

**Reviewed by  
Thomas J. Tupling**

**Reviewed by  
Thomas J. Tupling**

# CHELAN BAY PRIVATE DRIVE AND SITE IMPROVEMENTS

APPROVED FOR CONSTRUCTION 07/14/2021

BLOCK 9, PLAT OF LAKE PARK, AND VACATED BOULEVARD AVENUE;  
WITHIN A PORTION OF GOVT. LOTS 3, 4 AND 5, SEC. 14, T.27N., R. 22E.W.M., CITY OF  
CHELAN, CHELAN COUNTY, WASHINGTON

LINETYPES AND SYMBOLS

DOMESTIC WATER SUPPLY PIPE	— W —
ROOF DRAIN PIPE	— RD —
SANITARY SEWER PIPE	— SS — SS
FORCE MAIN PIPE	— FM — FM
STORM PIPE	— ST —
IRRIGATION PIPE	— IRR — IRR —
FINISHED GRADE MINOR CONTOUR	—————
FINISHED GRADE MAJOR CONTOUR	—————
EXISTING GRADE MINOR CONTOUR	- - - - -
EXISTING GRADE MAJOR CONTOUR	- - - - -
SILT FENCE	— [ ] —
PROJECT BOUNDARY	—————
EXISTING RIGHT-OF-WAY	— — — — —
PROPOSED RIGHT-OF-WAY	— — — — —
PROPOSED EASEMENT	- - - - -
WATER FITTING	⊥
FIRE HYDRANT	●
AIR VALVE ASSEMBLY	⊙
SINGLE WATER SERVICE	⊥
DOUBLE WATER SERVICE	⊥
SANITARY SEWER CLEANOUT	⊙
SANITARY SEWER MANHOLE	⊙
SANITARY SEWER SERVICE	⊥
CATCH BASIN — TYPE 2	⊙
CATCH BASIN — TYPE 1	⊙
MONUMENT	⊙
CALCULATED POSITION	○
POWER TRANSFORMER	▲
POWER VAULT	▼
POWER HANDHOLE	⊙
FIBER VAULT	⊙
FIBER HANDHOLE	⊙



VICINITY MAP  
NOT TO SCALE

ABBREVIATIONS

Δ	DELTA ANGLE
∅	DIAMETER
BLDG	BUILDING
CB	CATCH BASIN
CCPUD	CHELAN COUNTY PUBLIC UTILITY DISTRICT
CUL-DE-SAC	CUL-DE-SAC
CSCB	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
DOH	WASHINGTON STATE DEPARTMENT OF HEALTH
DI	DUCTILE IRON
DW	DRY WELL
DWG	DRAWING
E	EAST / EASTING
EL/ELEV	ELEVATION
ESMT	EASEMENT
EXIST	EXISTING
FF	FINISHED FLOOR ELEVATION
FL	FLANGE
FT	FEET / FOOT
HMA	HOT MIX ASPHALT
INTXN.	INTERSECTION
INV	INVERT ELEVATION
L	LENGTH
LCPE	LINED CORRUGATED POLYETHYLENE
LF	LINEAL FEET
LTF	LENGTH TO FIT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MON	MONUMENT
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PE	PLAIN END
PERF	PERFORATED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RIM	RIM ELEVATION
S	SOUTH
SG	SUBGRADE
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
TYP	TYPICAL
VC	VERTICAL CURVE
W	WEST
WQ	WATER QUALITY
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

NOTES

- SURVEY INFORMATION PROVIDED BY 48" NORTH.
- BASIS OF BEARING — WASHINGTON STATE COORDINATE SYSTEM, NORTH ZONE, GRID, NAD 83/2011.
- VERTICAL DATUM — LAKE CHELAN, GEOID 12B (CONUS).

CONSTRUCTION MONITORING NOTE:

CONTRACTOR SHALL VERIFY THAT ALL CONSTRUCTION INSPECTIONS, MONITORING AND TESTING SHALL BE PERFORMED AND DOCUMENTED UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. COMPANY PROVIDING TESTING SHALL OBTAIN AND BE FAMILIAR WITH THE APPROVED PLANS, SPECIFICATIONS AND REPORTS. WHEN COMPLETE, THE REGISTERED PROFESSIONAL ENGINEER SHALL PROVIDE CERTIFICATION THAT ALL TESTING AND INSPECTIONS ARE IN ACCORDANCE WITH THE APPROVED PLANS AND JURISDICTIONAL STANDARDS.

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

PROJECT INFORMATION:

OWNER: TRIPEN, INC.  
P.O. BOX 1826  
WENATCHEE, WA 98807

SITE ADDRESS: UNASSIGNED, W. WOODIN AVENUE  
CHELAN WA 98816

PARCEL: 272214662228  
TOTAL AREA: 8.27 ACRES  
NUMBER OF LOTS: 12  
SMALLEST LOT: 8,248 S.F. (LOT 9)  
LARGEST LOT: 34,385 S.F. ± (LOT 6)  
AVERAGE LOT: 21,343 S.F. ±

LEGAL DESCRIPTION:  
ALL OF BLOCK 9, PLAT OF THE TOWN OF LAKE PARK,  
CHELAN COUNTY, WASHINGTON, ACCORDING TO THE  
RECORDED PLAT THEREOF IN VOLUME 1 OF PLATS,  
PAGE 27, RECORDS OF SAID COUNTY. EXCEPT THAT  
PORTION, IF ANY, LYING ADJACENT TO LOTS 1  
THROUGH 11, BLOCK 2, IN SAID RECORDED PLAT.

CONTACTS:

DEVELOPER: TRIPEN, INC.  
P.O. BOX 1826  
WENATCHEE, WA 98807  
CONTACT: CHRIS MARTIN  
(509) 881-5252

SURVEYOR: 48" NORTH  
P.O. BOX 4266  
WENATCHEE, WA 98807  
(509) 436-1640

ENGINEER: TORRENCE ENGINEERING, LLC  
117 VOILA LANE  
CASHMERE, WA. 98815  
(509) 782-1897

ACQUATICS/SEPA: GRETTE & ASSOCIATES, LLC  
151 S. WORTHEN STREET, STE 101  
WENATCHEE, WA. 98801  
CONTACT RYAN WALKER  
(509) 663-6300

UTILITIES

WATER: CITY OF CHELAN  
50 CHELAN FALLS HIGHWAY  
CHELAN, WA 98816  
(509) 662-4575

SEWER: CITY OF CHELAN  
50 CHELAN FALLS HIGHWAY  
CHELAN, WA 98816  
(509) 682-4575

POWER/FIBER: CHELAN COUNTY PUD #1  
327 NORTH WENATCHEE AVE  
WENATCHEE, WA 98801  
(509) 663-8121  
POWER ENGINEER: CHRIS PETERSON  
(509) 661-4675

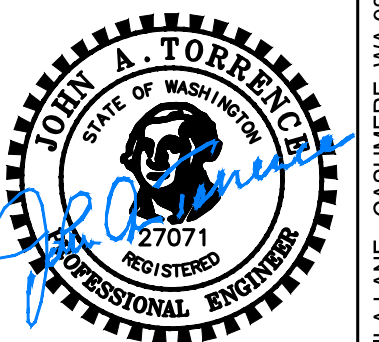
TELEPHONE: FRONTIER COMMUNICATIONS  
320 EAST PENNY ROAD  
WENATCHEE, WA 98801  
(509) 662-9242

SHEET INDEX

1. COVER SHEET
2. SITE PLAN AND SURVEY CONTROL
3. GENERAL NOTES AND SPECIFICATIONS, TYPICAL SECTIONS, DETAILS
4. EROSION AND SEDIMENT CONTROL PLAN
5. EROSION AND SEDIMENT CONTROL DETAILS
6. HIGHWAY 97A WATER EXTENSION PLAN
7. TRAIL AND FORCE MAIN PLAN & PROFILE
8. DRIVE A PLAN AND PROFILE
9. DRIVE B PLAN AND PROFILE
10. DRIVE C PLAN AND PROFILE
11. STORMWATER DETAILS
12. WATER DETAILS
13. WATER AND SEWER DETAILS
14. STORM AND MISCELLANEOUS DETAILS

**APPROVALS APPROVED FOR CONSTRUCTION**

CITY OF CHELAN PUBLIC WORKS  
EXAMINED AND APPROVED BY THE CITY OF CHELAN PUBLIC WORKS DIRECTOR  
DATE: 07/14/2021



07/07/2021

CHELAN BAY  
PRIVATE DRIVE AND SITE IMPROVEMENTS  
COVER SHEET  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV	DATE	DESCRIPTION

PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/JB

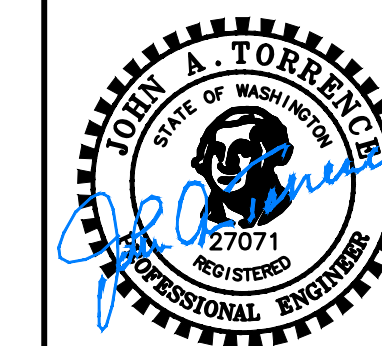
CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

1  
OF: 14

P:\Engineering Projects\2018\2018034 CG\_JB.dwg 3:10pm 07/14/2021 10:00 AM





07/07/2021

117 VOILA LANE - CASHMERE, WA 98815 - TEL: (509)782-1887 - FAX: (509) 782-5436

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**SITE PLAN AND SURVEY CONTROL**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

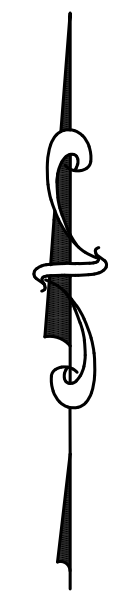
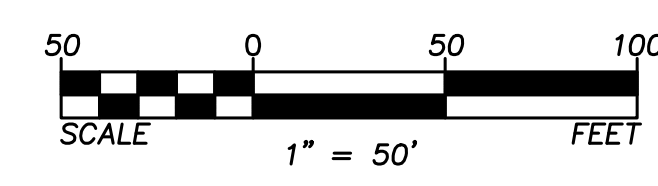
REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

CHECKED BY:  
**JAT**

ISSUE DATE:  
**07/07/2021**



- NOTES**
1. SEE RECORD OF SURVEY BY 48° NORTH FOR DETAILED BOUNDARY INFORMATION.
  2. SEE LANDSCAPE PLAN BY GEYER COBURN HUTCHINS, LANDSCAPE ARCHITECTS, FOR 97A TRAIL
  3. SETBACKS: 20' FOR LOTS AND 10' FOR TRAILS
  4. OHWM: 1100' ELEVATION (MAX. POOL ELEVATION)

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

P:\Engineering\Projects\2018\2018034 - 07-07-21 CHELAN BAY FE-REV.dwg, Jul 07, 2021 - 3:15pm



**NOTES**

**GENERAL**

- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY AS SHOWN BUT ARE SIMILAR TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED. COORDINATE WITH THE ENGINEER.
- CONTRACTOR SHALL PROMPTLY RECONNECT OR ARRANGE FOR RECONNECTION OF ALL EXISTING UTILITY SERVICES DAMAGED OR DISTURBED DURING CONSTRUCTION.
- IN ADDITION TO WATER AND SEWER WHICH ARE SHOWN ON THESE PLANS, CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER UTILITIES SUCH AS POWER, TELEPHONE, CABLE TV, IRRIGATION AND GAS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.
- MINOR ADJUSTMENTS TO UTILITY GRADES MAY BE REQUIRED TO AVOID CONFLICTS. COORDINATE WITH ENGINEER.
- CONTRACTOR SHALL LOCATE AND PRESERVE ALL EXISTING SURVEY MARKERS.
- CONTRACTOR SHALL MAINTAIN A SET OF APPROVED PLANS ONSITE AT ALL TIMES.
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF CHELAN DEVELOPMENT STANDARDS AND LOCAL MUNICIPAL STANDARDS, SPECIFICATIONS, AND THE LATEST EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION. THE APWA GENERAL SPECIAL PROVISIONS SHALL APPLY IN ITS ENTIRETY.
- THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF CHELAN AT LEAST 2 WORKING DAYS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL OBTAIN ALL RIGHT-OF-WAY, STREET CUT, UTILITY, AND/OR OTHER RELATED PERMITS NECESSARY FOR THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS IN ACCORDANCE WITH THE MUTCD.
- THE CONTRACTOR SHALL PREVENT THE TRACKING OF MUD AND DIRT ONTO THE ROADWAY AT ALL TIMES. FLUSHING OF THE STREET INTO THE STORM SEWER SYSTEM IS STRICTLY PROHIBITED. STOCKPILING OF MATERIAL ON CITY STREETS IS NOT ALLOWED.
- A CONSTRUCTION ENGINEER SHALL BE IDENTIFIED PRIOR TO BEGINNING THE WORK. THE CITY OF CHELAN REQUIRES ALL CONSTRUCTION TO BE INSPECTED BY A LICENSED ENGINEER OR AN INSPECTOR SUPERVISED BY A LICENSED ENGINEER TO ENSURE WORK IS IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THE LEVEL OF INSPECTION TO ACHIEVE THIS CERTIFICATION SHALL BE DETERMINED BY THE CONSTRUCTION ENGINEER. SUBMITTAL OF STAMPED RECORD DRAWINGS IS REQUIRED AND SHALL SERVE AS THIS CERTIFICATION.
- THE CONTRACTOR SHALL INSTALL TRACER WIRE, IN ADDITION TO LOCATION RIBBON, OVER ALL NON-METALLIC MAINS. THE TRACER WIRE SHALL BE 14 GAUGE COPPER WIRE WITH BLUE CODED UP INSULATION. THE TRACER WIRE SHALL BE INSTALLED AS SHOWN ON THE CITY OF CHELAN STANDARD DRAWING. BARE WIRE CONTACT POINTS SHALL BE PROVIDED AT VALVE BOXES, AIR RELEASE AND BLOW OFF INSTALLATIONS.
- DETECTABLE MARKING TAPE SHALL BE INSTALLED TWELVE INCHES (12") BELOW FINISHED GRADE OVER ALL PVC PIPE LOCATED WITHIN PUBLIC STREET RIGHT-OF-WAYS. PIPE LOCATOR RIBBON SHALL BE TWO INCHES WIDE, PLASTIC COATED ALUMINUM AND SHALL BE CLEARLY MARKED, SUCH AS "CAUTION BURIED WATER/SEWER LINE" CONTINUOUSLY ALONG THE LENGTH OF THE RIBBON WITH MINIMUM 1-1/2 INCH LETTERS. INSTALL BLUE TAPE FOR WATER AND GREEN FOR SEWER.

**PUBLIC SEWER NOTES**

- TESTING OF THE SEWER SYSTEM SHALL BE IN ACCORDANCE WITH CITY OF CHELAN STANDARDS.
- THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTIFICATION TO THE CITY FOR TESTING AND CONNECTIONS TO THE EXISTING SYSTEM.
- THE CITY OF CHELAN WILL CLEAN AND VIDEO INSPECT THE SEWER SYSTEM AND BILL THE CONTRACTOR AT THE CURRENT CITY RATES AND CHARGES. FLUSHING OF THE SEWER SYSTEM IS STRICTLY PROHIBITED. THE CONTRACTOR SHALL REQUEST VIDEO INSPECTION AFTER SUBGRADE HAS BEEN GRADED AND COMPACTED. ALL MANHOLES SHALL BE EXPOSED PRIOR TO THE INSPECTION. THE CONTRACTOR SHALL PROVIDE THE CITY WITH 48 HOURS ADVANCE NOTICE FOR INSPECTION. ALL CLEANING NECESSARY FOR VIDEO INSPECTION WILL BE AT THE CONTRACTOR'S EXPENSE.
- PROPERTY OWNERS WILL ASSUME ALL RESPONSIBILITY OF MAINTENANCE AND LIABILITY FOR "PRIVATE" SEWER SYSTEMS.

