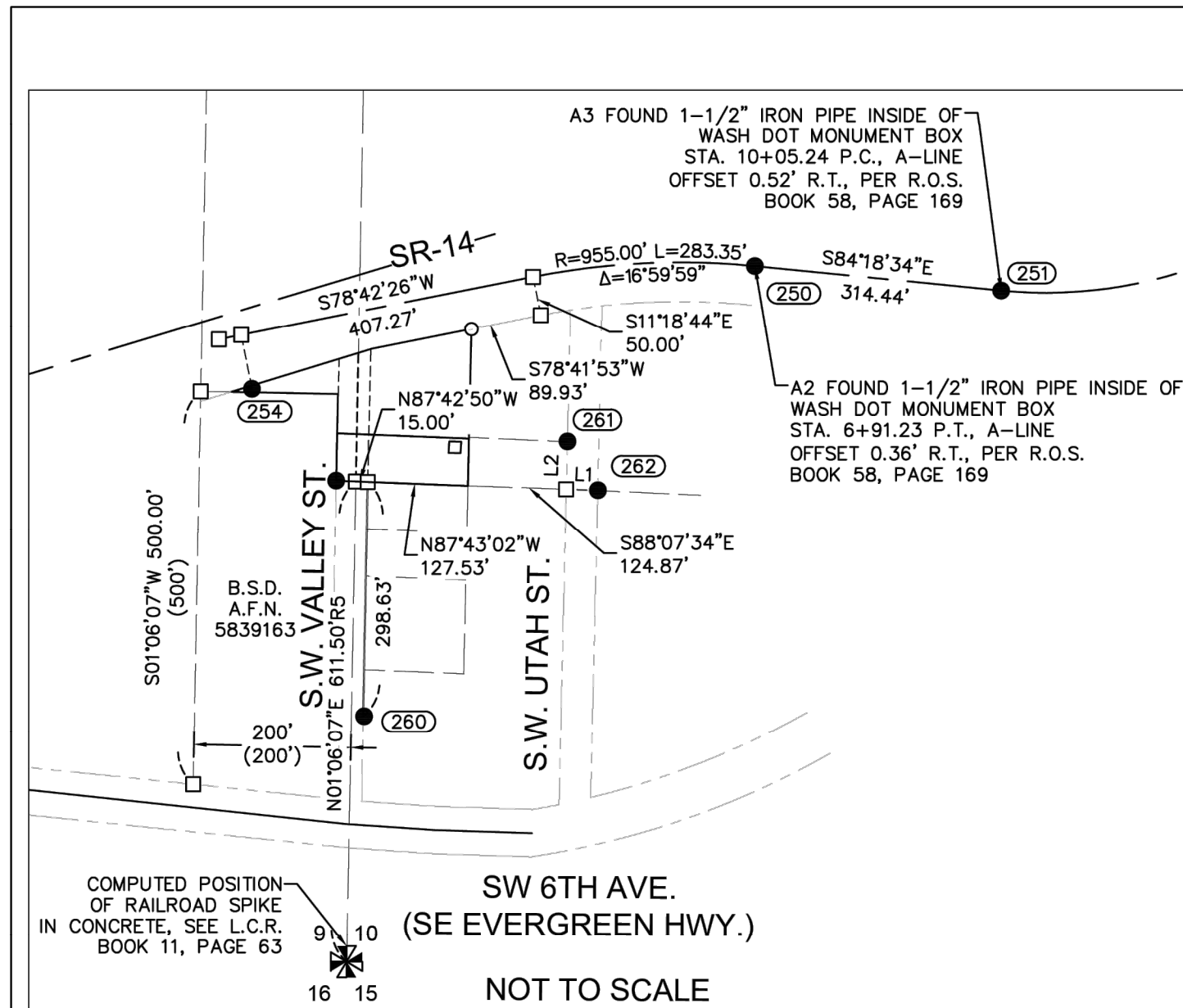
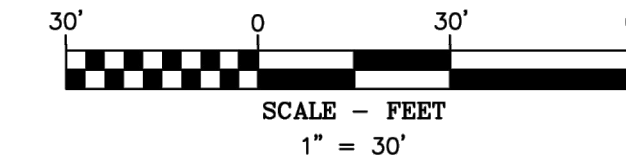
PLOT DATE: 10/27/2023 5:04 PM - FILE: C:\Users\Olivier\OneDrive - Windsor Engineers\OneDrive - Windsor Engineers\05\_Projects\2023\23228 Camas Valley St Duplex\02\_Drawings\02\_Working\04\_Final\Sheets\23228\_LEGEN.Dwg



# AMENDED RECORD OF SURVEY

## BOUNDARY LINE ADJUSTMENT

LOCATED IN THE SW 1/4 OF THE SW 1/4 SECTION 10,  
AND THE SE 1/4 OF THE SE 1/4 SECTION 9,  
T. 1N., R. 3E., W.M.  
CITY OF CAMAS, COUNTY CLARK, STATE OF WASHINGTON.



- LEGEND**
- SET 5/8" X 30" REBAR WITH 1 1/4" YELLOW PLASTIC CAP (KA OR59002 WA42690)
  - FOUND MONUMENT AS NOTED IN DESCRIPTIONS
  - COMPUTED ANGLE POINT, NOT MONUMENTED
- R.O.S. RECORD OF SURVEY  
A.F.N. AUDITOR'S FILE NUMBER  
R1 RECORD DATA PER RECORD OF SURVEY NO.  
FD FOUND DATA  
S.W.D. STATUTORY WARRANTY DEED  
P.I.N. PROPERTY IDENTIFICATION NO.
- — — — — EDGE OF ASPHALT  
- - - - - BUILDING SETBACK LINE  
- - - - - ORIGINAL BOUNDARY LINE  
- - - - - NEW BOUNDARY LINE

- MONUMENT INFORMATION**
- (250) FOUND 1-1/2" IRON PIPE INSIDE OF WASH DOT MONUMENT BOX; PER R.O.S. BOOK 58, PAGE 169; (VISITED MARCH 16, 2022)
  - (251) FOUND 1-1/2" IRON PIPE INSIDE OF WASH DOT MONUMENT BOX; PER R.O.S. BOOK 58, PAGE 169; (VISITED MARCH 16, 2022)
  - (252) FOUND 5/8" IRON ROD WITH NO CAP. ORIGIN UNKNOWN, NOT ACCEPTED; (VISITED MARCH 16, 2022)
  - (253) FOUND 5/8" IRON ROD WITH NO CAP. ORIGIN UNKNOWN, NOT ACCEPTED; (VISITED MARCH 16, 2022)
  - (254) FOUND 1/2" IRON ROD, W/ PLASTIC CAP, UNREADABLE, PER BOOK 13, PAGE 66; NOT ACCEPTED; (VISITED MARCH 16, 2022)
  - (255) FOUND 1/2" IRON ROD W/ PLASTIC CAP INSCRIBED PLS 12794, PER BOOK 13, PAGE 66. HELD; (VISITED MARCH 16, 2022)
  - (260) FOUND 3/4" IRON PIPE BENT; 16.38' EAST OF SECTION LINE, SEE REFERENCE 2; (VISITED MARCH 16, 2022)
  - (261) FOUND 1/2" IRON ROD BENT; HELD; (VISITED MARCH 16, 2022)
  - (262) FOUND 1/2" IRON ROD; HELD; (VISITED MARCH 16, 2022)
  - (263) FOUND 4" X 4" CONCRETE POST AT COMPUTED POSITION; HELD; (VISITED MARCH 16, 2022)

**AREA TABLE:**

PARCEL	ORIGINAL AREA	NEW AREA
PARCEL 83124000	6,976 S.F.	22,871 S.F.
PARCEL 83103000	25,953 S.F.	10,057 S.F.

SURVEY PERFORMED FOR:  
AMIT KAUSHAL & KAMRA RUCHIKA  
DATE OF MONUMENT: MAY 30, 2022  
PROJECT: 22-04-21 DRAFT: GD  
FILE: 220421.DWG LAYOUT TAB: WA SURVEY

KLEIN & ASSOCIATES, MAKES NO WARRANTY AS TO MATTERS OF UNWRITTEN TITLE, ADVERSE POSSESSION, ESTOPPEL, ACQUIESCENCE.

**BASIS OF BEARINGS**

WASHINGTON STATE PLANE COORDINATES SYSTEM NAD83(2011)(EPOCH: 2010), SOUTH ZONE, DERIVED FROM OPLUS POST PROCESSING ESTABLISHED BY G.P.S. OBSERVATION BETWEEN MONUMENT INFORMATION POINT (250) AND (251) HAS A BEARING OF S84°18'34"E

**REFERENCED SURVEYS**

- R1. MAP OF MARCER ADDITION TO CAMAS.
- R2. SURVEY PERFORMED BY GREENWOOD SURVEYS, INC.; FOR EARL BUFORD; RECORDED IN BOOK 13, PAGE 66.
- R3. MONUMENTATION SURVEY PERFORMED BY MINISTER-GLEASER SURVEYING, INC.; FOR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION; RECORDED IN BOOK 58, PAGE 169.
- R4. SURVEY PERFORMED BY GREENWOOD SURVEYS, INC.; FOR MAURICE GODSIL; RECORDED IN BOOK 13, PAGE 42.
- R5. SURVEY PERFORMED BY SWART LAND SURVEYING; FOR T&C CONSTRUCTION; RECORDED IN BOOK 26, PAGE 191.