**WATER NOTES**

- ALL WATER MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE CITY OF CHELAN PUBLIC WORKS DEVELOPMENT STANDARDS.
- ANY METERS LOCATED IN DRIVEWAYS SHALL HAVE TRAFFIC RATED LIDS.
- ALL WATER LINES SHALL BE C900-81 PVC, CLASS 200.
- ALL SERVICE LINES SHALL BE 2" PE, TYPE 111(3306).
- A MINIMUM HORIZONTAL SEPARATION OF 10 FEET BETWEEN SANITARY SEWERS, RECLAIMED WATER LINES, AND ANY EXISTING POTABLE WATER LINES, AND A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE DRINKING WATER LINE AND THE CROWN OF THE SEWER SHALL BE MAINTAINED. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
- WHEN LOCAL CONDITIONS PREVENT THE SEPARATIONS DESCRIBED IN NOTE 11, A SEWER MAY BE LAID CLOSER THAN 10 FEET HORIZONTALLY OR 18 INCHES VERTICALLY TO A WATER LINE OR RECLAIMED WATER LINE, PROVIDED THE GUIDELINES IN THE DOE HANDBOOK: CRITERIA FOR SEWAGE WORKS DESIGN SECTION C1-9.1.2 AND FIGURE C1-3 ARE FOLLOWED.
- A MINIMUM OF ONE FIELD REBUILD BREAKAWAY KIT FOR THE HYDRANTS WILL BE SUPPLIED BY THE DEVELOPER.
- RESTRAIN ALL JOINTS PER CITY DEVELOPMENT STANDARDS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSAL OF TREATED WATER FLUSHED FROM MAINS. FLUSHING SHALL BE DONE PER WSDOT 7-09.3(24)A.
- DISINFECTION PER CITY OF CHELAN DEVELOPMENT STDS. SECTION 1-15.
- TESTING PER CITY OF CHELAN DEVELOPMENT STDS. SECTION 1-14. SEE SHEET 6 FOR TESTING CONFIGURATION.
- ALL WORK WITH AC PIPE SHALL FOLLOW FEDERAL, STATE AND LOCAL REQUIREMENTS, AND THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FOLLOWING THESE REQUIREMENTS. THE EXISTING AC PIPE SHALL BE HANDLED BY APPROPRIATELY CERTIFIED PERSONNEL USING APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. THE ABANDONED PIPE SHALL REMAIN IN THE TRENCH AND PLUGGED WITH GROUT OR OTHER SUITABLE MATERIAL AS DIRECTED BY WSDOT UTILITIES MANUAL M22.87.10 SECTION 130.6 FOR ADDITIONAL GUIDANCE ON ABANDONED, DEACTIVATED, OR DISCONNECTED UTILITIES.

**GRADING NOTES**

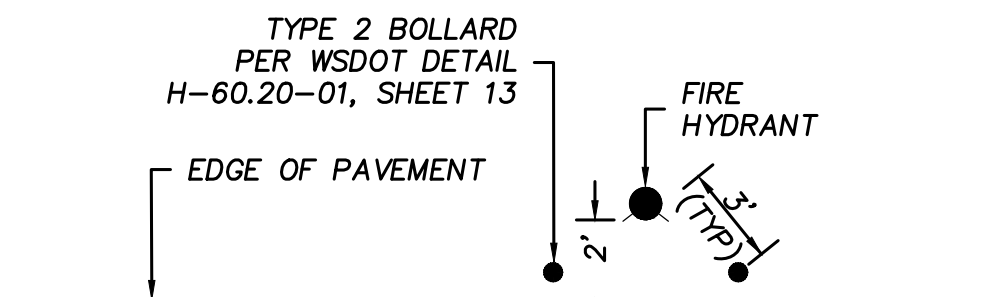
- FINISHED GRADE CONTOURS SHOWN ON THESE PLANS REPRESENT FINAL GRADE TOP OF PROPOSED IMPROVEMENTS AND LOT GRADING. REFERENCE THE TYPICAL ROAD SECTIONS WITHIN.
- LOT GRADING IS SHOWN AS A BASELINE ONLY. ADDITIONAL LOT GRADING MAY BE REQUIRED FOR BUILDING PAD PREPARATION. THE PROJECT CESCL SHALL BE RESPONSIBLE FOR ALL UPDATES TO THE SWPPP REGARDING FIELD CHANGES.
- ALL GRADING SHALL CONFORM TO THE LATEST WSDOT STANDARD SPECIFICATIONS, DIVISION 2 EARTHWORK, UNLESS SHOWN OTHERWISE ON THIS GRADING PLAN.
- THE CONTRACTOR SHALL MAKE DEDUCTIONS AND CONCLUSIONS AS TO THE NATURE OF THE SUBSURFACE MATERIALS TO BE ENCOUNTERED, AND SHALL BE SOLELY RESPONSIBLE FOR ANY CONSTRUCTION DIFFICULTIES ARISING FROM SUCH WORK.
- VARIOUS ROCK REMOVAL METHODS MAY BE REQUIRED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL CONSTRUCTION, REGULATORY, AND REMITTING REQUIREMENTS RELATED TO ROCK REMOVAL.
- PERMANENT CUT AND FILL SLOPES SHALL NOT EXCEED 2H:1V AND PERMANENT FILLS SHALL BE CONSTRUCTED AS STRUCTURAL FILLS. TEMPORARY CUT AND FILL SLOPES SHALL BE PER THE LATEST EDITION OF THE IBC.
- THE CONTRACTOR SHALL COORDINATE ALL TESTING WITH OWNERS REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE OVER-EXCAVATION WITH THE OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION.

**STORMWATER NOTES**

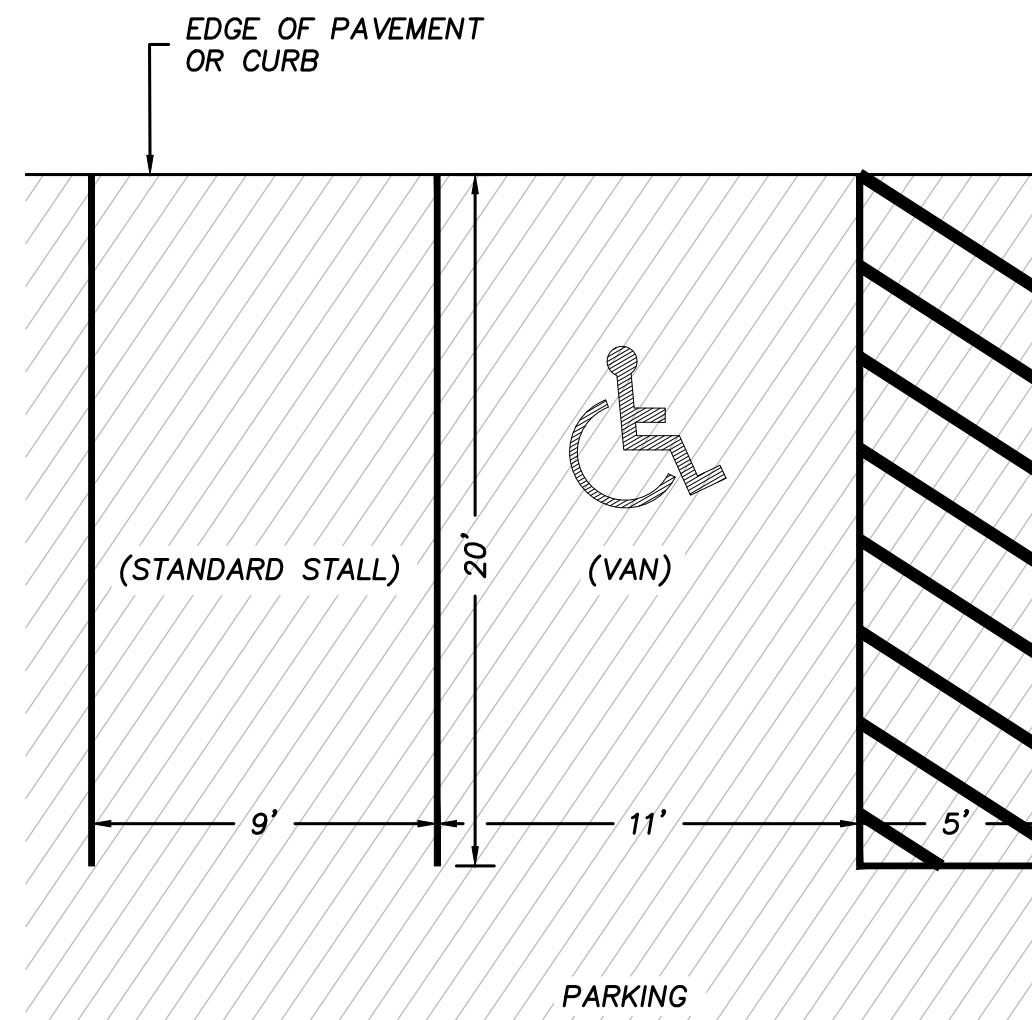
- ALL STORM DRAINAGE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF CHELAN STANDARDS.
- TESTING OF THE STORM SEWER SYSTEM SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS.

**PRIVATE ON-SITE SEWER NOTES**

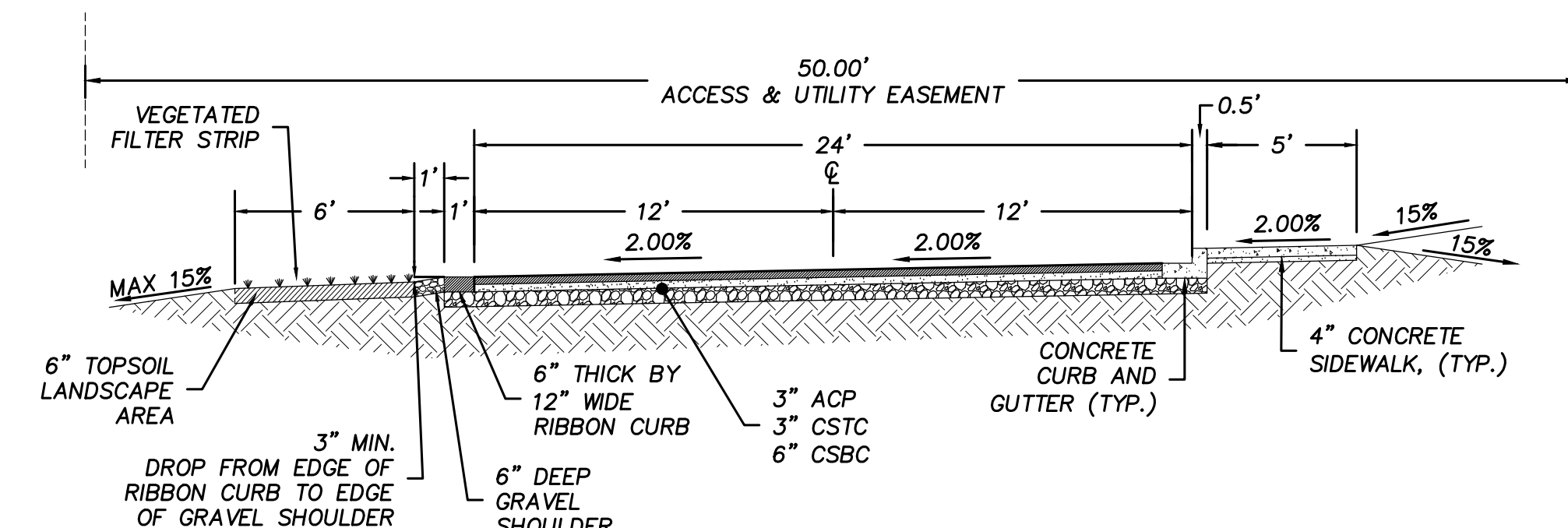
- SEWER FORCE MAIN TO BE HDPE, SDR 17 POLY PIPE. SIZE PER PLANS.
- MINIMUM 48" COVER ON ALL PIPES.
- ROLL SEWER FORCEMAIN UNDER WATER MAINS AT CROSSINGS WITH MINIMUM 18-INCH OF SEPARATION, SEE DETAIL ON SHEET 7.
- INSTALL GATE VALVE AT EVERY LOT, MARK VALVE LOCATION WITH 2x4 FOR FUTURE CONNECTION FROM HOME.
- VERIFY AND MAINTAIN MINIMUM VERTICAL CLEARANCE WITH ALL WATER PIPE PER WSDOH REQUIREMENTS.
- SUBMIT TYPE, SIZE AND DETAILS FOR RESIDENTIAL AND COMMERCIAL GRINDER PUMPS WITH BUILDING PERMITS FOR APPROVAL.
- ALL FORCE MAINS WILL BE PRIVATELY OWNED AND MAINTAINED.



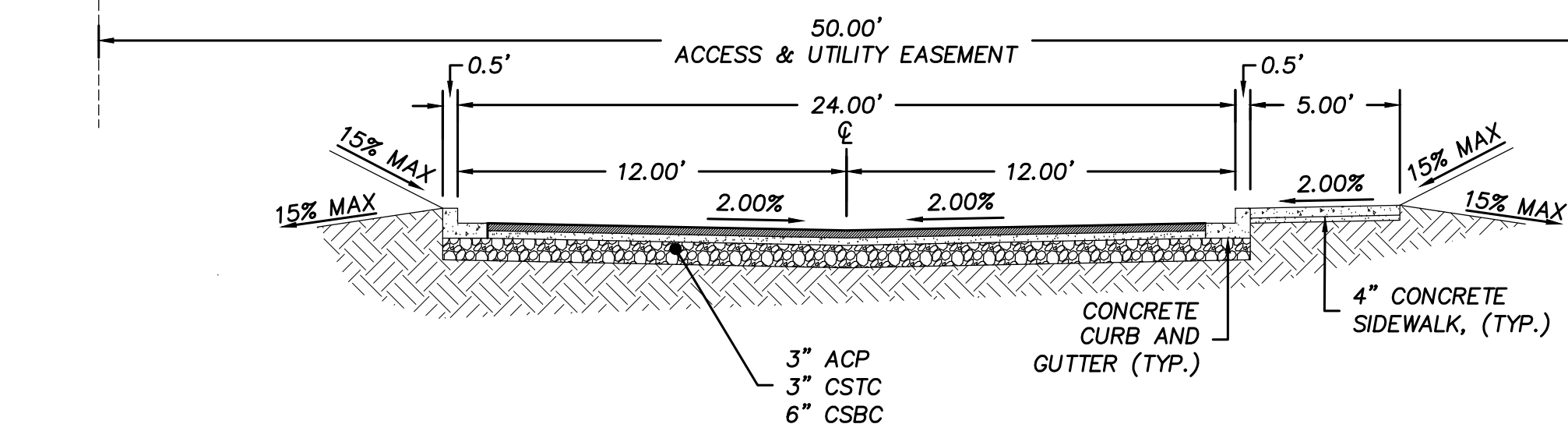
**TYPICAL FIRE HYDRANT WITH BOLLARDS PLAN**  
NOT TO SCALE



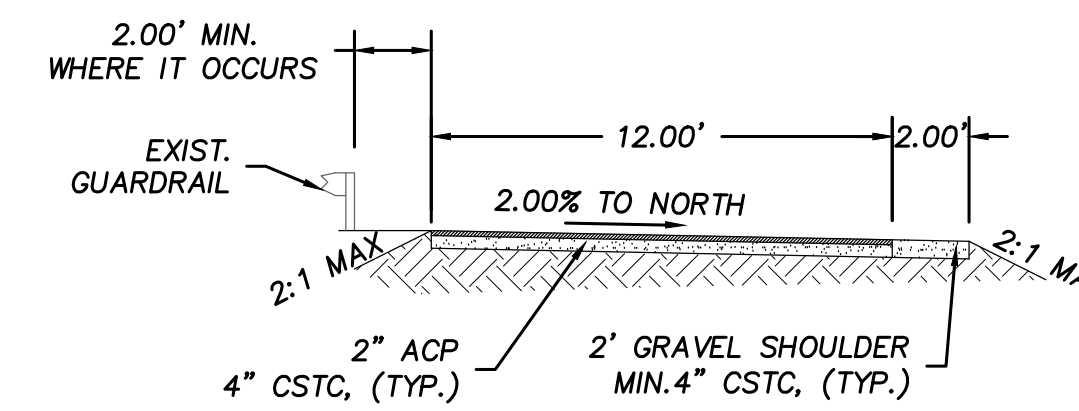
**TYPICAL STANDARD AND ADA PARKING STALL STRIPING PLAN**  
NOT TO SCALE



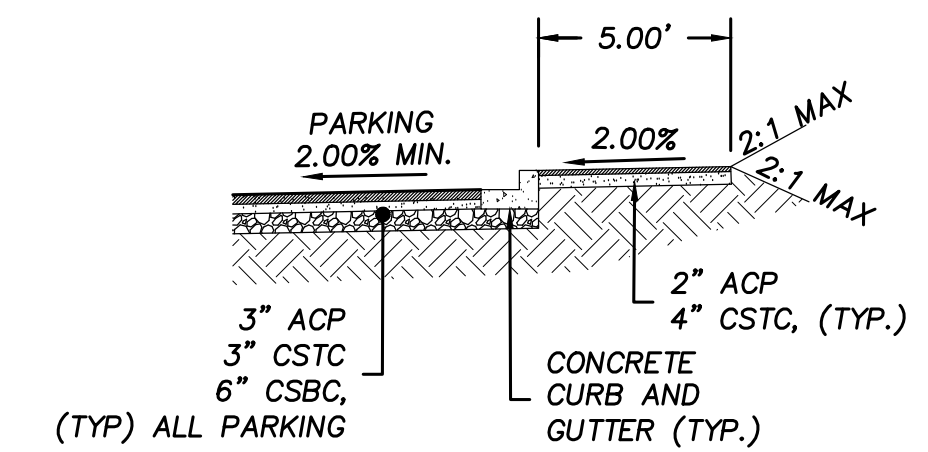
**PRIVATE DRIVE A AND B TYPICAL SECTION**  
NOT TO SCALE



**PRIVATE DRIVE C TYPICAL SECTION**  
NOT TO SCALE



**97A TRAIL TYPICAL SECTION**  
NOT TO SCALE



**COMMERCIAL SITE TYPICAL PATH SECTION**  
NOT TO SCALE



07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
GENERAL NOTES AND SPECIFICATIONS, TYPICAL SECTIONS  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/JB

CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

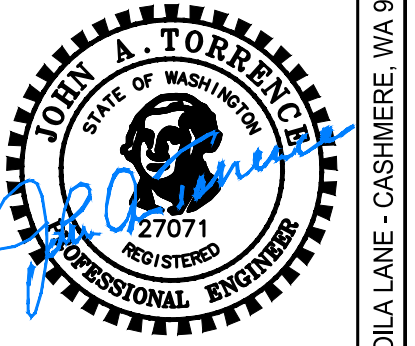
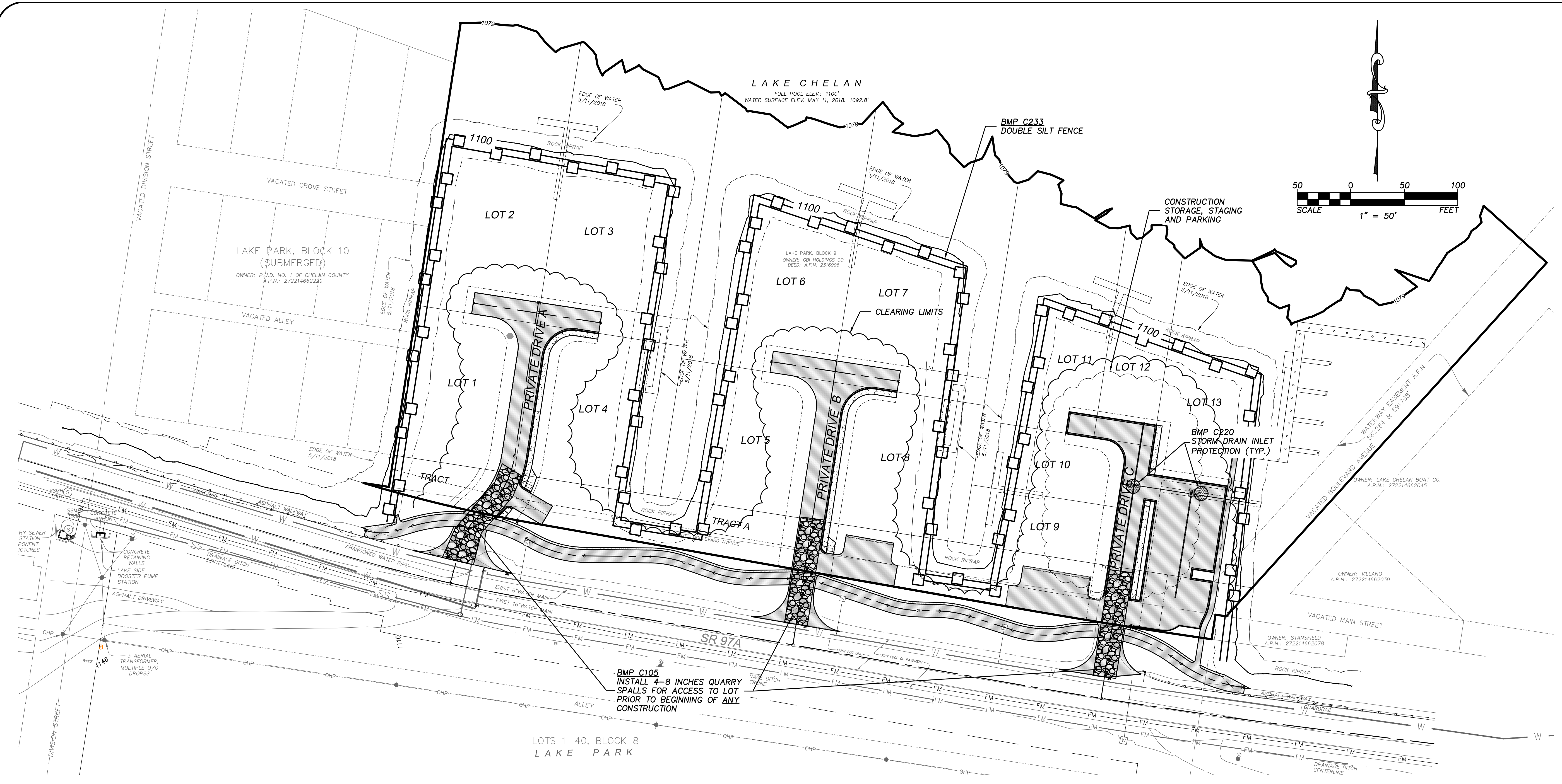
CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

3  
OF  
14

E:\Engineering\Projects\2018\2018034 - Chehalis Bay Site Improvements.dwg (PLOT) DATE: 07/07/2021 11:15am





07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**EROSION AND SEDIMENT CONTROL PLAN**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

CHECKED BY:  
**JAT**

ISSUE DATE:  
**07/07/2021**

4  
OF 14

**EROSION CONTROL - GENERAL**

(AS RECOMMENDED IN APPENDIX 7B OF THE STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON)

- APPROVAL OF THIS ESC PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A 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.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

**SITE STABILIZATION**

THE SITE IS TO BE STABILIZED BOTH DURING AND AFTER CONSTRUCTION. POSSIBLE BMPs FOR STABILIZATION MAY BE CHOSEN BY THE CESCL DURING CONSTRUCTION AS APPROPRIATE.

THE ENTIRE SITE SHALL BE PERMANENTLY STABILIZED AFTER CONSTRUCTION IS COMPLETE. PERMANENT STABILIZATION CAN BE ACCOMPLISHED BY APPROPRIATE METHODS AS CHOSEN BY THE PROJECT CESCL.

THE PROJECT CESCL IS SOLELY RESPONSIBLE FOR SELECTION, INSTALLATION AND MAINTENANCE OF THE BMPs CHOSEN. SEE SWPPP REPORT.

**DUST MANAGEMENT AND CONTROL NOTES**

THE OWNER/CONTRACTOR SHALL PROVIDE A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) FOR ON SITE DUST CONTROL MANAGEMENT. SEE THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR CONTACT INFORMATION. DUST WILL BE MANAGED AND CONTROLLED AS FOLLOWS:

- BY UTILIZING ON SITE PUBLIC WATER WITH SPRINKLERS AND FIRE HOSE TO KEEP THE DISTURBED AREAS ADEQUATELY WATERED DURING GRADING OPERATIONS.
- BY UTILIZING A WATER TRUCK TO SUPPLEMENT SPRINKLERING WHEN NECESSARY TO KEEP THE DISTURBED AREAS ADEQUATELY WATERED DURING GRADING OPERATIONS.
- BY INSTALLING PERMANENT LANDSCAPING FEATURES AS SOON AS PRACTICAL.

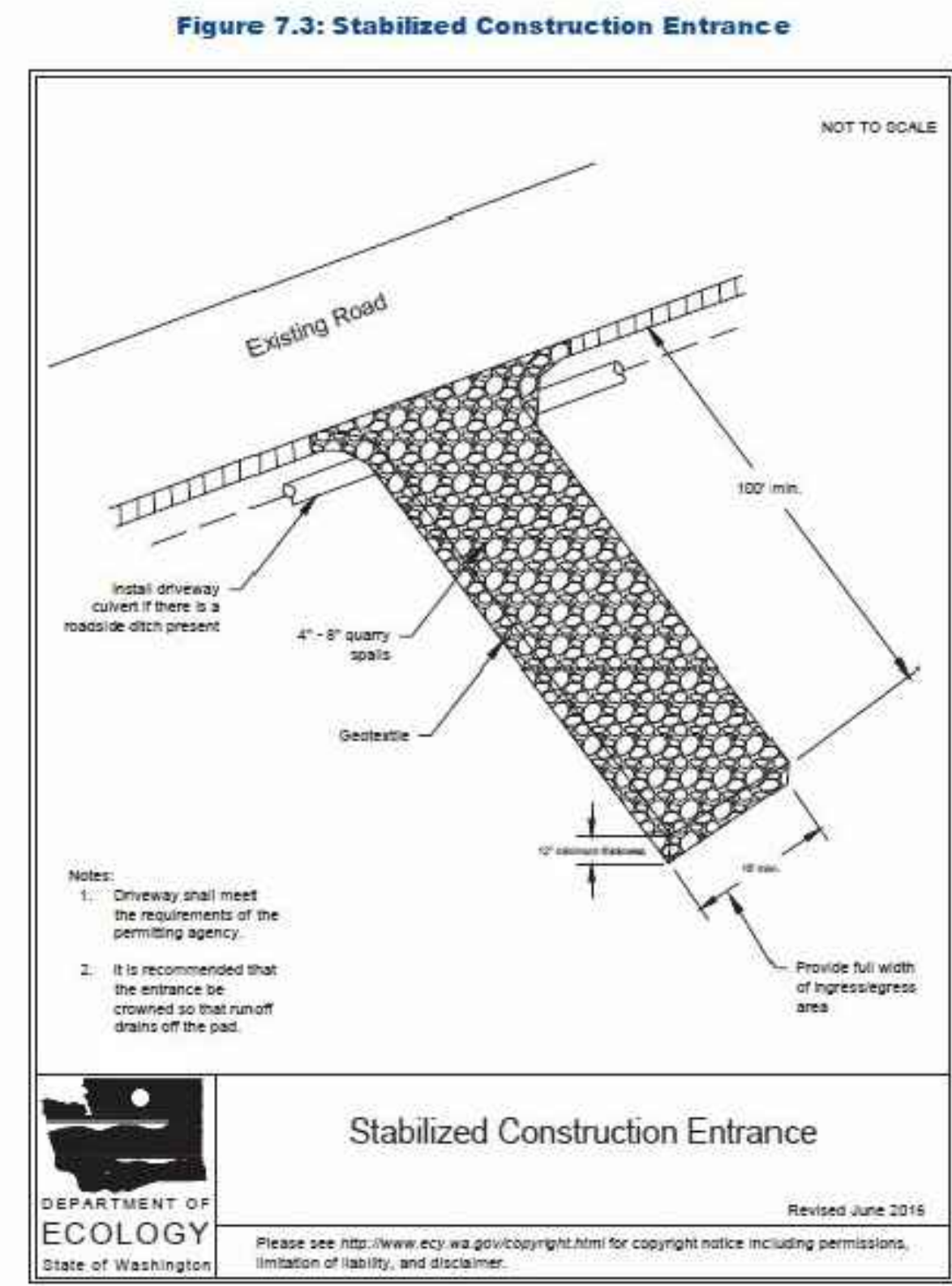
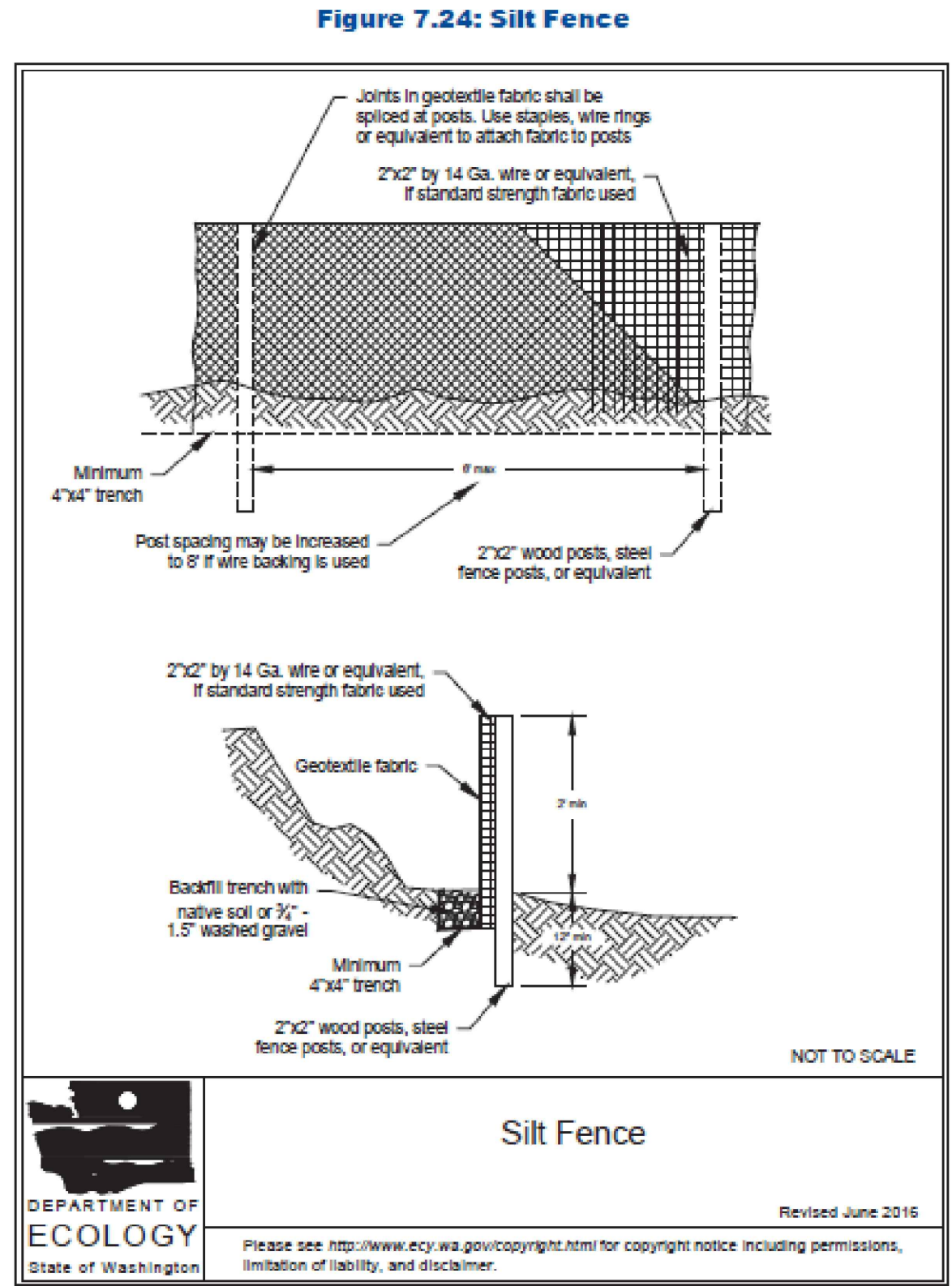
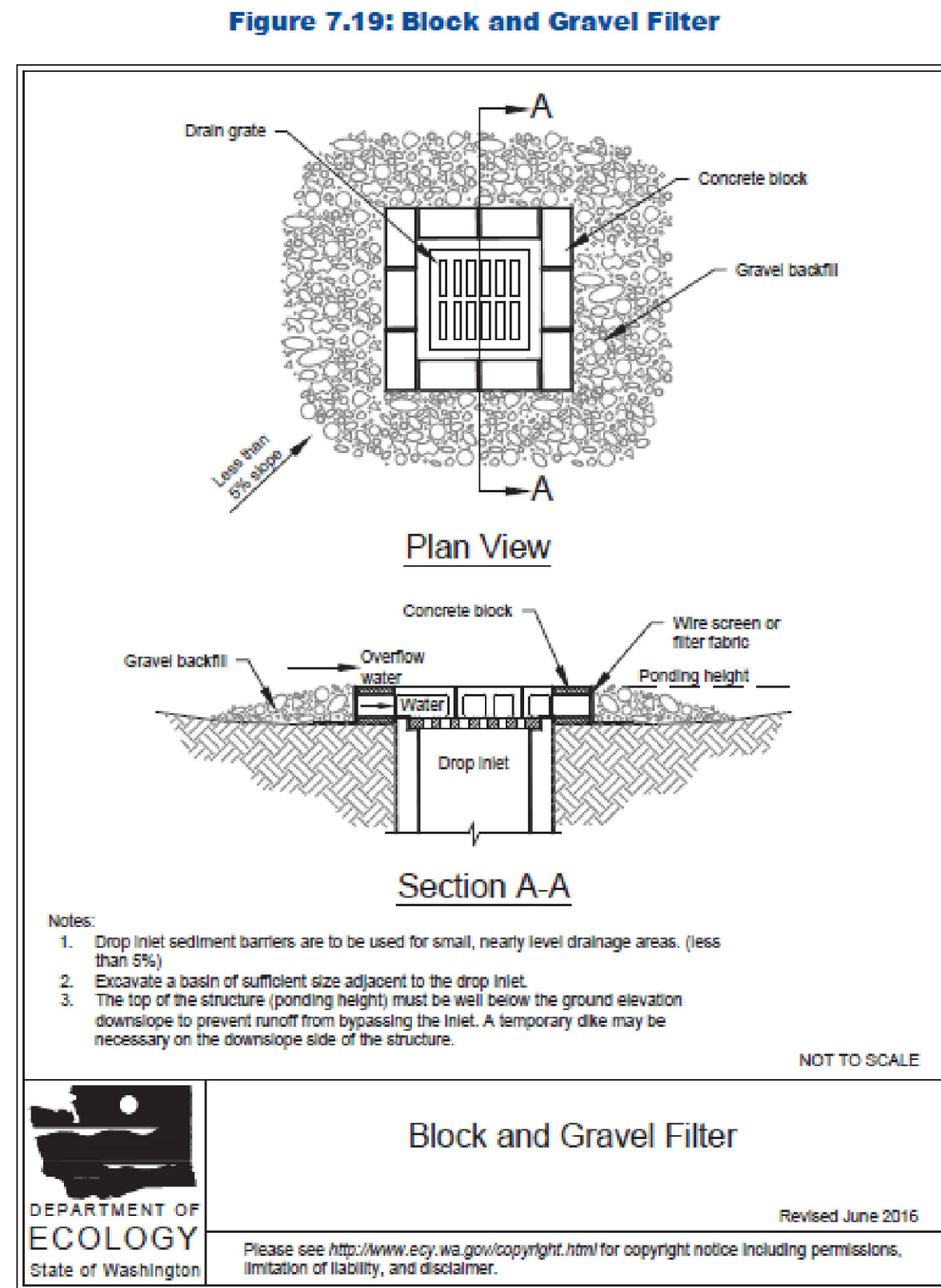
- CONSTRUCTION SEQUENCE**
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCES.
  - MARK CLEARING LIMITS
  - CLEARING AND GRUBBING.
  - GRADING.
  - INSTALL UTILITIES.
  - CONSTRUCT DRIVES.
  - STABILIZE EXPOSED GROUND.