**REFERENCED DEEDS**

PROPERTY LINE ADJUSTMENT, QUIT CLAIM DEED, A.F.N. 6087120 BARGAIN SALE AND DEED A.F.N. 58391630 STATUTORY WARRANTY DEED, A.F.N. 6035422D

**PROCEDURES**

A CLOSED LOOP TRAVERSE WAS PERFORMED USING A 3" TRIMBLE S6 TOTAL STATION, MEETS MINIMUM STANDARDS AS DESIGNATED IN WAC 332-130-090

**SURVEYOR'S CERTIFICATE:**

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF AMIT KAUSHAL, IN NOVEMBER, 2022

JAMES M. KLEIN  
PROFESSIONAL LAND SURVEYOR LS #42690



**LINE TABLE**

LINE #	DIRECTION	LENGTH
L1	N87°24'39"W	40.17
L2	S1°27'47"W	59.99

**NARRATIVE**

THE PURPOSE OF THIS SURVEY IS TO AMENDED A PREVIOUSLY RECORDED SURVEY PERFORMED BY OUR FIRM, RECORDED IN BOOK 72, PAGE 147, WHICH AREA TABLE WAS IN ERROR.  
THE PURPOSE OF THIS SURVEY WAS TO MONUMENT THE EXTERIOR BOUNDARY OF TWO SEPARATE TRACTS FOR A PROPERTY LINE ADJUSTMENT, WHICH IS DESCRIBED IN THAT CERTAIN PROPERTY LINE ADJUSTMENT BY QUIT CLAIM DEED, RECORDED OCTOBER 27, 2022, AUDITOR'S FILE NO. 6087120 D.  
A MATHEMATICAL MODEL WAS CREATED BASED ON TWO PREVIOUSLY RECORDED SURVEYS, THE SOUTH AND EAST LINES WERE COMPUTED BASED ON A SURVEY PERFORMED BY GREENWOOD SURVEYS, RECORDED IN BOOK 13 OF SURVEYS PAGE 66, ALONG WITH A SURVEY PERFORMED BY MINISTER-GLEASURE SURVEYING INC., RECORDED IN BOOK 58 OF SURVEYS PAGE 169, WHICH WAS USED TO ESTABLISH THE NORTH LINE OF THE SUBJECT TRACT, ALSO BEING THE SOUTHERLY RIGHT-OF-WAY OF STATE ROUTE 14. RECOVERED MONUMENTS ALONG A-LINE PER MINISTER-GLEASURE SURVEY WERE RECOVERED AND HELD TO ESTABLISH SAID NORTH LINE OF THE SUBJECT TRACT. MONUMENTS FOUND OR ESTABLISHED BY SAID GREENWOOD SURVEY ALONG THE SOUTHERLY RIGHT-OF-WAY OF STATE ROUTE 14 WERE NOT HELD IN THIS SURVEY. MONUMENTS RECOVERED ALONG SW VALLEY STREET WERE RECOVERED AND HELD, AS SHOWN ON SAID GREENWOOD SURVEY. THE ADJUSTED PROPERTY LINES WERE THEN COMPUTED, AND PROPERTY MONUMENTS SET BASED ON SAID PROPERTY LINE ADJUSTMENT BY QUIT CLAIM DEED.

**AUDITOR'S CERTIFICATE**

FILED FOR RECORD THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2022  
AT \_\_\_\_\_ M. IN BOOK \_\_\_\_\_ OF SURVEYS PAGE \_\_\_\_\_ AT THE  
REQUEST OF JAMES M. KLEIN, REGISTERED LAND SURVEYOR, NO. 42690.

COUNTY AUDITOR

**OWNER**  
AMIT KAUSHAL  
AND  
KAMRA RUCHIKA

SHEET 1 OF 1  
WILLAMETTE MERIDIAN  
CLARK COUNTY, WASHINGTON

1/4	SEC	T.	R.
10	1N.	3E.	









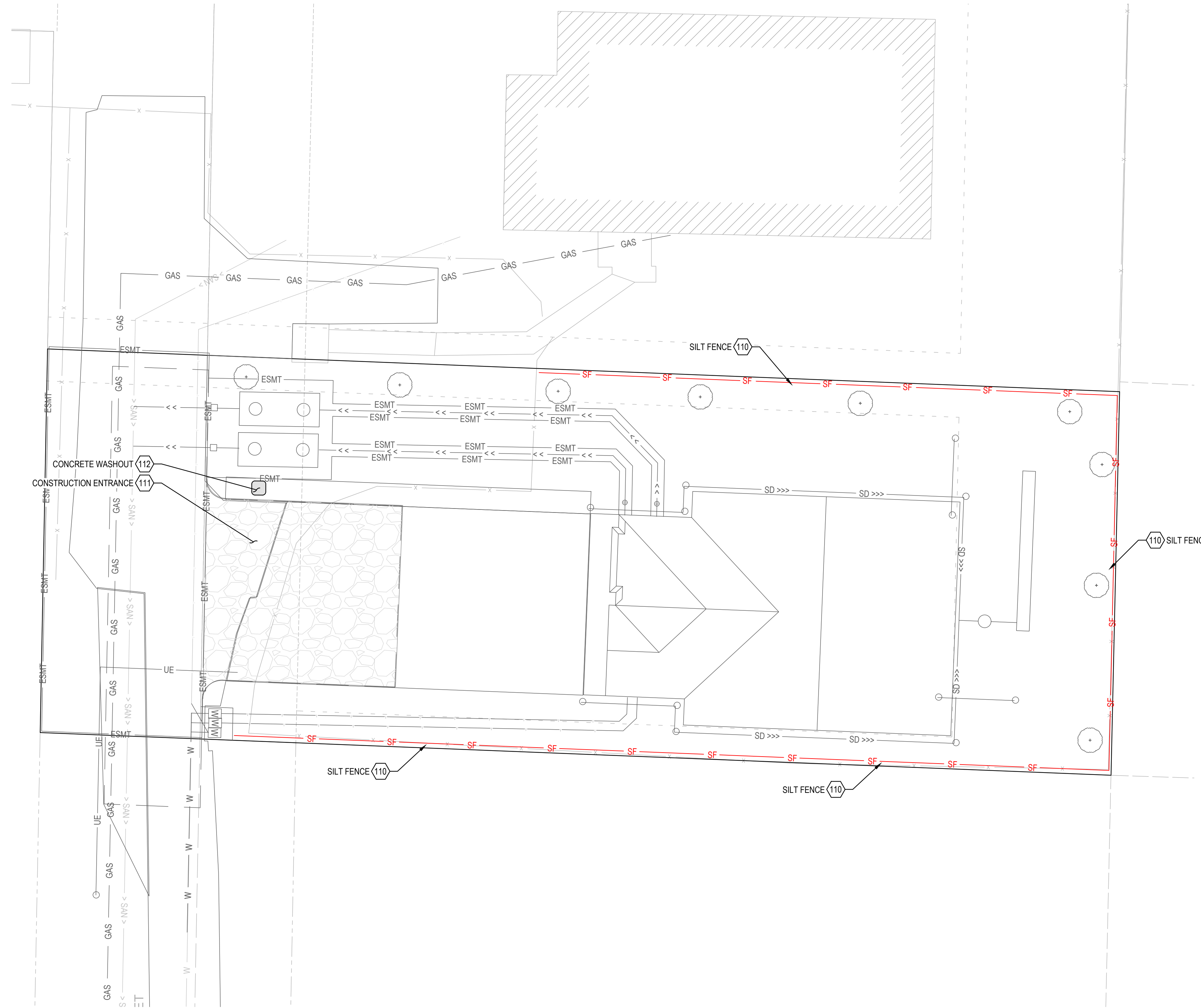


**GENERAL SHEET NOTES:**

A. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

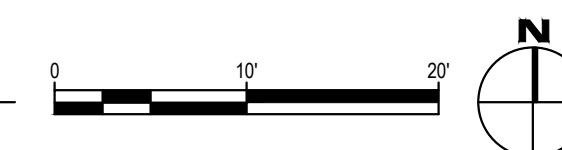
**KEYNOTES:**

- 110 EROSION CONTROL**
- 110 INSTALL SILT FENCE PER DETAIL ON SHEET C600
- 111 CONSTRUCTION ENTRANCE PER DETAIL ON SHEET C600
- 112 INSTALL CONCRETE WASHOUT



**EROSION CONTROL PLAN**

SCALE: 1" = 10'

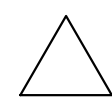


PLOT DATE: 10/27/2023 5:05 PM - FILE: C:\Users\Olivier\OneDrive - Windsor Engineers\OneDrive - Windsor Engineers\05\_Projects\2023\23228 Camas Valley St Duplex\02\_Drawings\02\_Working\04\_Final\Sheets\23228\_ESC.dwg



Know what's below.  
Call before you dig.  
CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:



No.	Description	Date

LINE IS 1" ON FULL SCALE DRAWING



Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com

Copyright 2023 By Windsor Engineers, LLC  
All Rights Reserved.