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
**1-800-424-5555**

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

P:\Engineering\Projects\2018\2018034 - 07-07-21\CH-07-CHELAN BAY FE-REV.dwg, Jul 07, 2021, 3:15pm





**TORRENCE Engineering, LLC**  
CIVIL ENGINEERING & LAND DEVELOPMENT

**JOHN A. TORRENCE**  
STATE OF WASHINGTON  
27071  
REGISTERED PROFESSIONAL ENGINEER

07/07/2021

117 VOILA LANE - CASHMERE, WA 98815 • TEL: (509)782-1897 • FAX: (509) 782-5436

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**EROSION AND SEDIMENT CONTROL DETAILS**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV.	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/ JB

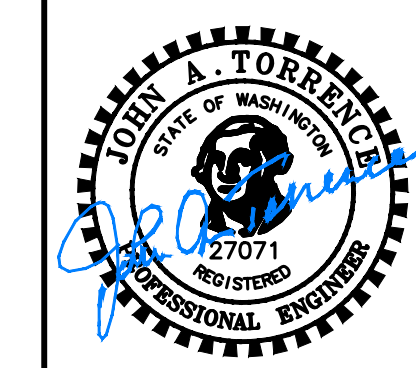
CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

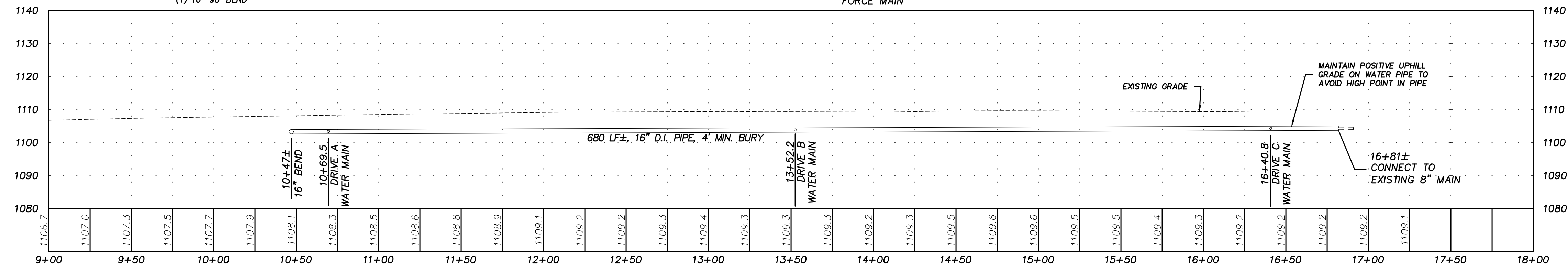
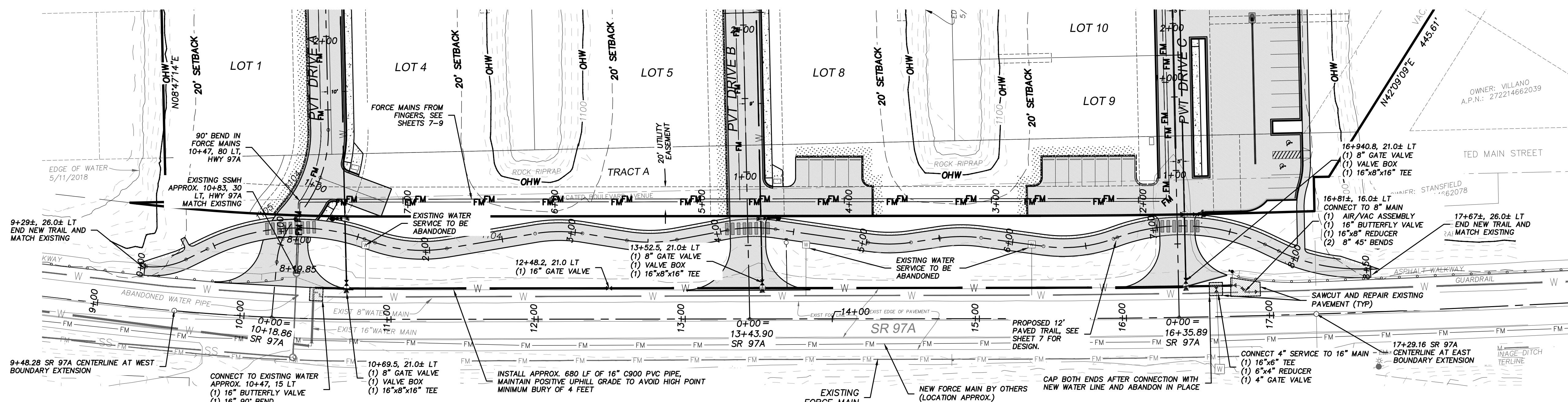




07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**HIGHWAY 97A WATERMAIN EXTENSION PLAN**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

117 VOILA LANE - CASHMERE, WA 98615 - TEL: (509)782-1897 - FAX: (509) 782-5436

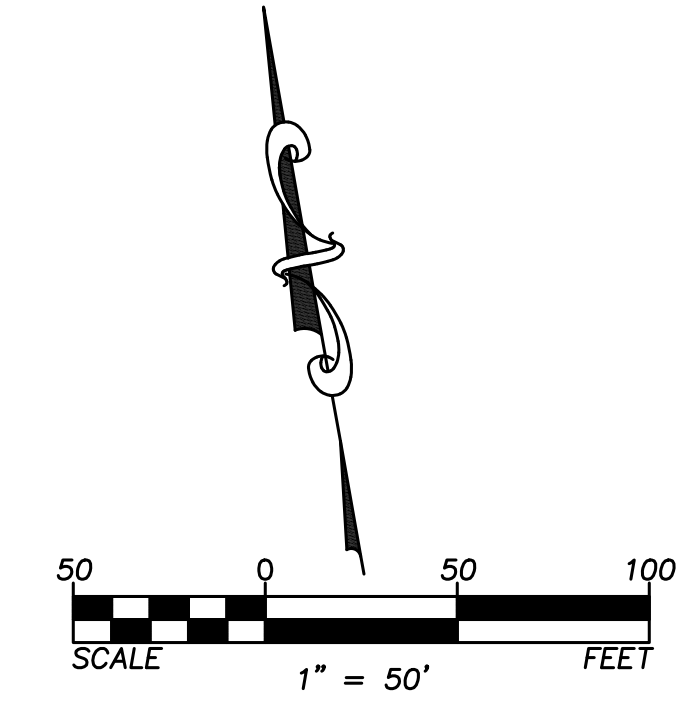
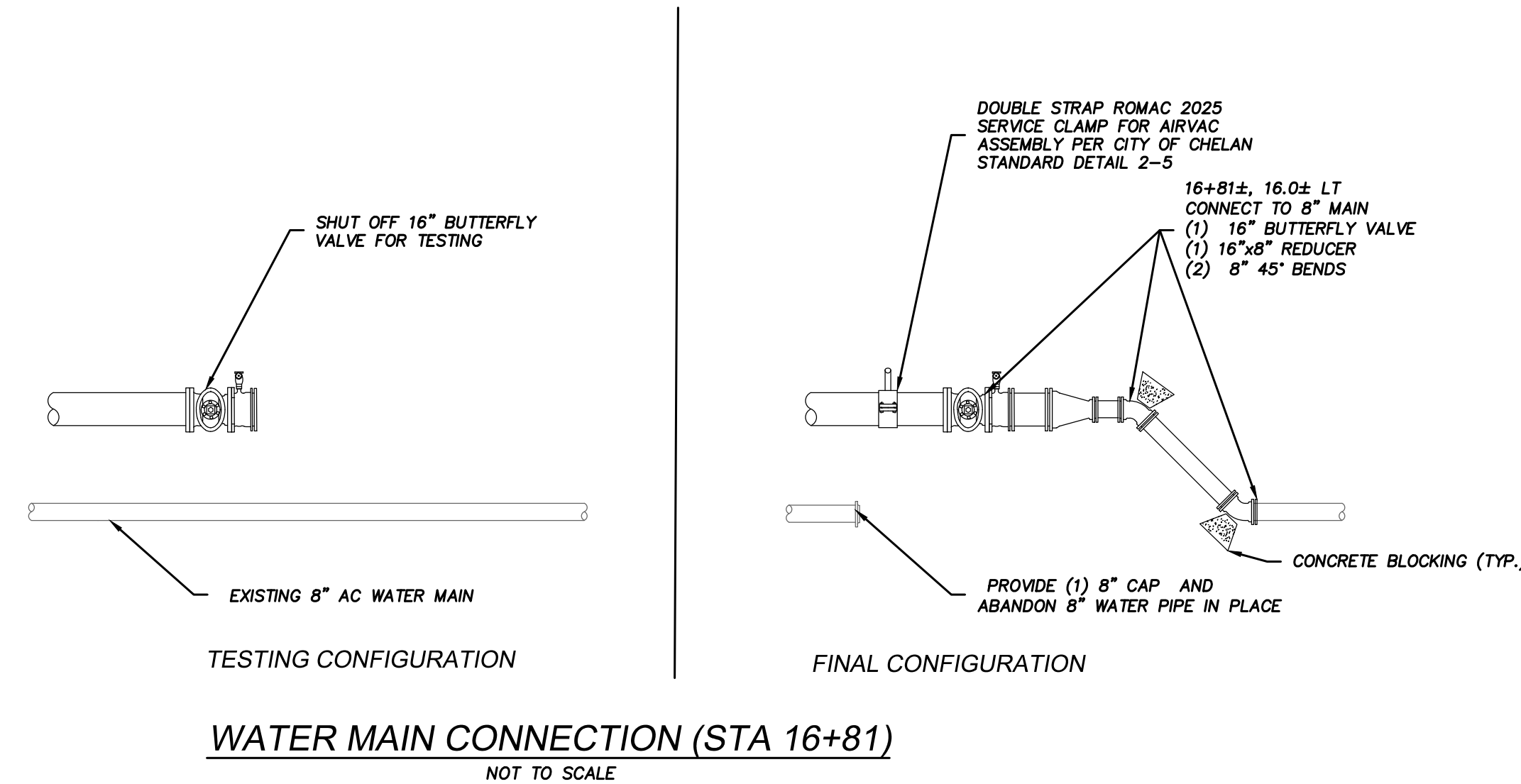
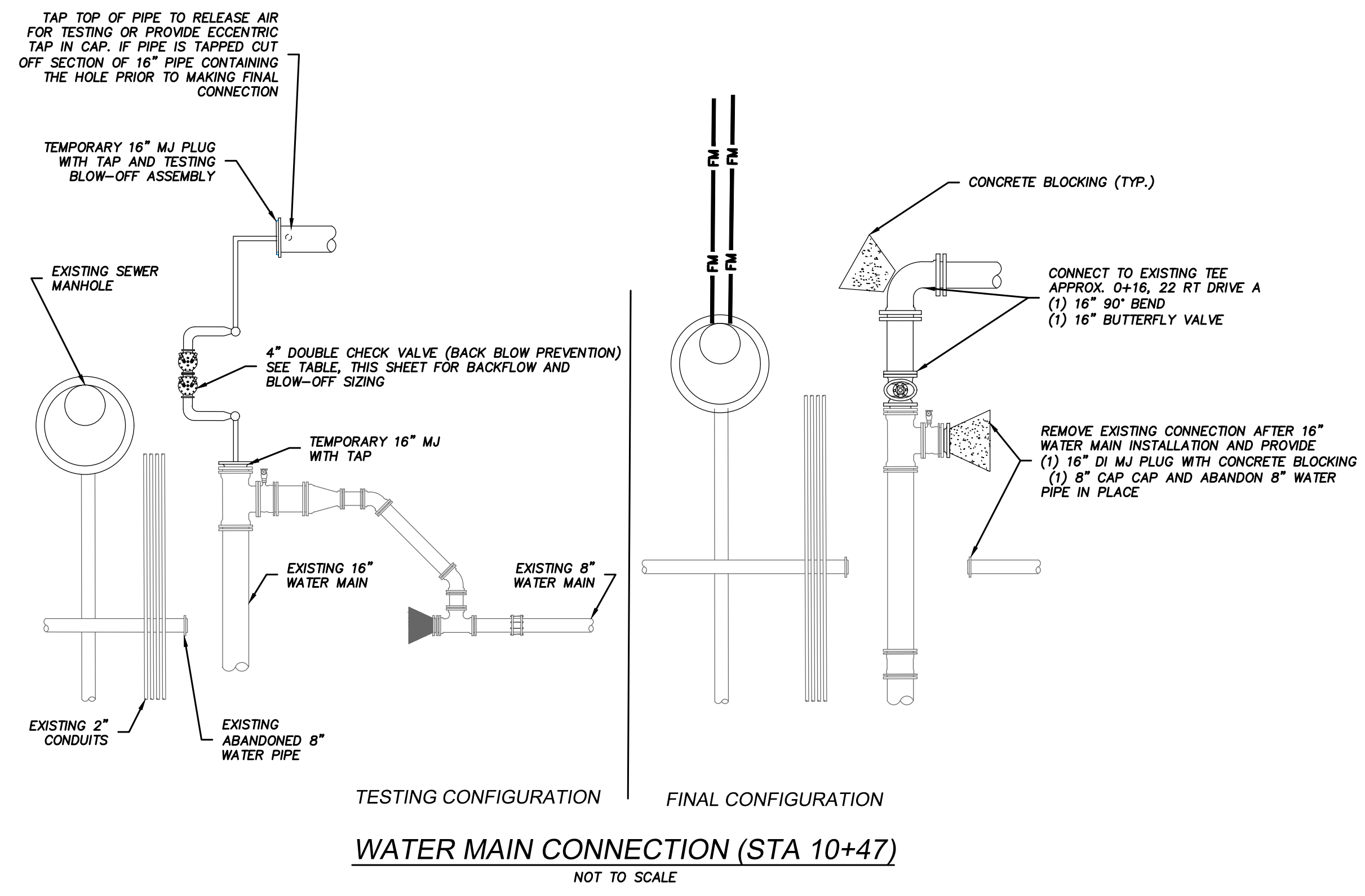


**PROFILE: HIGHWAY 97A**  
1" = 40' HZ, 1" = 20' VT

- NOTES:**
- EXISTING WATER MAIN, WATER METER AND SEWER MAIN AND MANHOLE LOCATIONS SHOWN ARE APPROXIMATE, FIELD VERIFY
  - SEE SHEET 12 FOR WATER DETAILS.
  - SEE SHEET 13 FOR SEWER DETAILS.

**BLOW-OFF AND BACKFLOW SIZING**

MAIN SIZE	GALLONS PER FOOT	FLOW AT 2.5 FPS (GPM)	BLOW-OFF AND BACKFLOW DEVICE SIZE AND NO.
6"	1.5	230	(1) 2"
8"	2.7	400	(1) 2"
10"	4.2	640	(2) 2", OR (1) 3"
12"	6.1	900	(2) 2", OR (1) 3"
16"	10.8	1,600	(4) 2", OR (2) 3", OR (1) 4"
24"	24.5	3,700	(4) 4", OR (2) 6"



FILE: HIGHWAY 97A  
1" = 50' HZ, 1" = 20' VT  
CALL TWO WORKING DAYS BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST AND NOT ALL ARE SHOWN. VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

CHECKED BY:  
**JAT**

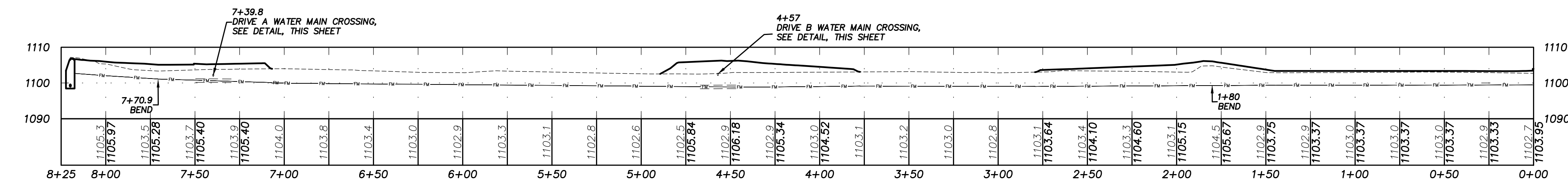
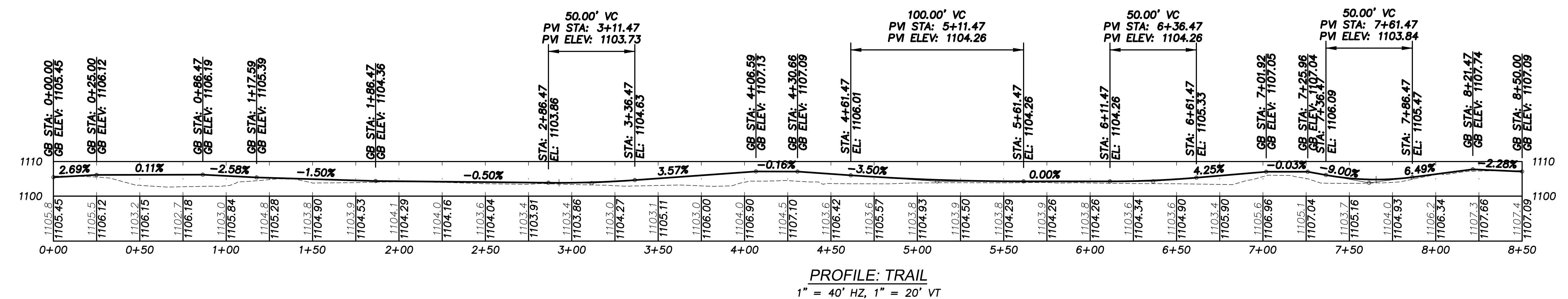
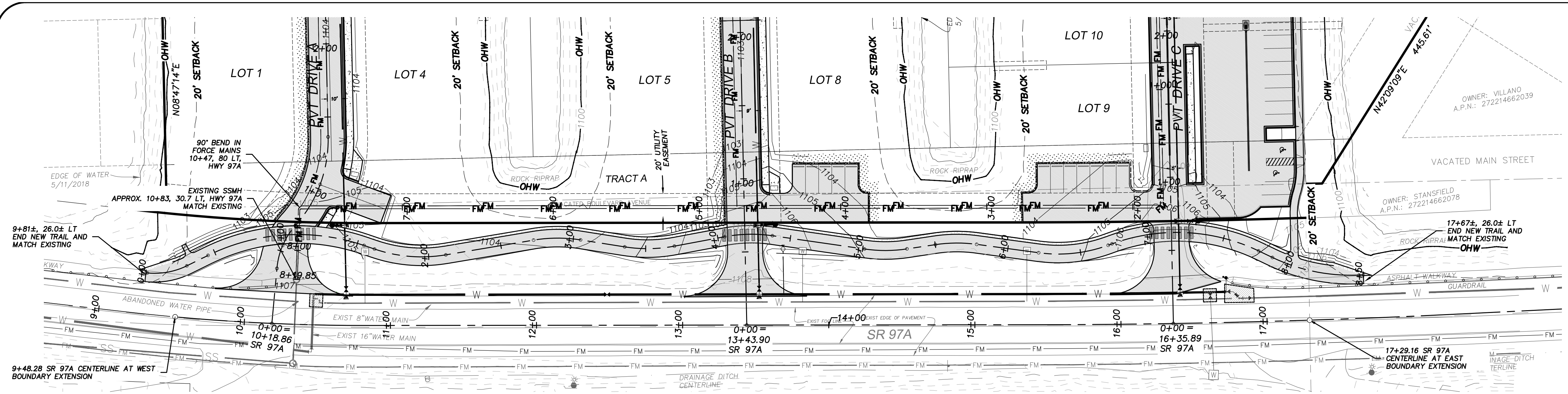
ISSUE DATE:  
**07/07/2021**

**6**  
OF **14**

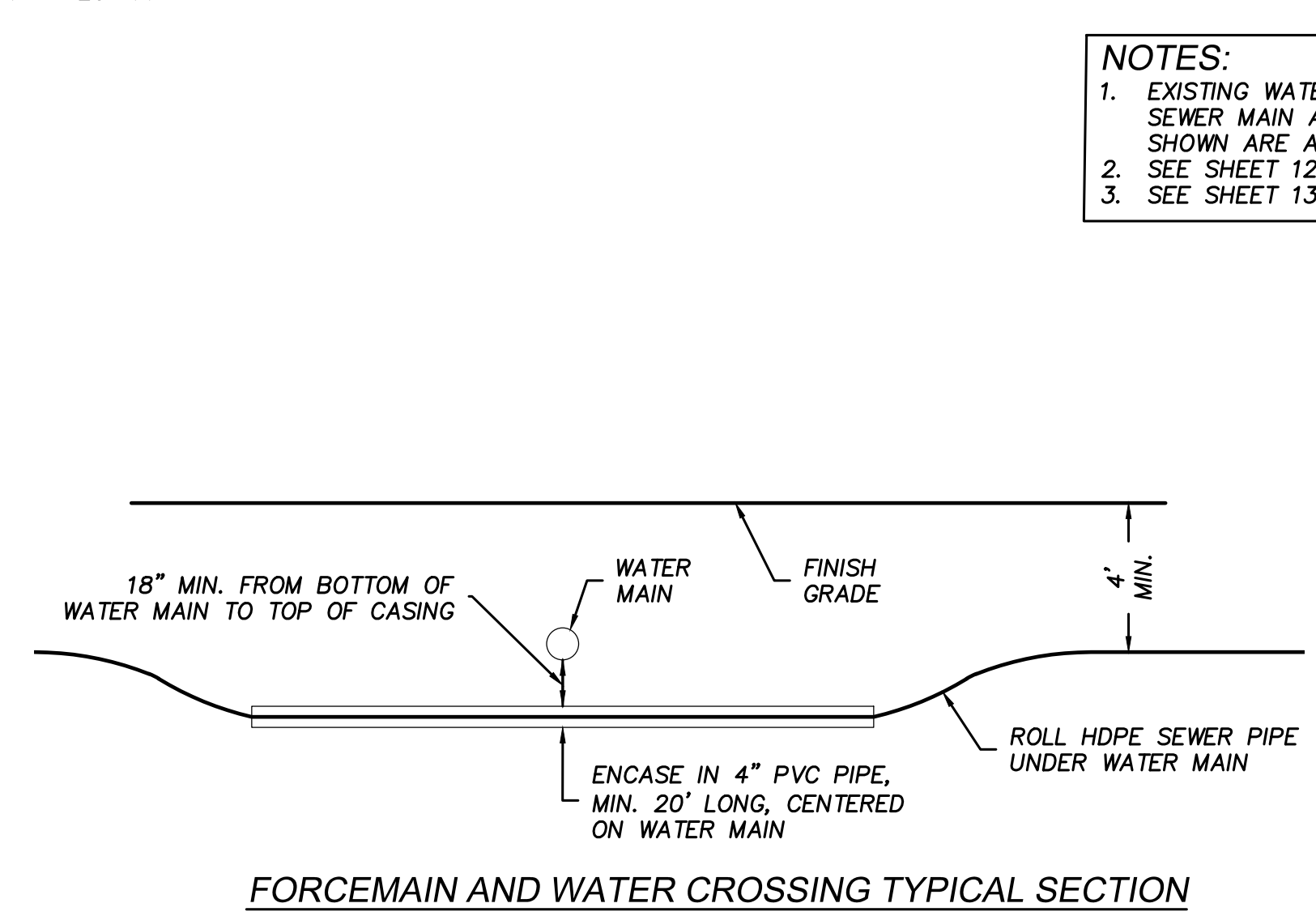
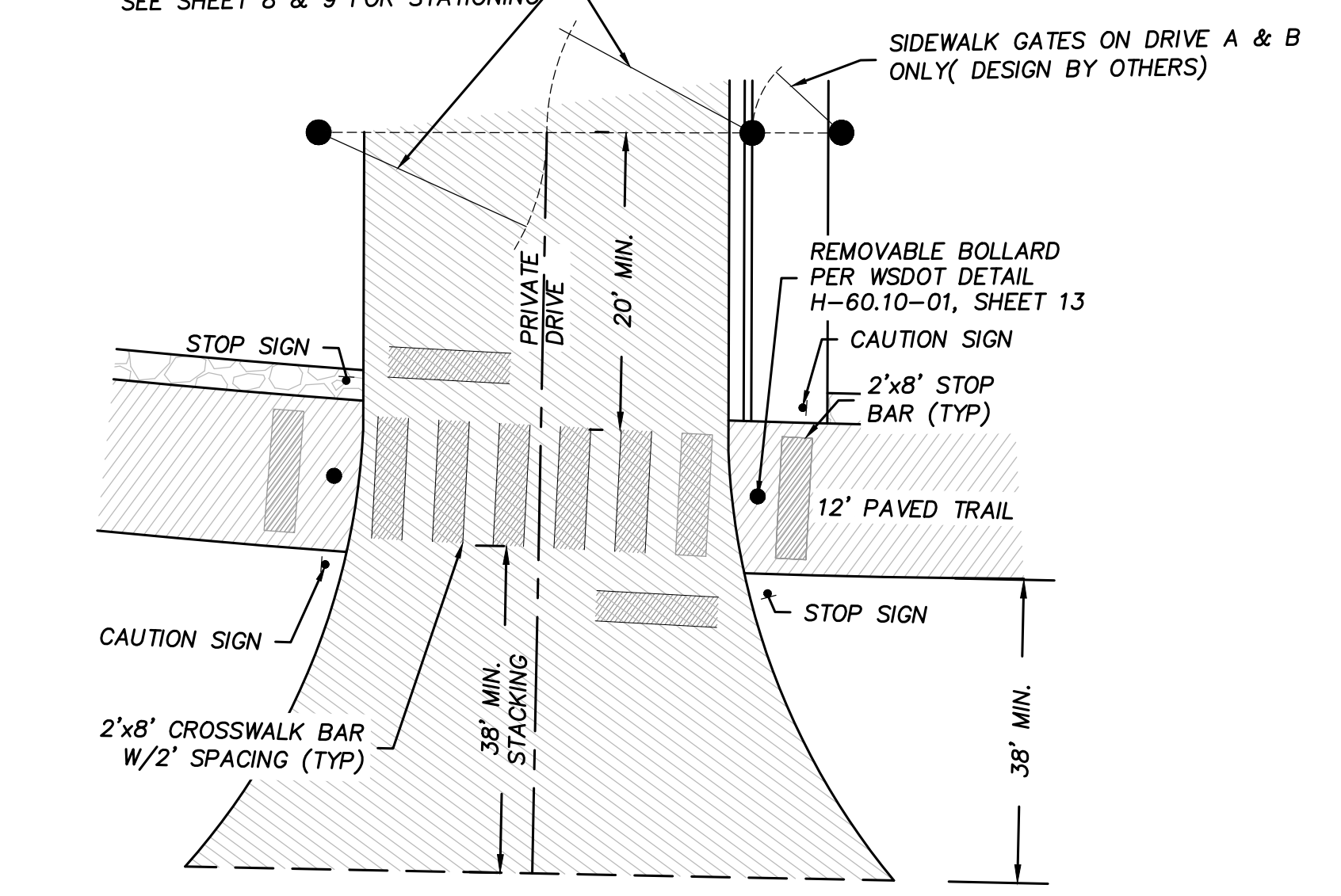
P:\Engineering Projects\2018\2018034 - Chelans Bay Site Improvements\2021-07-07 - Chelans Bay Site Improvements.dwg, 07/07/2021 3:16pm



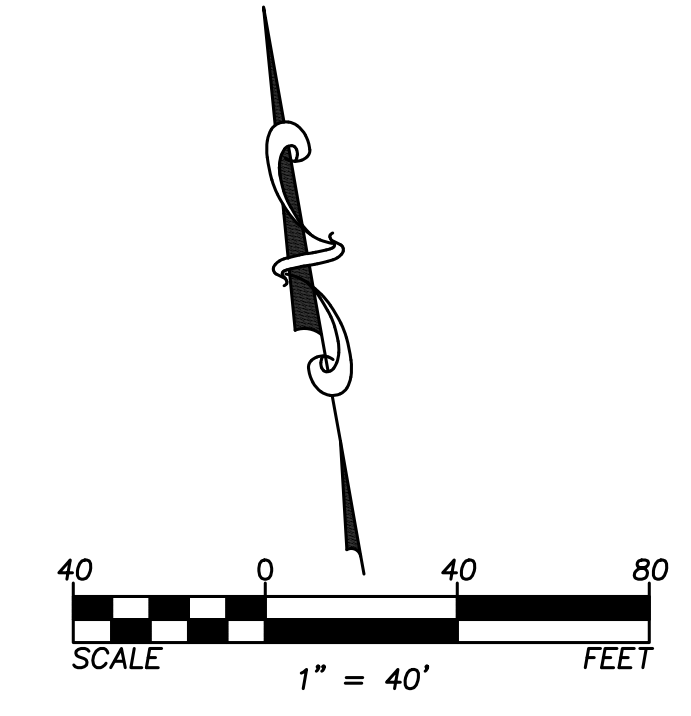
P:\Engineering Projects\2018\2018034 - 03 - Highway 3 - Highway Working Drawings\DWG\FINAL ENGINEERING\2021-07-07 CHELAN BAY FE-REVISED.dwg, 07/07/2021 3:16pm



GATES ON DRIVE A & B ONLY (DESIGN BY OTHERS)  
SWING GATES WITH TRAFFIC DIRECTION  
SEE SHEET 8 & 9 FOR STATIONING

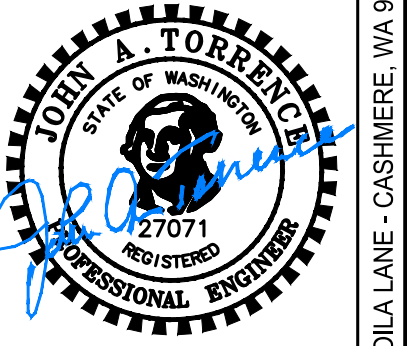


- NOTES:**
- EXISTING WATER MAIN, WATER METER AND SEWER MAIN AND MANHOLE LOCATIONS SHOWN ARE APPROXIMATE; FIELD VERIFY
  - SEE SHEET 12 FOR WATER DETAILS.
  - SEE SHEET 13 FOR SEWER DETAILS.



CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.