**CAMAS VALLEY STREET DUPLEX**  
CAMAS, WA

**ENGINEERING PLAN**

Project No: 23228  
Issue Date: 10/27/2023

**EROSION CONTROL PLAN**

**C110**

Project Manager: CTM  
Drawn by: ORK  
Checked by: CTM

ISSUED FOR ENGINEERING PLAN REVIEW/APPROVAL ONLY



**EROSION/SEDIMENT CONTROL NOTES:**

- THE EROSION/SEDIMENT CONTROL (ESC) PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS TO BE UTILIZED AS A GUIDE TO CONTROL THE TRANSPORT OF LOOSE SOILS TO THE PROPERTY OUTSIDE OF THE CONSTRUCTION AREA AND AROUND THE CONSTRUCTION SITE. THE ESC MEASURES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
- THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THE ESC MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND PERMANENT VEGETATION/LANDSCAPING IS ESTABLISHED.
- IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A "STOP WORK" ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.
- THE CONTRACTORS SHALL BE RESPONSIBLE TO FAMILIARIZE THEMSELVES WITH THE MOST RECENTLY ADOPTED EDITION OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL. II AND THE CITY OF CAMAS MUNICIPAL CODE 14.06 (2011).
- ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO DISTURBING AND EXPOSING ANY SOIL SURFACES (I.E. CONSTRUCTION ENTRANCES, FILTER FABRIC SEDIMENT BARRIERS, AND SEDIMENTATION TRAPS) AND MAINTAINED FOR THE DURATION OF THE PROJECT. TRAPPED SEDIMENT IN EXCESS OF 1 FOOT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED SOIL AREAS RESULTING FROM VEGETATION REMOVAL SHALL BE PERMANENTLY STABILIZED. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- TO MINIMIZE EROSION AND SEDIMENTATION TRANSPORTATION, EARTHWORK SHALL NOT BE PERFORMED WHILE SOILS ARE IN AN UNSTABLE STATE DUE TO PRECIPITATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE CLEARING LIMITS AND/OR ANY EASEMENTS, SENSITIVE OR CRITICAL AREAS, AND THEIR BUFFERS, TREES, AND DRAINAGE COURSES FLAGGED PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. FLAGGING LIMITS ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- REMOVE ONLY THOSE TREES AND SHRUBS THAT NEED TO BE REMOVED FOR THE CONSTRUCTION OF ROADS, SIDEWALKS, UTILITIES, AND STORMWATER FACILITIES.
- ALL EXISTING AND NEWLY CONSTRUCTED ROAD CATCH BASINS AND CURB INLETS AFFECTED BY CONSTRUCTION SHALL BE PROTECTED AGAINST SEDIMENT DEPOSITS. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- ALL POLLUTANTS THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER SYSTEMS.
- ALL DISTURBED SOIL SURFACES ARE TO BE STABILIZED BY A SUITABLE APPLICATION OF "BEST MANAGEMENT PRACTICES" (BMP'S). DURING THE PERIOD OF OCTOBER 1 THROUGH JULY 5 DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO TWO DAYS WHEN NOT BEING WORKED. FROM JULY 5 THROUGH OCTOBER 1, DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO 7 DAYS WHEN NOT BEING WORKED. STABILIZATION OF DISTURBED SOIL AREAS MAY CONSIST OF HYDROSEEDING, HAND-SEEDING AND MULCHING, PLACEMENT OF EROSION CONTROL BLANKETS OR PLASTIC. ALL SEEDED AREAS ARE TO BE FERTILIZED, WATERED, AND MAINTAINED TO ENSURE THAT THE GROWTH OF VEGETATION OCCURS AS SOON AS POSSIBLE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED.

REV. NO.	DATE	BY	APPR.	DETAIL NO.
1	9/18/07	SD	JC	EC2
2	1/17/11	SD	JC	EC2

CITY OF CAMAS - EROSION CONTROL DETAIL  
EROSION/SEDIMENT CONTROL NOTES  
SCALE: NOT TO SCALE  
DATE: 8/17/2023

**EROSION/SEDIMENT CONTROL NOTES (CONTINUED):**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLICING THE JOB SITE DAILY AND MAINTAINING THE EROSION/SEDIMENT CONTROL MEASURES THROUGHOUT ALL PHASES OF CONSTRUCTION. AN INSPECTION LOG SHALL BE KEPT AND MADE AVAILABLE TO THE CITY OF CAMAS. THE POLICING AND MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO:
  - VERIFYING THAT ALL AREAS ARE GRADED SUCH THAT ALL RUNOFF IS DIRECTED TO A SEDIMENTATION DEVICE BEFORE DISCHARGE TO SURFACE.
  - REMOVAL OF TRAPPED SILT AT SILT BARRIERS, SILT TRAPS, OR POINTS OF ACCUMULATION.
  - ADDITIONAL PROTECTIVE MEASURES DUE TO JOB SITE OR WEATHER CONDITIONS AS REQUIRED BY THE CITY OF CAMAS.
  - MONITORING OF VEHICLES LEAVING THE SITE TO MINIMIZE TRANSMISSION OF LOOSE SOILS TO THE PUBLIC ROADWAYS.
  - VERIFY THAT ALL PROPERTIES ADJACENT TO THE PROJECT SITE ARE PROTECTED FROM SEDIMENTATION DEPOSITION. THIS MAY BE ACCOMPLISHED BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENTATION BARRIERS, FILTERS OR DIKES, SEDIMENTATION BASINS/TRAPS, OR BY A COMBINATION OF SUCH MEASURES.
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED IN ACCORDANCE WITH EROSION/SEDIMENT CONTROL NOTE 11. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN TWO YEARS OF CONSTRUCTION MUST BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES. THESE MEASURES MAY CONSIST OF ROUGHENED SOIL SURFACES, INTERCEPTORS, DIVERSIONS OR TERRACES, TEMPORARY OR PERMANENT CHANNELS, ADDITIONAL VEGETATION, OR PIPE-SLOPE DRAINS AS REQUIRED BY THE CITY OF CAMAS UNTIL THE PROBLEM IS CORRECTED.
- THE ESC MEASURES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING ANY STORM EVENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING UNDERGROUND UTILITIES AS SPECIFIED BELOW:
  - WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME.
  - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - TRENCH DE-WATER DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND.
- PRIOR TO CONSTRUCTION, THE CITY OF CAMAS REQUIRES AN APPROVED FORM OF SECURITY IN THE AMOUNT OF 200% OF THE ENGINEER'S ESTIMATED COST OF THE ESC MEASURES, INCLUDING ASSOCIATED LABOR, AS SHOWN IN THE APPROVED ESC PLAN AND SWPPP.
- SUGGESTED STANDARD SEED MIXTURE FOR THOSE AREAS WHERE A TEMPORARY VEGETATIVE COVER IS REQUIRED:
 

TEMPORARY EROSION CONTROL MIX*	% WEIGHT	% PURITY	% GERMINATION
CHEVYCHES OR ANNUAL BLEED GRASS	45	98	90
(FESTUCA RUBRA VAR. COMUTATA OR POA ANNA)	50	98	90
PERENNIAL RYE	5	98	85
(LULIUM PERENNE)	5	92	85
REDTOP OR COLONIAL BENTGRASS	5	98	90
(AGROSTIS ALBA OR AGROSTIS TENAX)	5	98	90
WHITE DUTCH CLOVER	5	98	90
(TRIFOLIUM REPENS)	5	98	90