07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**TRAIL AND FORCEMAIN PLAN & PROFILE**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

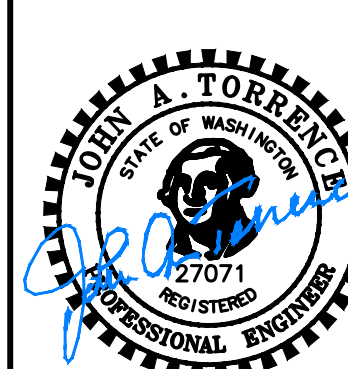
PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/JB

CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

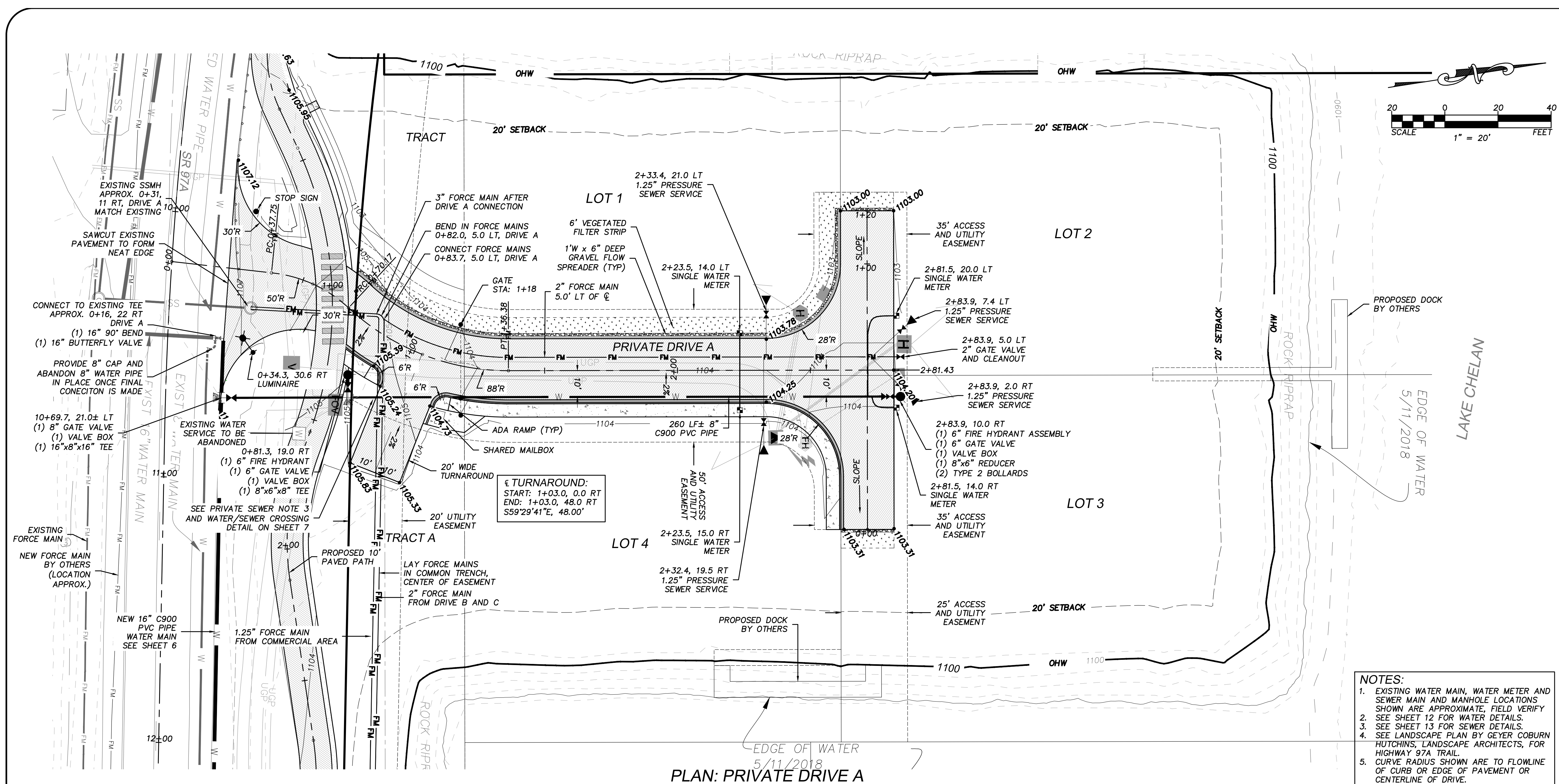




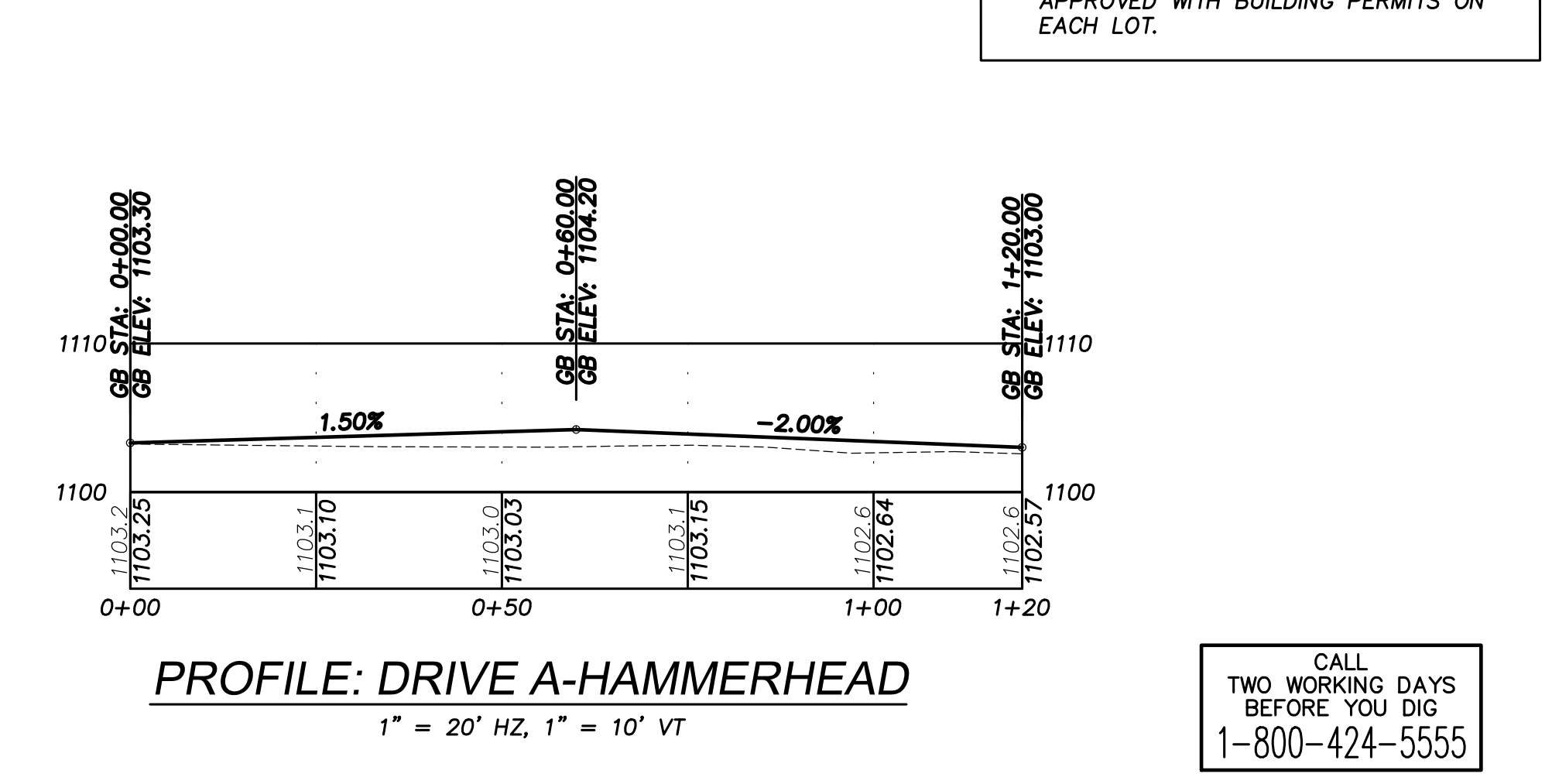
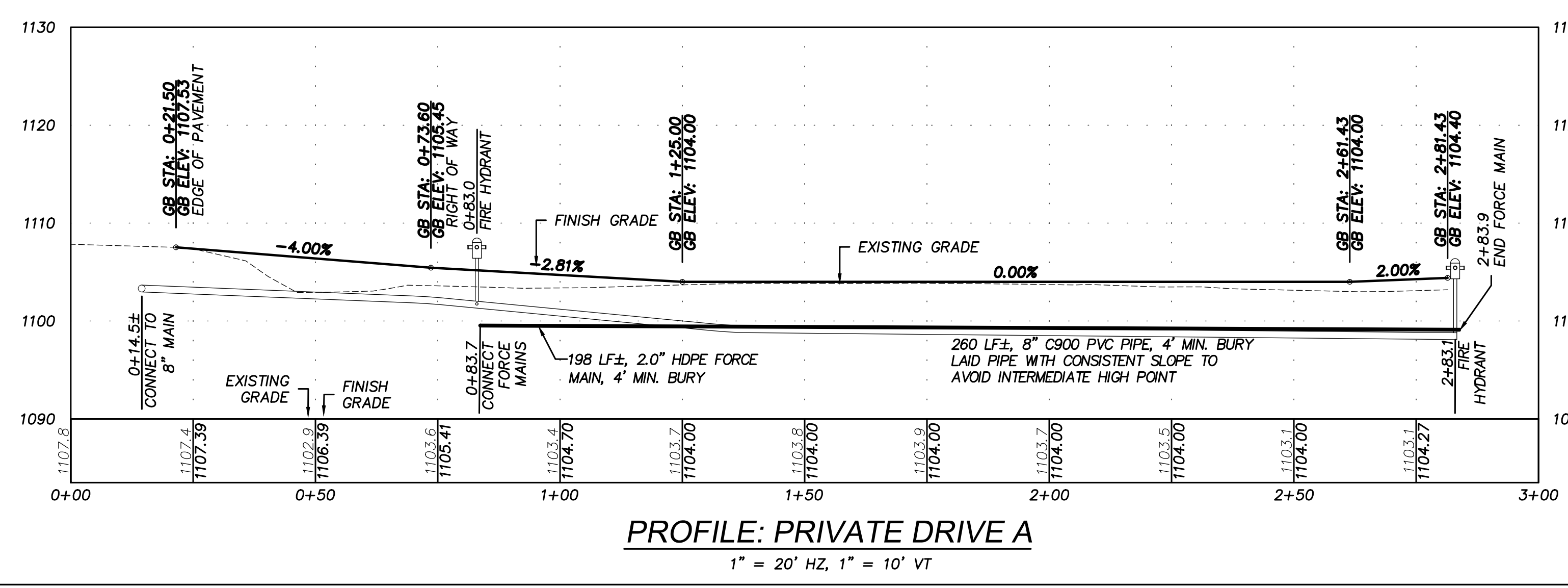
07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**PRIVATE DRIVE A PLAN AND PROFILE**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

117 VOILA LANE - CASHMERE, WA 98815 - TEL: (509)782-1897 - FAX: (509) 782-5436



- NOTES:**
- EXISTING WATER MAIN, WATER METER AND SEWER MAIN AND MANHOLE LOCATIONS SHOWN ARE APPROXIMATE, FIELD VERIFY
  - SEE SHEET 12 FOR WATER DETAILS.
  - SEE SHEET 13 FOR SEWER DETAILS.
  - SEE LANDSCAPE PLAN BY GEYER COBURN HUTCHINS, LANDSCAPE ARCHITECTS, FOR HIGHWAY 97A TRAIL.
  - CURVE RADIUS SHOWN ARE TO FLOWLINE OF CURB OR EDGE OF PAVEMENT OR CENTERLINE OF DRIVE.
  - ROOF DRAINAGE WILL BE REVIEWED AND APPROVED WITH BUILDING PERMITS ON EACH LOT.



CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
2018034

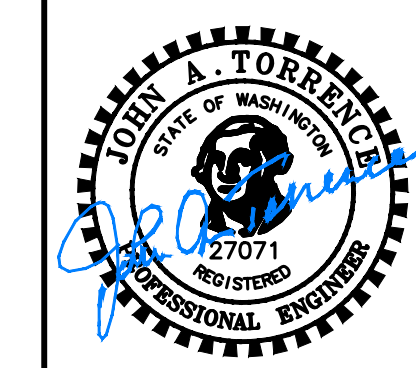
DESIGNED/DRAWN BY:  
CG/JB

CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

P:\Engineering Projects\2018\2018034 - Private Drive A - Chelean Bay - Final - ENR\ENR\2021-07-07 - Chelean Bay - Final - Review - July 07, 2021 - 3:16pm