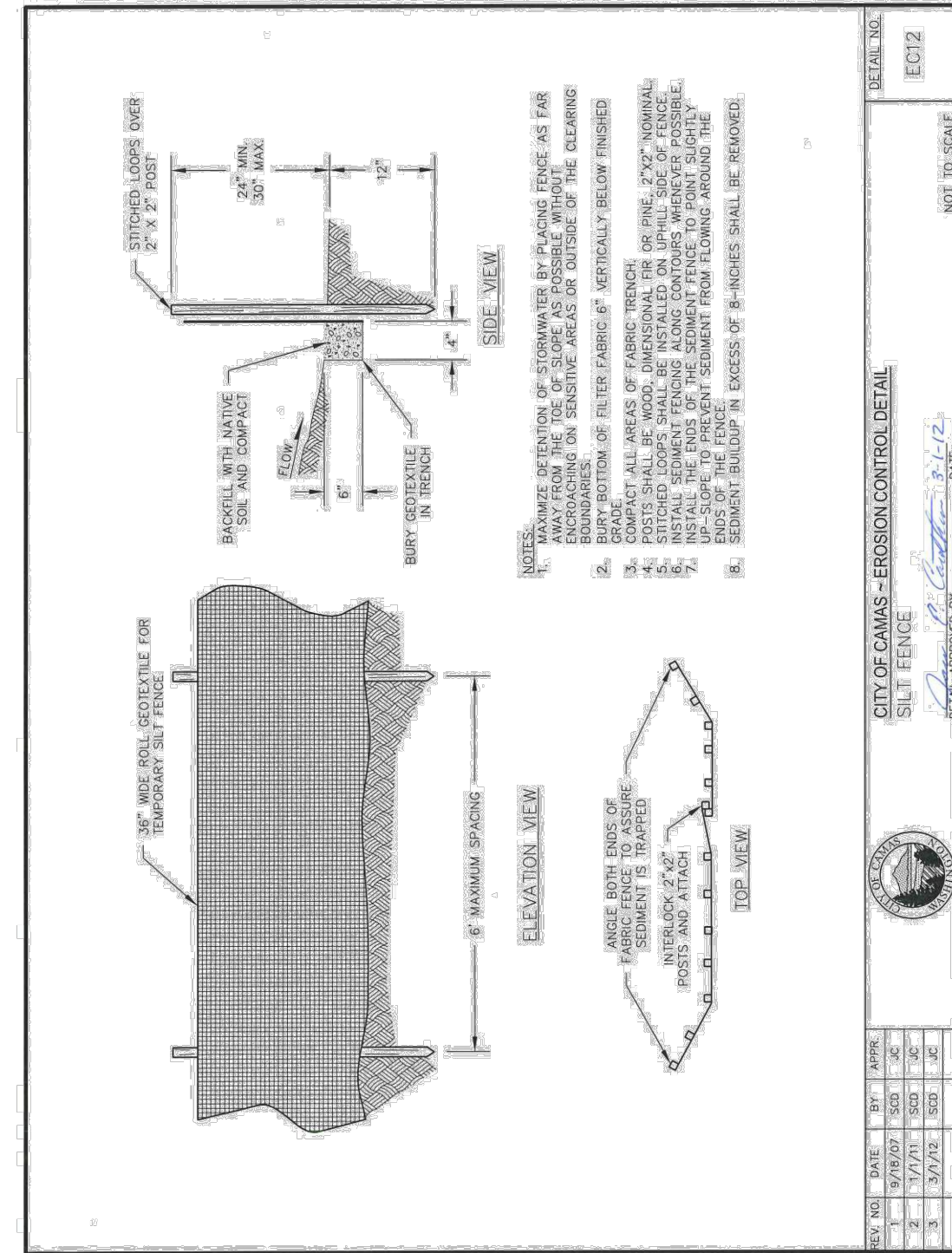
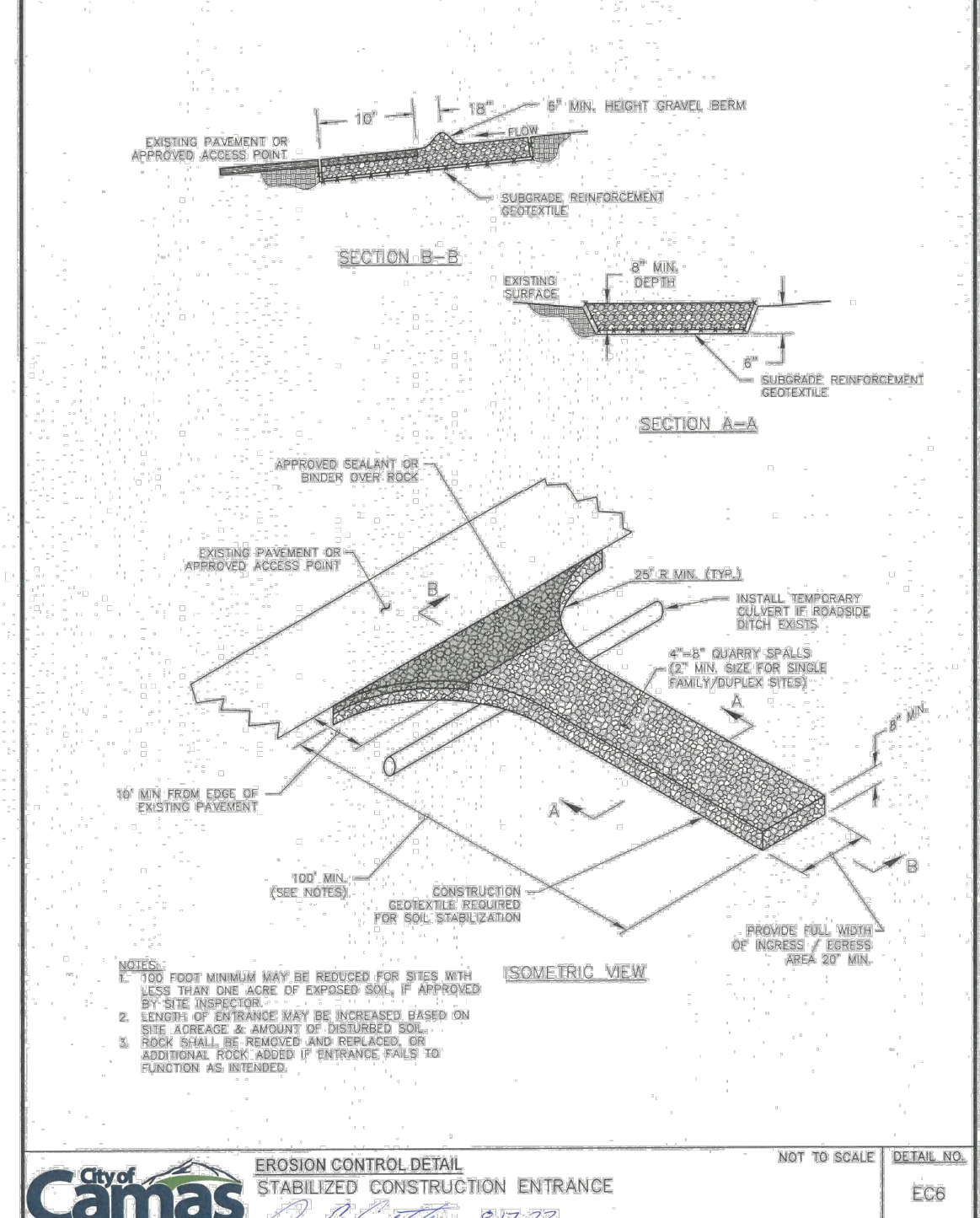
 \*APPLICATION RATE OF 120 LBS/ACRE AND COVERED WITH STRAW OR MULCH
- SUGGESTED TURF SEED MIXTURE FOR DRY SITUATIONS WHERE THERE IS NO NEED FOR MUCH WATER:
 

LOW-GROWING TURF SEED MIX*	% WEIGHT	% PURITY	% GERMINATION
DWARF TALL FESCUE (SEVERAL VARIETIES)	45	98	90
(FESTUCA ARUNDINACEA VAR.)	45	98	90
DWARF PERENNIAL RYE	30	98	90
(LULIUM PERENNE VAR. BRUCEYI)	30	98	90
RED FESCUE	20	98	90
(FESTUCA RUBRA)	20	98	90
COLONIAL BENTGRASS	5	98	90
(AGROSTIS TENAX)	5	98	90

 \*APPLICATION RATE OF 120 LBS/ACRE AND COVERED WITH STRAW OR MULCH

REV. NO.	DATE	BY	APPR.	DETAIL NO.
1	9/18/07	SD	JC	EC3
2	1/17/11	SD	JC	EC3

CITY OF CAMAS - EROSION CONTROL DETAIL  
EROSION/SEDIMENT CONTROL NOTES  
SCALE: NOT TO SCALE  
DATE: 8/17/2023



Know what's below.  
Call before you dig.  
CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

Revisions:


LINE IS 1" ON FULL SCALE DRAWING



Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com

Copyright 2023 By Windsor Engineers, LLC  
All Rights Reserved.



CAMAS VALLEY STREET DUPLEX  
CAMAS, WA

ENGINEERING PLAN

Project No: 23228

Issue Date: 10/27/2023

EROSION CONTROL DETAILS

C600

Project Manager: CTM  
Drawn by: ORK  
Checked by: CTM

ISSUED FOR ENGINEERING PLAN REVIEW/APPROVAL ONLY



**GENERAL CONSTRUCTION NOTES:**

- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE MDTOT/APWA "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" AND STANDARD DETAIL SHEETS ATTACHED HEREWITH.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, INCLUDING THE INVERT AND TOP ELEVATIONS AT CROSSING LOCATIONS, PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE CITY ENGINEER OF ANY POTENTIAL CONFLICTS.
- CONTRACTOR SHALL CONTACT CLARK COUNTY'S 24-HOUR UTILITY NOTIFICATION CENTER AT CALLEBEFOREYODIG.CCC OR CALL (800) 424-5555 (OR 811) TO SUBMIT A REQUEST FOR UTILITY LOCATES, A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING MONUMENTS, PROPERTY CORNERS AND SURVEY MARKERS SHALL BE PROTECTED. REPLACEMENT OF LOST, DESTROYED OR DAMAGED MARKERS SHALL BE DONE BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH RCW 58.09 AT THE CONTRACTORS EXPENSE.
- THE CONTRACTOR SHALL NOT EXCAVATE OVER FOUR FEET IN DEPTH WITHOUT USING ADEQUATE SAFETY MEASURES. THE CONTRACTOR IS REFERRED TO TITLE 296 WAC, PART N FOR EXCAVATION, TRENCHING AND SHORING REQUIREMENTS.
- ALL UTILITY TRENCHES SHALL HAVE BEDDING, PRE-COVER AND BACKFILL MATERIAL AS REQUIRED IN GENERAL DETAILS G2 WITHIN PAVED AREAS & G3 WITHIN UNPAVED AREAS.
  - WATER SETTLEMENT OF UTILITY TRENCHES IS NOT ALLOWED.
  - TRENCH LINES LOCATED WITHIN AN EXISTING ROADWAY SHALL BE PLATED OR TOPPED WITH COLD MIX.
  - CRUSHED ROCK BACKFILL OVERSIGHT IS NOT ALLOWED.
  - PLATES SHALL HAVE COLD MIX AROUND ALL EDGES.
- ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EROSION/SEDIMENT CONTROL PLAN AND CITY OF CAMAS EROSION/SEDIMENT CONTROL DETAILS PRIOR TO ANY CLEARING OR THE START OF ANY CONSTRUCTION.
- IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A "STOP WORK" ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.
- THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CAMAS ENGINEERING DEPARTMENT. APPROVAL SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
- THE DEVELOPER/CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE CITY OF CAMAS ENGINEERING DEPARTMENT PRIOR TO COMMENCING ANY WORK.
- ANY SIGNIFICANT DEVIATIONS FROM THE PLANS WILL REQUIRE A SUBMITTAL FROM THE APPLICANT'S ENGINEER AND APPROVAL FROM THE CITY OF CAMAS ENGINEERING DEPARTMENT.
- AN EROSION/SEDIMENT CONTROL BOND MAY BE REQUIRED BY THE CITY OF CAMAS PRIOR TO WORK COMMENCING.

GENERAL DETAIL  
CONSTRUCTION NOTES  
NOT TO SCALE  
DETAIL NO. G1  
DATE: 8/12/2022

**UTILITY TRENCH WITHIN PAVED AREAS**

SEE UTILITY TRENCH SURFACE RESTORATION DETAIL G2A

TRENCH ZONE PATCH PER NOTE #2 BELOW

MARKING TAPE REQUIRED FOR ALL SANITARY LINES, 1' ABOVE PIPE.

1.4 GA. HDPE (HMWPE) INSULATED COPPER CLAD STEEL TAPPING WIRE GREEN FOR FLOW, BLUE FOR WATER) ON MAINS AND LATERALS WHEN REQUIRED (SEE CHAIR BELOW). SEAL SPACED CONNECTIONS WITH 3M DRY OR KING GEL CAPS.

NOTES:  
1. SMOOTH ALL EDGES FOR TRENCH EXCAVATION.  
2. ALL TRENCH COMPACTOR SHALL MEET OR EXCEED 80% OF ADOPTED 1-105.  
3. BEDDING AND PRE-COVER (PIPE ZONE) TO BE 5/8" MINUS CRUSHED AGGREGATE.  
4. COP BACKFILL REQUIRED ABOVE PIPE ZONE FOR ALL TRANSVERSE TRENCHING AND UTILITY CROSSINGS TO A MINIMUM DEPTH OF 3 FEET, ON ALL DESIGNATED COLLECTOR AND ARTERIAL STREETS. COP SHALL BE DESIGNED TO HAVE A MINIMUM 28-DAY STRENGTH OF 50 PSI AND A MINIMUM 28-DAY STRENGTH NOT TO EXCEED 300 PSI.  
5. TRENCH ZONE PATCH SHALL CONSIST OF MIN. 3" COMPACTED DEPTH OF CLASS 1/2" PG 64-22 HMA PAVEMENT OVER 12" OF 1 1/4" MINUS CRUSHED AGGREGATE. CONTRACTOR TO MATCH EXISTING ASPHALT DEPTH IF >3".

UTILITY TYPE	MAIN TYPE	MIN. PIPE (MIN) COVER	MIN. LATERAL OR SERVICE COVER
WATER	DISTRIBUTION (C)	2.5'	2' (0)
	TRANSMISSION (A)	3'	2' (0)
STORM	MAIN	5'	PER PLAN (MIN. 2')
	STEP (C)	5'	1.5' (0)
SEWER	STEP (C)	6'	4.5' (0)
	GRAVITY	6'	4.5' (0)

NOTES:  
A. TAPPING WIRE REQUIRED FOR MAINS 12" DIA AND LARGER.  
B. SERVICES ONLY ALLOWED WHERE APPROVED.  
C. TAPPING WIRE REQUIRED.

GENERAL DETAIL  
UTILITY TRENCH WITHIN PAVED AREAS  
NOT TO SCALE  
DETAIL NO. G2  
DATE: 9-10-23

**UTILITY TRENCH SURFACE RESTORATION**

SEE TABLE BELOW

ALL ASPHALT TO ASPHALT JOINTS SHALL BE SEALED OVER HOT PAVING ASPHALT, AND SANDED, SAME DAY AS PAVING.

TACK ALL COLD JOINTS PRIOR TO ASPHALT PAVEMENT PATCHING.

MIN. 2" GRIND & INLAY

TRENCH ZONE PATCH PER NOTE #2 BELOW

NOTES:  
1. SMOOTH ALL EDGES FOR SURFACE RESTORATION, INCLUDING GRIND AND INLAY EDGES.  
2. TRENCH ZONE PATCH SHALL CONSIST OF MIN. 3" COMPACTED DEPTH OF CLASS 1/2" PG 64-22 HMA PAVEMENT OVER 12" OF 1 1/4" MINUS CRUSHED AGGREGATE. CONTRACTOR TO MATCH EXISTING ASPHALT DEPTH IF >3".

STREET CLASSIFICATION	TRANSVERSE TRENCH REQUIREMENTS	LONGITUDINAL TRENCH REQUIREMENTS
LOCAL INCLUDING CUL-DE-SACS & DEAD ENDS (A)	3' MINIMUM EACH SIDE OF TRENCH, 10 FT MINIMUM TOTAL (B)(C)	FULL LANE WIDTH GRIND & INLAY (B)
LOCAL THROUGH STREETS (A)	12 FT GRIND & INLAY EACH SIDE OF TRENCH (C)	FULL LANE WIDTH GRIND & INLAY
COLLECTOR	12 FT GRIND & INLAY EACH SIDE OF TRENCH	FULL LANE WIDTH GRIND & INLAY
ARTERIAL	12 FT GRIND & INLAY EACH SIDE OF TRENCH	FULL LANE WIDTH GRIND & INLAY

NOTES:  
A. MINIMUM REQUIREMENTS FOR PUBLIC AND PRIVATE STREETS.  
B. OPTIONAL FULL DEPTH PATCH, OR GRIND AND INLAY.  
C. SURFACE RESTORATION LESS THAN MIN. SHOWN REQUIRES PRIOR APPROVAL.

GENERAL DETAIL  
UTILITY TRENCH SURFACE RESTORATION  
NOT TO SCALE  
DETAIL NO. G2A  
DATE: 4/18/2019

**EASEMENT DESIGN NOTES:**

- PUBLIC EASEMENTS FOR WATER, SEWER OR STORMWATER UTILITIES LOCATED BETWEEN LOTS, ALONG BACK LOT LINES, WITHIN OPEN SPACES OR THROUGH OTHER TRACTS OR PARCELS WITHIN OR ADJACENT TO A DEVELOPMENT ARE DISCOURAGED AND ONLY ALLOWED ON A CASE BY CASE BASIS AS APPROVED BY THE CITY.
- IF SUCH EASEMENT IS ALLOWED THE FOLLOWING REQUIREMENTS AND RESTRICTIONS SHALL THEREBY APPLY TO ALL SUCH EASEMENTS UNLESS SUCH REQUIREMENTS AND RESTRICTIONS ARE SPECIFICALLY WAIVED BY THE CITY.
  - ALL PUBLIC UTILITIES LOCATED WITHIN A PERMITTED EASEMENT SHALL BE INSTALLED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF CITY OF CAMAS GENERAL DETAIL #G2 AS SHOWN IN THE CITY OF CAMAS DESIGN STANDARD MANUAL.
  - CONSTRUCTION OR INSTALLATION OF ACCESSORY STRUCTURES, SHEDS, BRICK CONCRETE OR MASONRY GRILLS OR BARBECUES, DECKS, PLAY STRUCTURES, JUNGLE GYMS, SWING SETS, COVERED PATIOS, SWIMMING POOLS, SPORT COURTS, BRICK OR STONE PAVES WALKWAYS OR DRIVES, LANDSCAPING (OTHER THAN BARK DUST OR LAWN), LANDSCAPING WATER FEATURES SUCH AS COY POUNDS OR WATERFALLS, RAISED BED GARDENS OR ANY OTHER PERMANENT OR SEMI-PERMANENT IMPROVEMENTS WITHIN OR ACROSS THE LIMITS OF THE EASEMENT IS PROHIBITED.
  - CONSTRUCTION OR INSTALLATION OF CONCRETE SIDEWALKS OR DRIVEWAYS, ASPHALT DRIVEWAYS OR PATHS, GRAVEL DRIVES OR RV PADS, LAWNS OR BARK MIST AREAS ARE ALLOWED WITHIN THE LIMITS OF THE EASEMENT.
  - SHOULD THE CITY BE REQUIRED TO DISRUPT THE SURFACE OF THE UTILITY EASEMENT THE CITY WILL PROVIDE SURFACE RESTORATION LIMITED TO THOSE APPROVED SURFACE TREATMENTS NOTED IN SECTION 4. ABOVE.
  - FOR PUBLIC UTILITY EASEMENTS LOCATED ON SLOPES OF 6% OR GREATER (CROSS SLOPE OR PROFILE GRADE) THERE SHALL BE INSTALLED A MINIMUM 12" WIDE ACCESS ROAD CAPABLE OF SUPPORTING AN H20 TRAFFIC LOAD INSTALLED WITH A MAXIMUM CROSS SLOPE OF 2% FOR PROFILE GRADES 6% OR STEEPER (TO A MAXIMUM GRADE OF 13%) THE MINIMUM 12" WIDE SURFACE WIDTH SHALL BE PAVED.