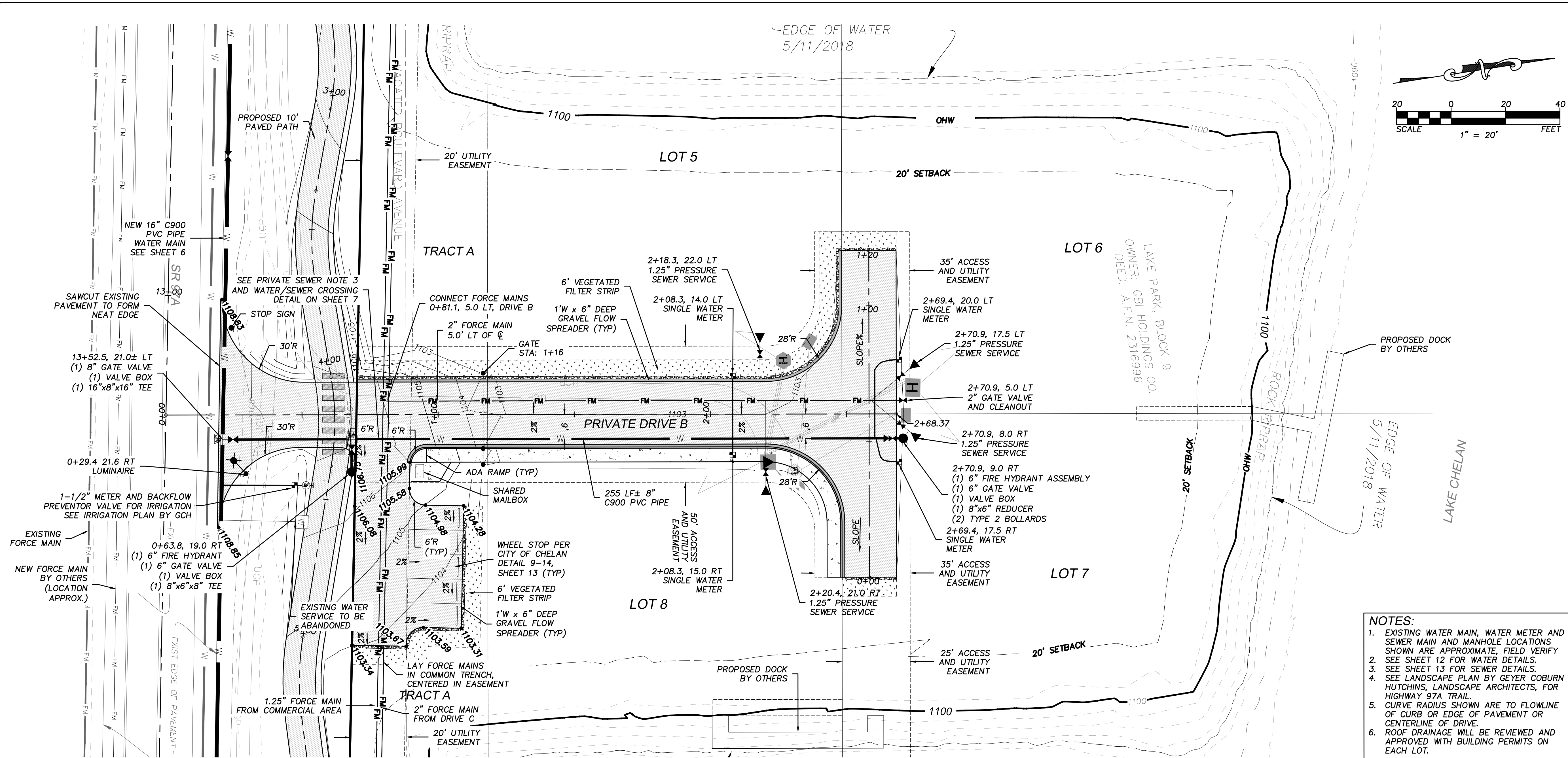




07/07/2021

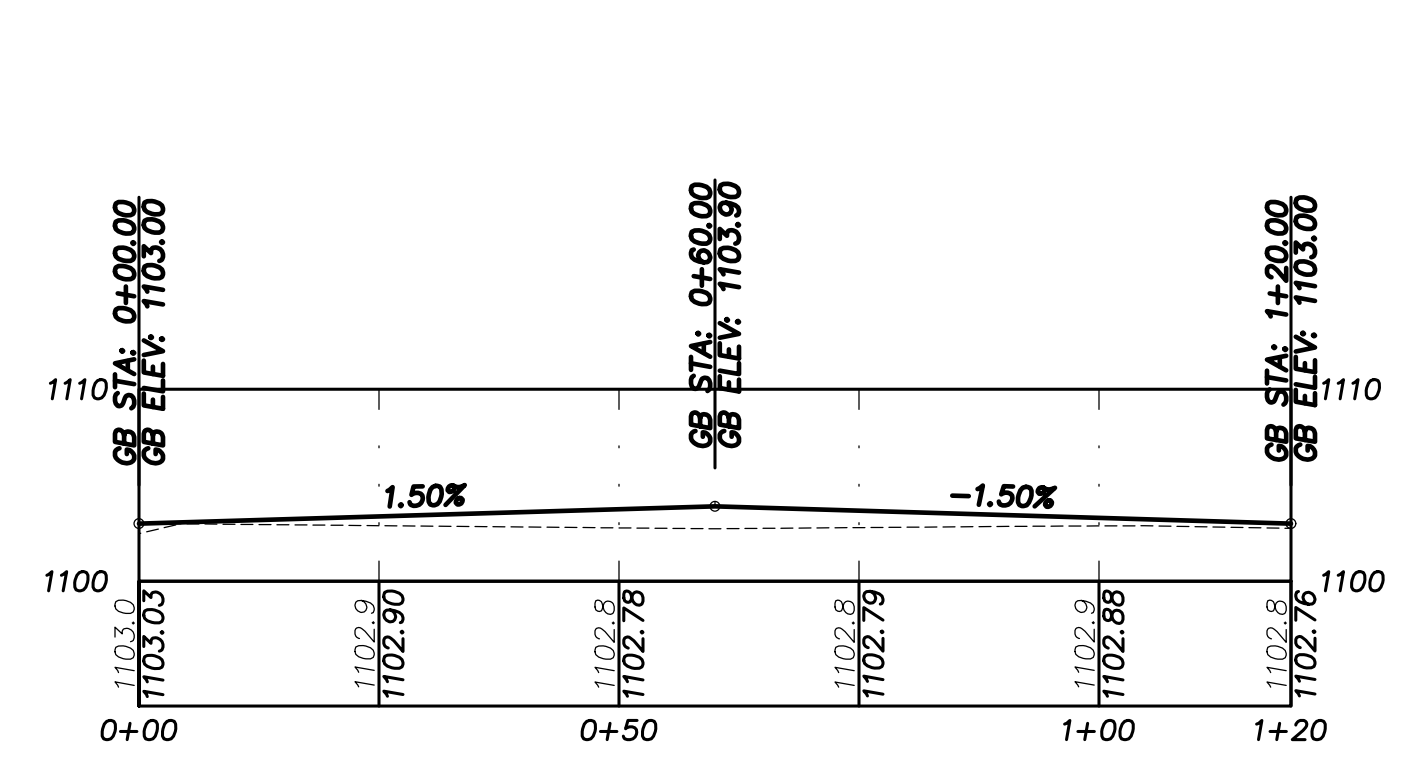
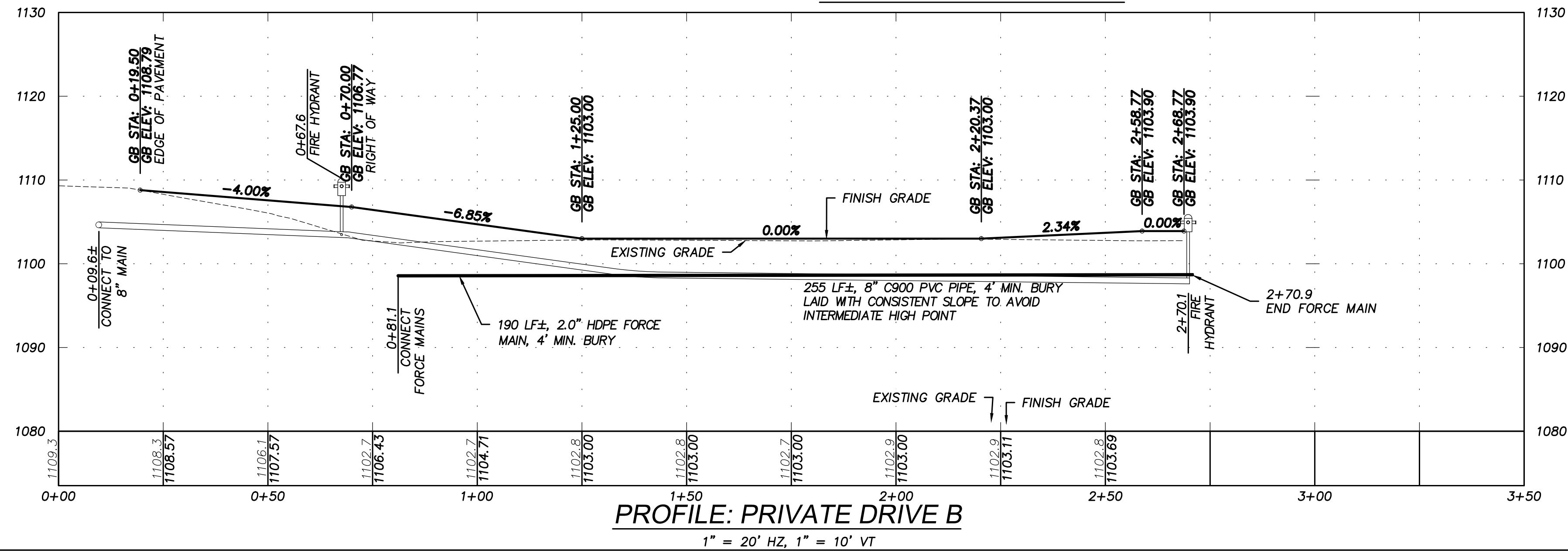
117 VOILA LANE - CASHMERE, WA 98615 - TEL: (509)782-1887 - FAX: (509) 782-2436

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**PRIVATE DRIVE B PLAN AND PROFILE**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON



- NOTES:**
- EXISTING WATER MAIN, WATER METER AND SEWER MAIN AND MANHOLE LOCATIONS SHOWN ARE APPROXIMATE, FIELD VERIFY
  - SEE SHEET 12 FOR WATER DETAILS.
  - SEE SHEET 13 FOR SEWER DETAILS.
  - SEE LANDSCAPE PLAN BY GEYER COBURN HUTCHINS, LANDSCAPE ARCHITECTS, FOR HIGHWAY 97A TRAIL.
  - CURVE RADIUS SHOWN ARE TO FLOWLINE OF CURB OR EDGE OF PAVEMENT OR CENTERLINE OF DRIVE.
  - ROOF DRAINAGE WILL BE REVIEWED AND APPROVED WITH BUILDING PERMITS ON EACH LOT.

**PLAN: PRIVATE DRIVE B**



**PROFILE: DRIVE B-HAMMERHEAD**  
1" = 20' HZ, 1" = 10' VT

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

UTILITIES ARE KNOWN TO EXIST AND NOT ALL ARE SHOWN. VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/JB

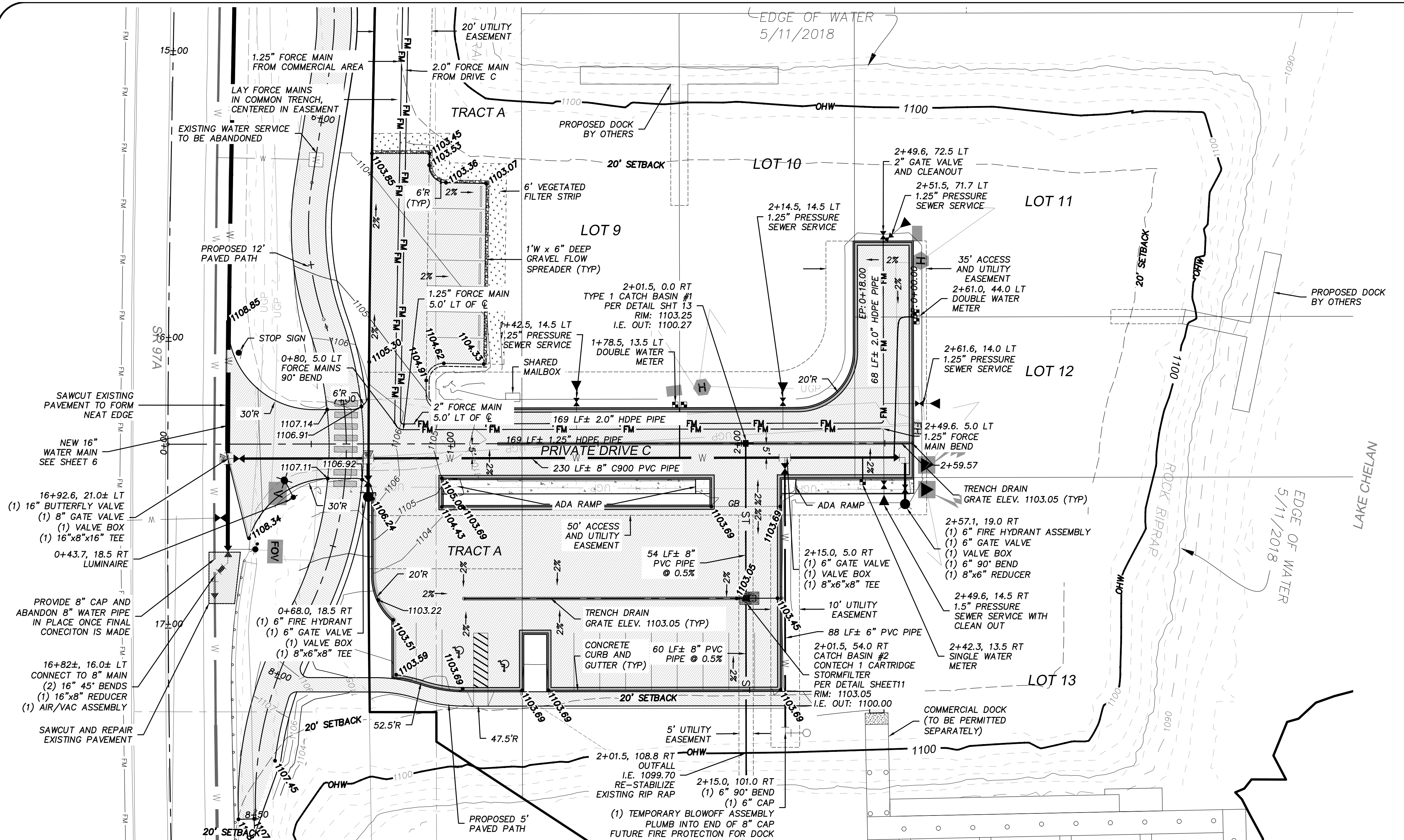
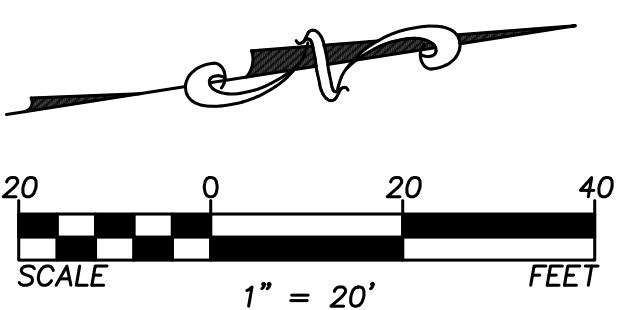
CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

P:\Engineering\Projects\2018\2018034 - GBI Holdings - 3 - Project\Working\DWG\FINAL\ENGINEERING\2021-07-07\_CHELAN\_BAY\_FE\_REV.dwg, Jul 07, 2021 - 3:18pm

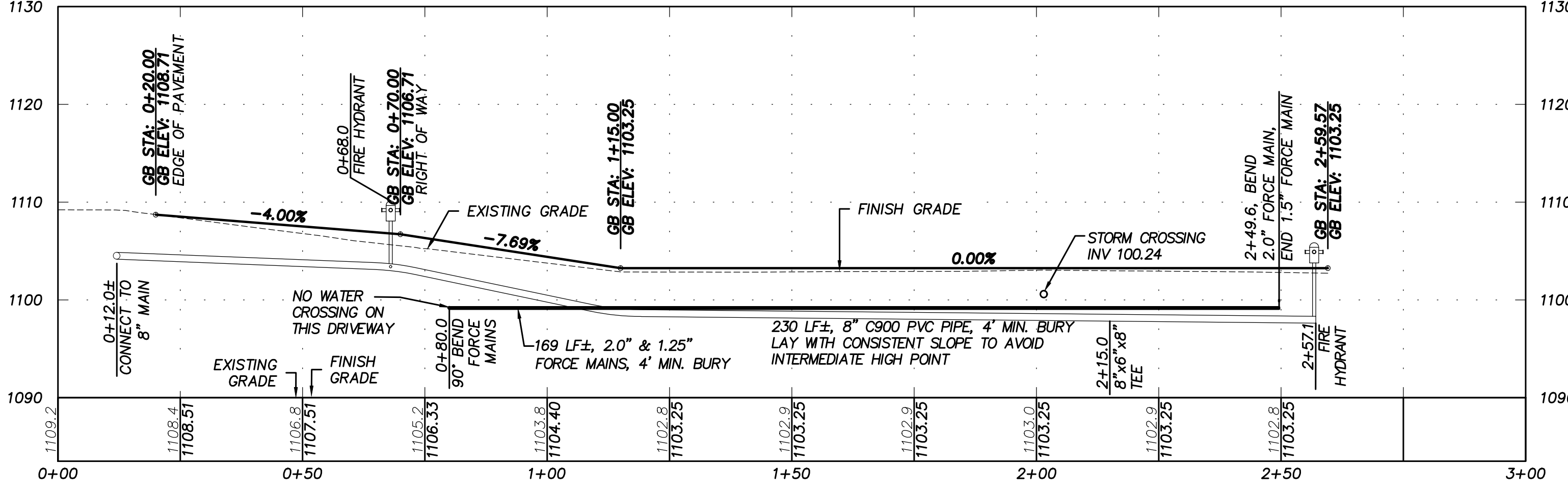


**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**PRIVATE DRIVE C PLAN AND PROFILE**  
**PARCEL NO. 27-22-14-662-228**  
**CITY OF CHELAN, WASHINGTON**

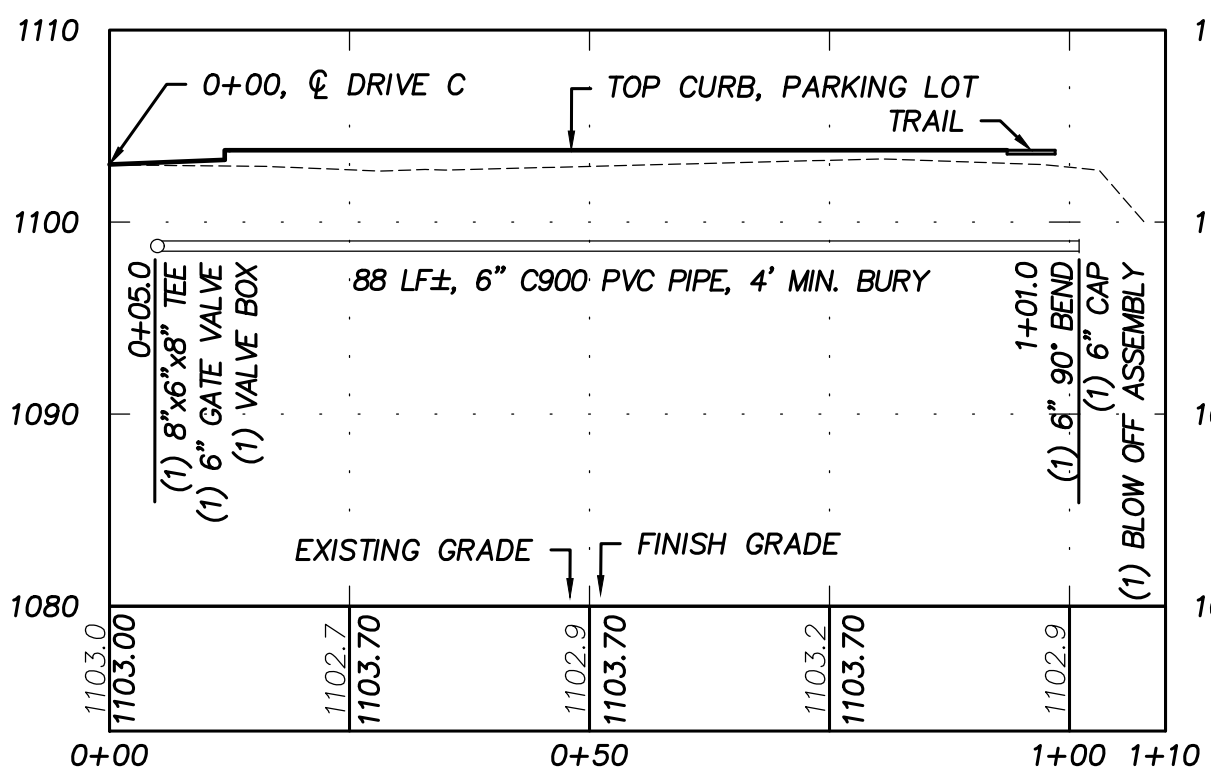


- NOTES:**
- EXISTING WATER MAIN, WATER METER AND SEWER MAIN AND MAINHOLE LOCATIONS SHOWN ARE APPROXIMATE. FIELD VERIFY.
  - SEE SHEET 12 FOR WATER DETAILS.
  - SEE SHEET 13 FOR SEWER DETAILS.
  - SEE LANDSCAPE PLAN BY GEYER COBURN HUTCHINS, LANDSCAPE ARCHITECTS, FOR HIGHWAY 97A TRAIL.
  - CURVE RADIUS SHOWN ARE TO FLOWLINE OF CURB OR EDGE OF PAVEMENT OR CENTERLINE OF DRIVE.
  - ROOF DRAINAGE WILL BE REVIEWED AND APPROVED WITH BUILDING PERMITS ON EACH LOT.