GENERAL DETAIL  
UTILITY EASEMENT NOTES  
NOT TO SCALE  
DETAIL NO. G7  
DATE: 8-21-18

**UTILITY EASEMENT NOTES**

ONE UTILITY  
15' WIDE

TWO UTILITIES  
20' WIDE

THREE UTILITIES  
30' WIDE

EASEMENT ACCESS ROAD SECTION

ROAD SECTION DESIGNED FOR H20 LOADING, PAVED IF PROFILE GRADE MORE

EXISTING GROUND

EASEMENT WIDTH

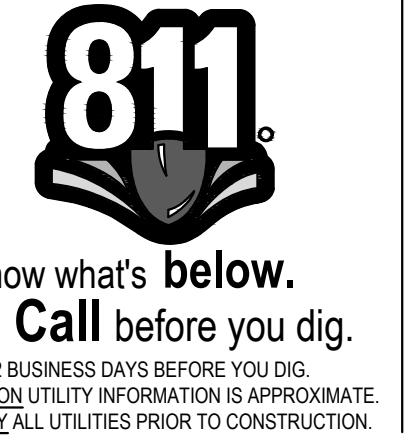
12" MIN.

2% MAX

5% MAX

NOTES:  
1. NO PRIVATE UTILITIES SHALL BE ALLOWED IN CITY OF CAMAS EASEMENTS.

GENERAL DETAIL  
UTILITY EASEMENTS  
NOT TO SCALE  
DETAIL NO. G8  
DATE: 10-21-18



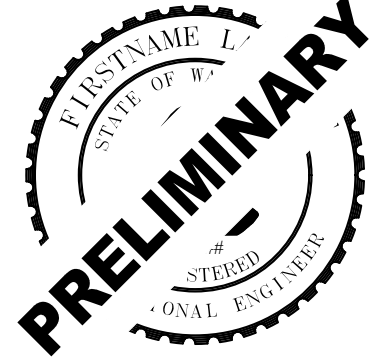
Revisions:


LINE IS 1" ON FULL SCALE DRAWING

**WINDSOR ENGINEERS**

Ridgefield, WA  
Duluth + Minneapolis, MN  
www.windsorengineers.com

Copyright 2023 By Windsor Engineers, LLC  
All Rights Reserved.



**CAMAS VALLEY STREET DUPLEX**  
CAMAS, WA

**ENGINEERING PLAN**

Project No: 23228  
Issue Date: 10/27/2023

**GENERAL DETAILS**

Project Manager: CTM  
Drawn by: ORK  
Checked by: CTM

**C601**

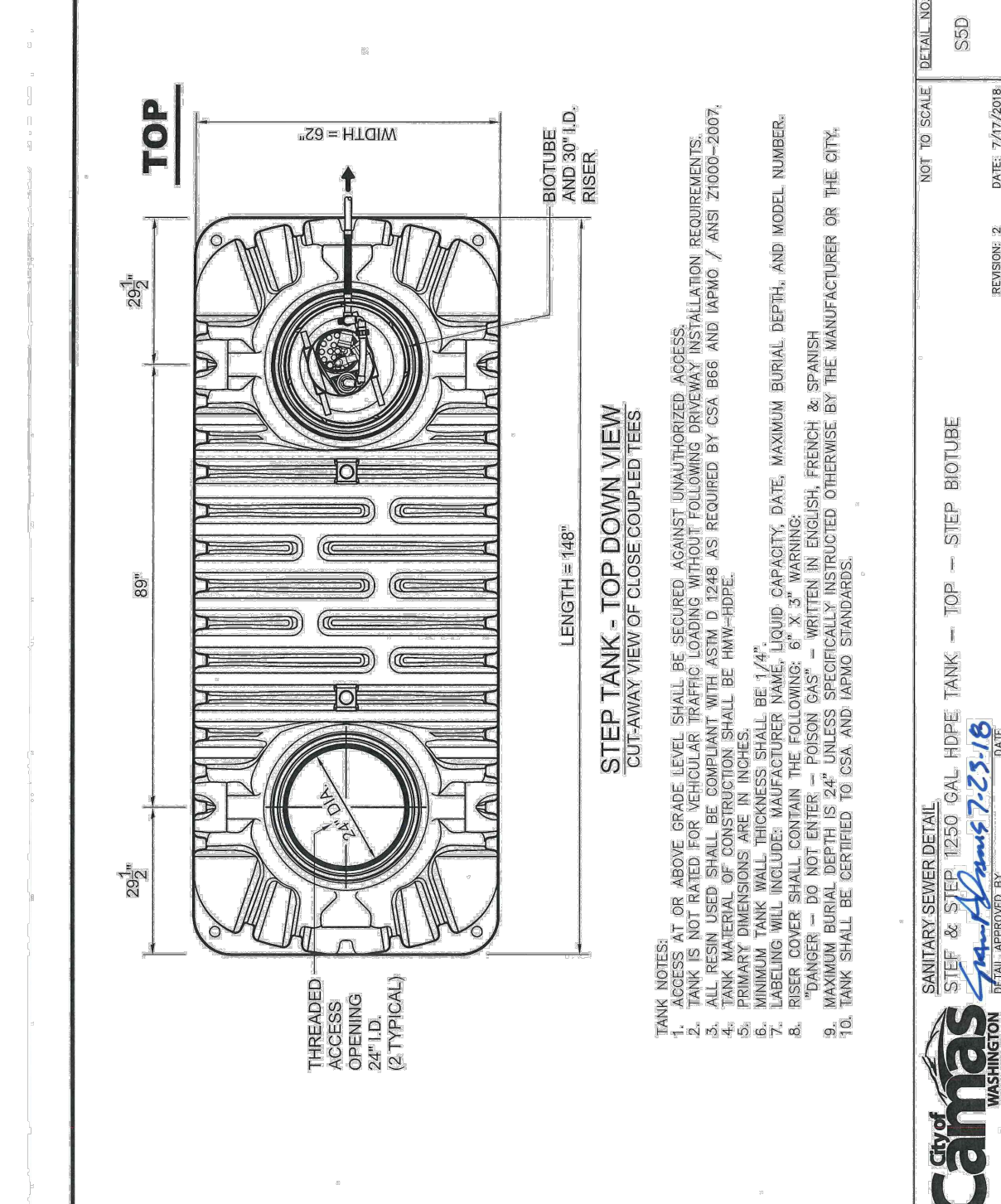
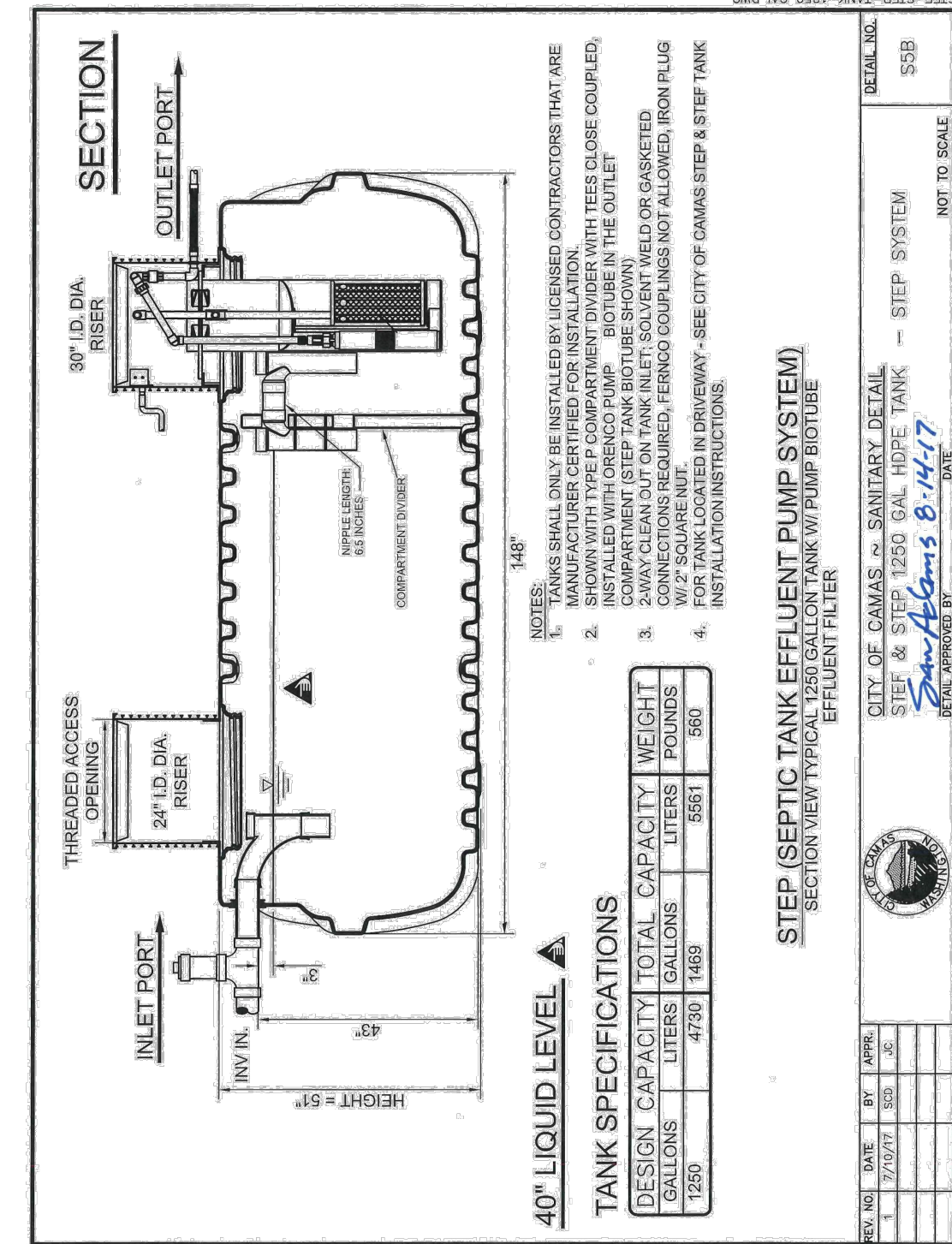
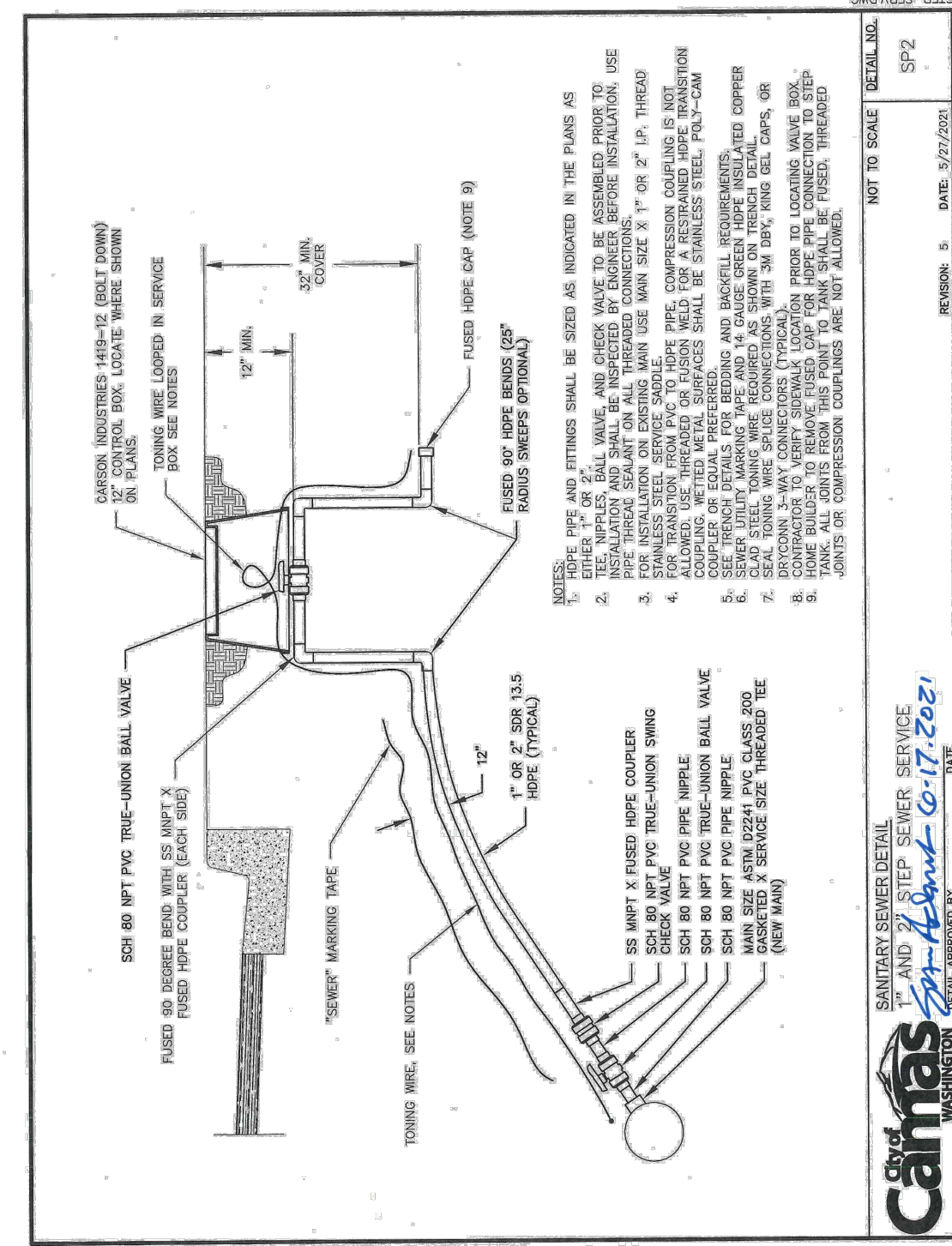
ISSUED FOR ENGINEERING PLAN REVIEW/APPROVAL ONLY



**SEPTIC TANK EFFLUENT PUMP (S.T.E.P.) NOTES:**

- ALL TRENCH EXCAVATION AND PIPE INSTALLATION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(2) AND SECTION 7-08.3(2). ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE DISPOSED OF ON AN APPROVED SITE.
- PIPE BEDDING AND PRE-COVER (PIPE ZONE) MATERIAL SHALL BE 5/8 INCH MINUS CRUSHED ROCK.
- TRENCH BACKFILL MATERIAL SHALL BE 1-1/4 INCH MINUS CRUSHED ROCK.
- TRENCH COMPACTION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(2). CONTRACTOR TO DETERMINE THE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE A.A.S.H.T.O. T-180 TEST METHOD.
- SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.
- ALL SANITARY SEWER PIPE AND FITTINGS SHALL BE 2 INCHES TO 36 INCHES IN DIAMETER, UNLESS OTHERWISE NOTED. SHALL BE CLASS 200 PVC GASKETED PIPE, WHICH IS FURTHER DEFINED AS ASTM D2241 DR21. ALL SANITARY SEWER PIPE AND FITTINGS SMALLER THAN 2 INCH DIAMETER, UNLESS OTHERWISE NOTED, SHALL BE IRON PIPE SIZE HOPE WITH A GREEN STRIPE TO INDICATE "SEWER," WHICH IS FURTHER DEFINED AS PE4710 SDR11 FOR 200 PSI RATING.
- 14 GAUGE GREEN HOPE INSULATED COPPER CLAD STEEL TONING WIRE SHALL BE PLACED DIRECTLY OVER ALL SEWER MAINS AND SERVICE LATERALS. THE TONING WIRE SHALL BE ACCESSIBLE AT ALL VALVES, RESERS, A.A.S.V.'S AND SERVICE BOXES. ALL SPLICES AND CONNECTIONS TO TONING WIRE SHALL BE PROTECTED WITH KING GEL CAPS, 3M DBY DIRECT BURST, OR OTHER APPROVED EQUAL CONNECTORS.
- ALL PIPE AND FITTINGS SHALL BE HYDROSTATICALLY TESTED AT 100 P.S.I. FOR FIFTEEN MINUTES, EXCEPT LATERAL SERVICES, WHICH SHALL FOLLOW MANUFACTURER TEST PROCEDURES FOR HYDROSTATIC TESTING OF HOPE PIPE.
- ALL S.T.E.P. SANITARY SEWER MAINLINES SHALL BE INSTALLED WITH A MINIMUM COVER OF 5 FEET.
- ALL S.T.E.P. SANITARY SEWER LATERALS SHALL BE INSTALLED IN A DEDICATED TRENCH FROM THE SERVICE CONNECTION TO THE TANK. SEE TRENCH DETAIL FOR TRENCH BACKFILL MATERIAL AND COMPACTION REQUIREMENTS.

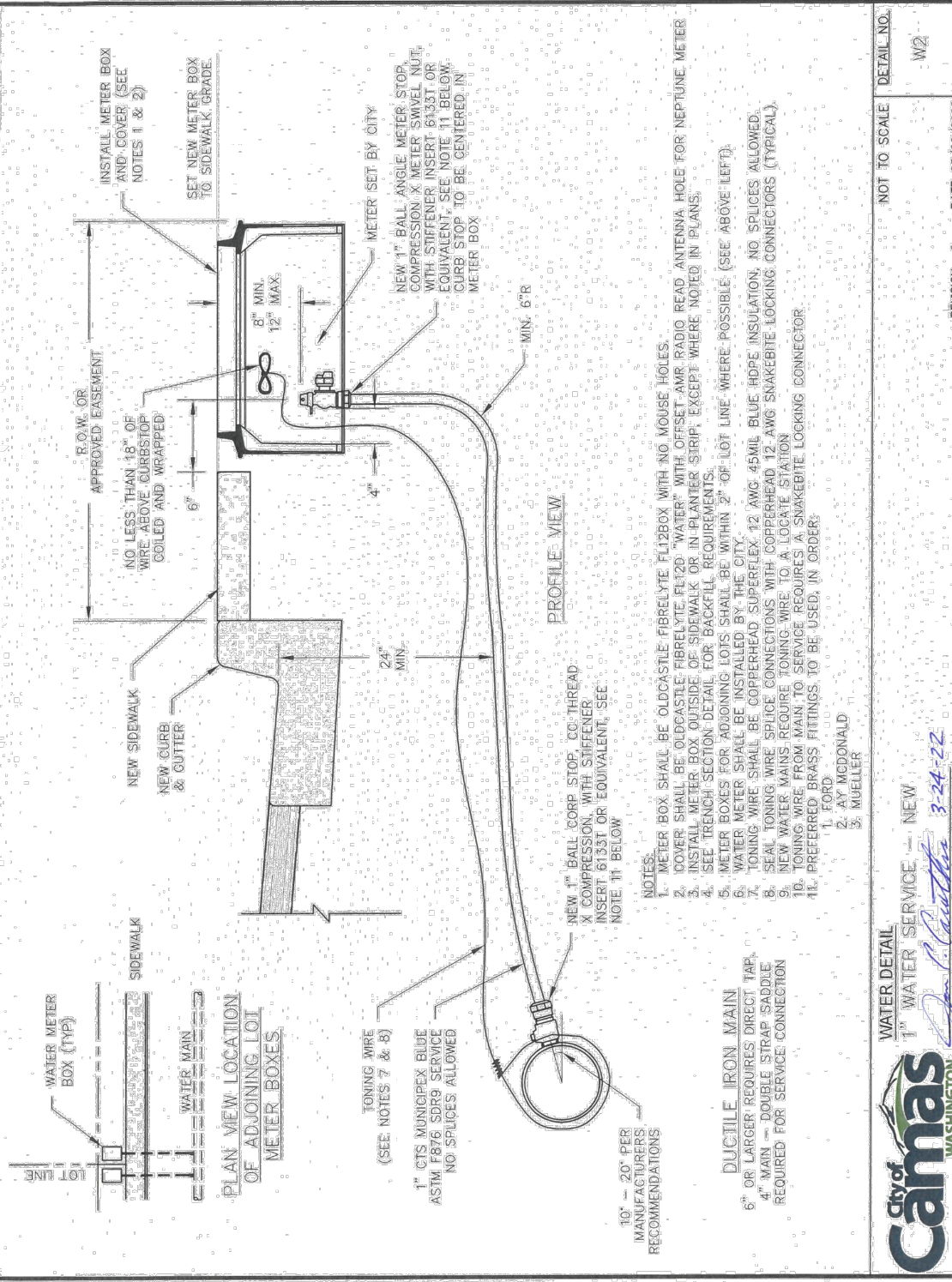
**NOT TO SCALE** **DETAIL NO.** SP2  
**REVISION 5** **DATE** 3/27/2021  
**City of Camas** **WASHINGTON**  
**Sanitizing** **3-24-22**  
**MANUFACTURER** **DATE**



**WATER CONSTRUCTION NOTES:**

- ALL TRENCH EXCAVATION AND PIPE INSTALLATION SHALL CONFORM TO THE MOST CURRENT A.W.W.A. STANDARDS, AND THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(1) AND SECTION 7-08.3(2). ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE LOADED DIRECTLY INTO A DUMP TRUCK AND DISPOSED OF AT AN APPROVED SITE.
- PIPE BEDDING AND PRE-COVER (PIPE ZONE) MATERIAL SHALL BE 5/8 INCH MINUS CRUSHED ROCK.
- TRENCH BACKFILL MATERIAL SHALL BE 1-1/4 INCH MINUS CRUSHED ROCK.
- TRENCH COMPACTION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(2). CONTRACTOR TO DETERMINE THE TYPE OF EQUIPMENT AND METHOD USED TO ACHIEVE THE REQUIRED COMPACTION AND BE APPROVED BY THE CITY OF CAMAS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE A.A.S.H.T.O. T-180 TEST METHOD.
- SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.
- ALL VALVES 12 INCHES OR LESS IN DIAMETER SHALL BE A.W.W.A. APPROVED RESILIENT WEDGE GATE VALVES. BUBBLE TIGHT AT 200PSI, HAVE NON-RISING STEMS, AND OPEN BY TURNING TO THE LEFT. PROVIDE A 3 INCH SQUARE MARK TO CONFORM TO A.W.W.A. C-504. ALL VALVES 12 INCHES OR LARGER IN DIAMETER SHALL BE A.W.W.A. APPROVED SUITERSLY VALVES.
- ALL WATER PIPE 12 INCHES OR LESS IN DIAMETER SHALL BE DUCTILE IRON CLASS 52 PIPE. ALL WATER PIPE 14 INCHES IN DIAMETER AND LARGER SHALL BE DUCTILE IRON CLASS 60 PIPE. RUBBER GASKET TYPE SHALL BE U.S. PIPE, TYTON OR APPROVED EQUAL. ALL FITTINGS SHALL BE DUCTILE IRON AND SHALL CONFORM TO THE A.W.W.A. STANDARD D-110.
- ALL TEES, FLANGES, CAPS, BENDS AND OFFSETS, AS WELL AS ALL OTHER APPURTENANCES WHICH ARE SUBJECT TO UNBALANCED THRUST, SHALL BE PROPERLY BRACED BY ONE OF THE FOLLOWING METHODS:
  - PRIMARY METHOD IS MECHANICAL JOINT RESTRAINT, AS SHOWN IN DETAIL W-4 - USE TEBDA IRON SERIES 1100 MEDIA LUG MECHANICAL JOINT RESTRAINT OR APPROVED EQUAL. CONTRACTOR TO RESTRAINT THE MINIMUM REQUIRED PIPE LENGTH WITH TEBDA LUGS OR APPROVED EQUAL.
  - ALTERNATE METHOD IS CONCRETE THRUST BLOCKING, AS SHOWN IN DETAIL W-5 - BLOCKING SHALL BE 3000 PSI CONCRETE POURED IN PLACE. THRUST BLOCKING SHALL ONLY BE USED WHEN OTHER MEANS OF RESTRAINT CANNOT BE USED, OR EXISTING PIPE BEING CONNECTED IS NOT RESTRAINED.
- ALL WATER MAINS SHALL BE TESTED AT 200PSI IN ACCORDANCE WITH SECTION 7-08.3(2) OF THE STANDARD SPECIFICATIONS. THE CITY SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ACCEPTANCE TESTING. MAXIMUM LENGTH OF PIPE TO BE TESTED AT ONE TIME IS 1000 FT.
- CHLORINATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 7-08.3(24) OF THE STANDARD SPECIFICATIONS. CITY ENGINEER WILL TAKE SAMPLES AND DELIVER TO LABORATORY FOR BACTERIA TESTING. NEGATIVE SAMPLE RESULTS SHALL BE OBTAINED PRIOR TO PRESSURE TESTING, DECHLORINATION OR DISPOSAL TO SANITARY MAIN MAY BE REQUIRED.
- APPROPRIATE DISPOSAL AND OR DECHLORINATION OF FLUSHED WATER DURING BLOWOFF IS THE RESPONSIBILITY OF THE CONTRACTOR. METHOD USED SHALL BE APPROVED BY CITY AND OTHER REGULATORY AUTHORITIES.
- WATER MAIN TO HAVE A MINIMUM COVER OF 30 INCHES. WATER SERVICES TO HAVE A MINIMUM 24\"/>

**NOT TO SCALE** **DETAIL NO.** W1  
**REVISION 7** **DATE** 03/02/2022  
**City of Camas** **WASHINGTON**  
**Sanitizing** **3-24-22**  
**MANUFACTURER** **DATE**



**811**  
 Know what's below.  
 Call before you dig.  
 CALL 2 BUSINESS DAYS BEFORE YOU DIG.  
 CAUTION: UTILITY INFORMATION IS APPROXIMATE.  
 VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

**Revisions:**

NO.	DATE	DESCRIPTION

LINE IS 1" ON FULL SCALE DRAWING

**WINDSOR ENGINEERS**  
 Ridgefield, WA  
 Duluth + Minneapolis, MN  
 www.windsorengineers.com  
 Copyright 2023 By Windsor Engineers, LLC  
 All Rights Reserved.

**PRELIMINARY**  
 CAMAS VALLEY STREET DUPLEX  
 CAMAS, WA  
 ENGINEERING PLAN  
 Project No: 23228  
 Issue Date: 10/27/2023

**UTILITY DETAILS**  
 Project Manager: CTM  
 Drawn by: ORK  
 Checked by: CTM  
**C602**