**PLAN: PRIVATE DRIVE C**



**PROFILE: PRIVATE DRIVE C**  
1" = 20' HZ, 1" = 10' VT



**PROFILE: DOCK WATER MAIN**  
1" = 20' HZ, 1" = 10' VT

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-424-5555

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

CHECKED BY:  
**JAT**

ISSUE DATE:  
**07/07/2021**

OF:  
**10**

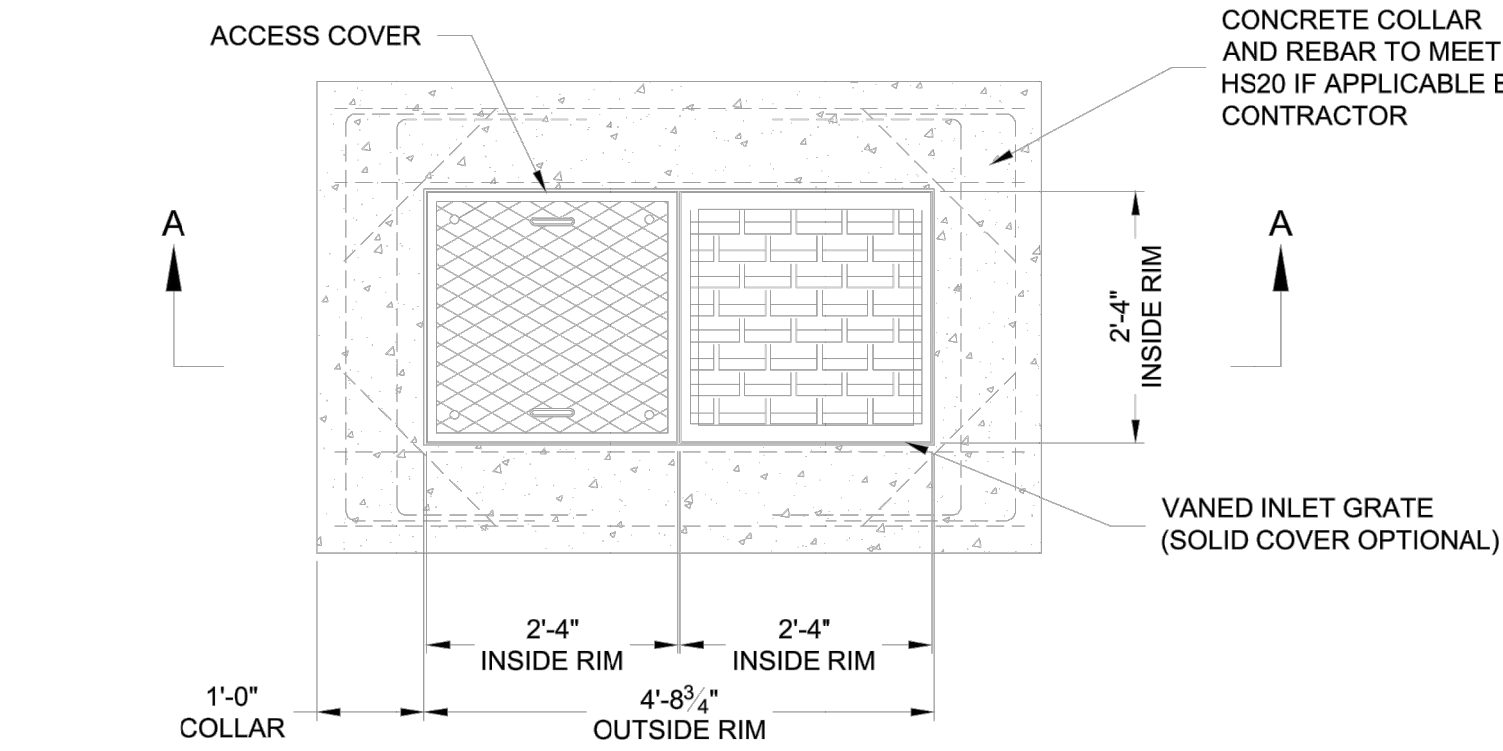
OF:  
**14**

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

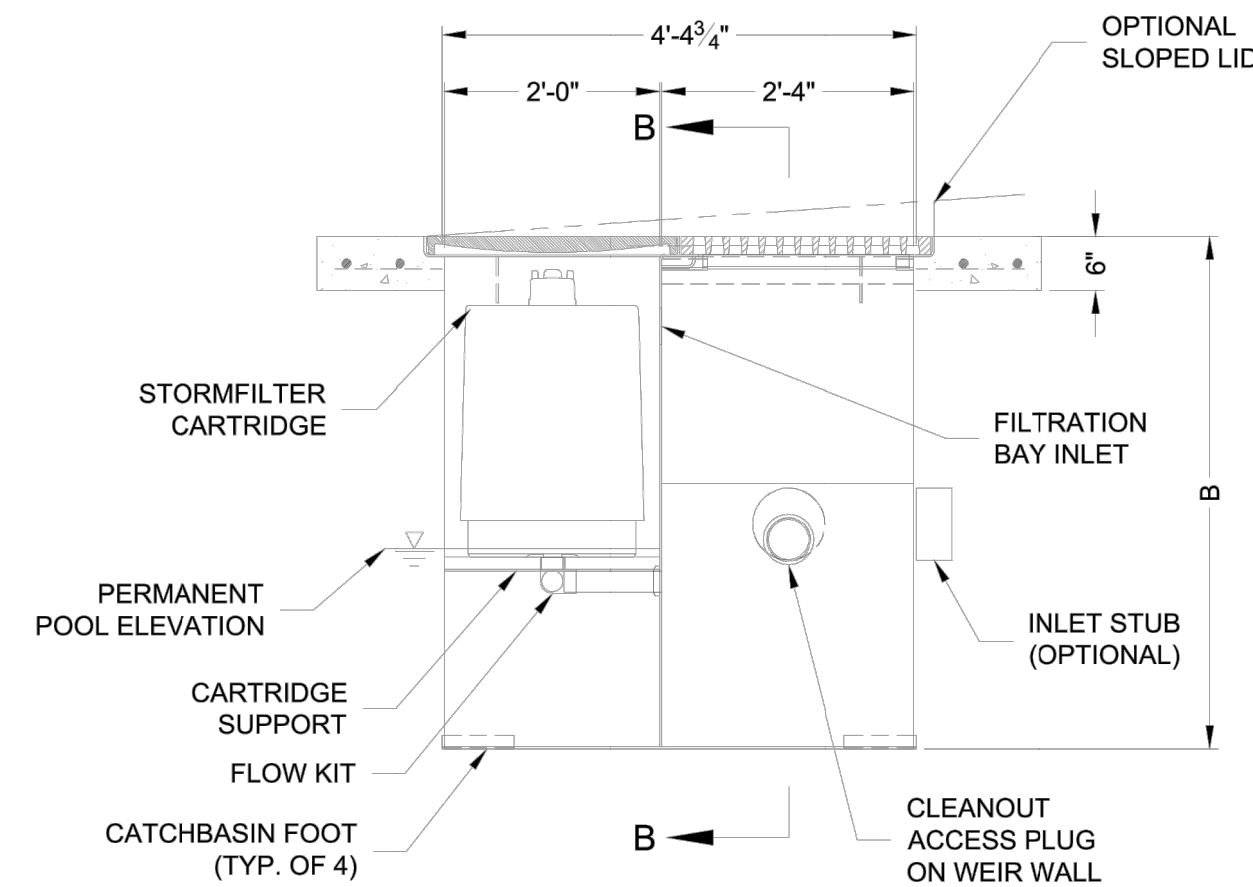


P:\Engineering Projects\2018\2018034 - 08 Holdings - 3 - 01\Working DWG\FINAL ENGINEERING\2021-07-07 CHELAN BAY FE-REV.dwg, Jul 07, 2021 - 3:16pm

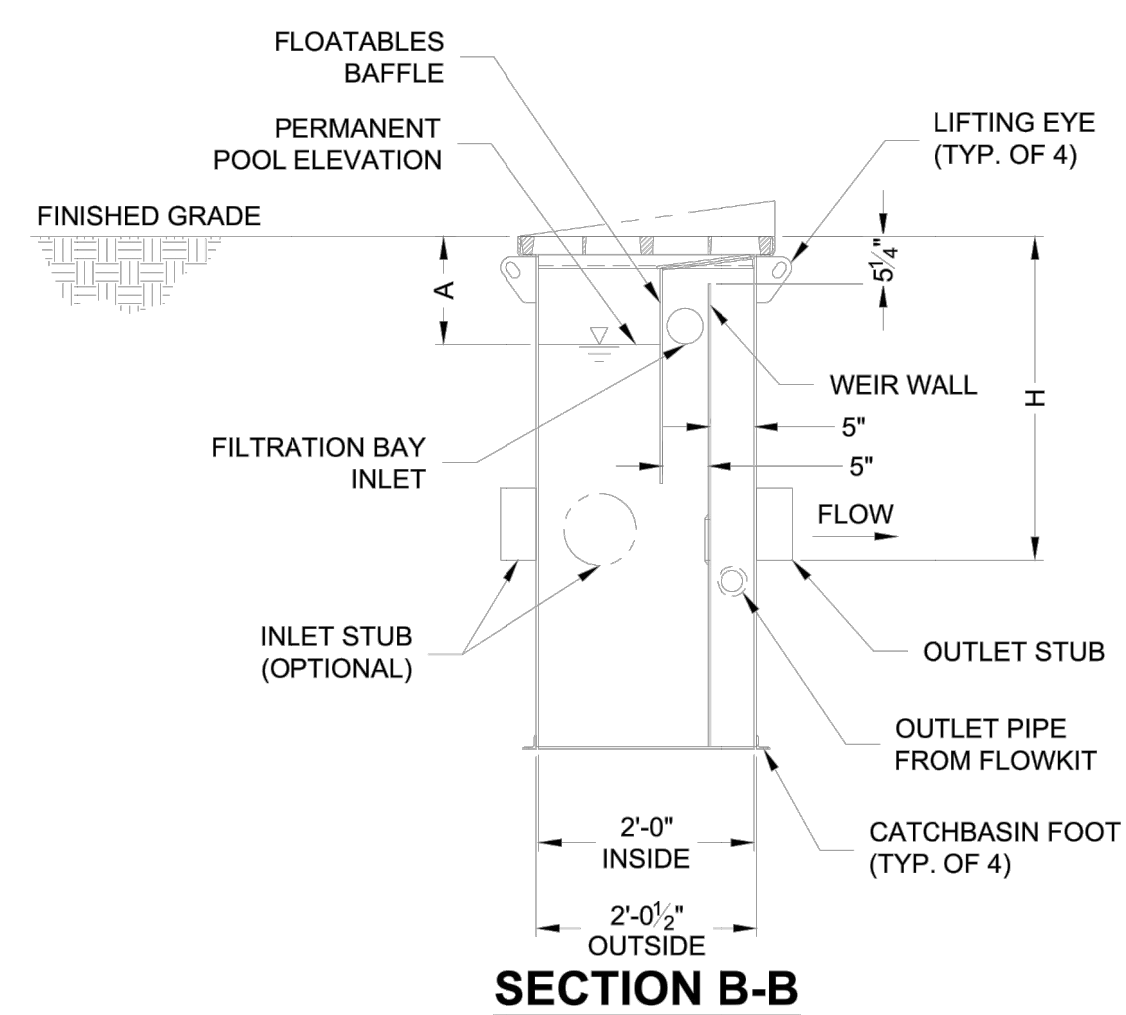
P:\Engineering Projects\2018\2018034 - 08 Holdings - 3 - 01\Working DWG\FINAL ENGINEERING\2021-07-07 CHELAN BAY FE-REV.dwg, Jul 07, 2021 - 3:16pm



PLAN VIEW



SECTION A-A



SECTION B-B

**STORMFILTER STEEL CATCHBASIN DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. 1 CARTRIDGE CATCHBASIN HAS A MAXIMUM OF ONE CARTRIDGE. SYSTEM IS SHOWN WITH A 27" CARTRIDGE, AND IS ALSO AVAILABLE WITH AN 18" CARTRIDGE. STORMFILTER CATCHBASIN CONFIGURATIONS ARE AVAILABLE WITH A DRY INLET BAY FOR VECTOR CONTROL. PEAK HYDRAULIC CAPACITY PER TABLE BELOW. IF THE SITE CONDITIONS EXCEED PEAK HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

**CARTRIDGE SELECTION**

CARTRIDGE HEIGHT	27"	18"	18" DEEP
RECOMMENDED HYDRAULIC DROP (H)	3.05'	2.3'	3.3'
SPECIFIC FLOW RATE (gpm/sf)	2 gpm/sf	1.67* gpm/sf	1 gpm/sf
CARTRIDGE FLOW RATE (gpm)	22.5	18.79	11.25
PEAK HYDRAULIC CAPACITY	1.0	1.0	1.8
INLET PERMANENT POOL LEVEL (A)	1'-0"	1'-0"	2'-0"
OVERALL STRUCTURE HEIGHT (B)	4'-9"	3'-9"	4'-9"

\* 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

**GENERAL NOTES**

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STORMFILTER CATCHBASIN STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
- STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- INLET SHOULD NOT BE LOWER THAN OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
- MANUFACTURER TO APPLY A SURFACE BEAD WELD IN THE SHAPE OF THE LETTER "O" ABOVE THE OUTLET PIPE STUB ON THE EXTERIOR SURFACE OF THE STEEL SFCB.
- STORMFILTER CATCHBASIN EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
- STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO M306 LOAD RATING. TO MEET HS20 LOAD RATING ON STRUCTURE, A CONCRETE COLLAR IS REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

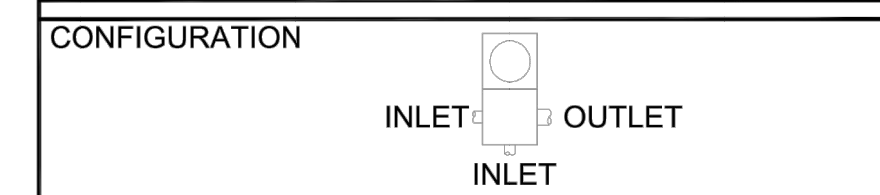
**INSTALLATION NOTES**

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

**1-CARTRIDGE CATCHBASIN STORMFILTER DATA**

STRUCTURE ID	CB 2
WATER QUALITY FLOW RATE (cfs)	0.04
PEAK FLOW RATE (<1 cfs)	0.29
RETURN PERIOD OF PEAK FLOW (yrs)	100-YR
CARTRIDGE HEIGHT (27", 18", 18" DEEP)	27"
CARTRIDGE FLOW RATE (gpm)	18.79
MEDIA TYPE (PERLITE, ZPG, PSORB)	P-SORB
RIM ELEVATION	1103.05

PIPE DATA:	I.E.	DIAMETER
INLET STUB	1100.00	8" PVC
OUTLET STUB	1100.00	8" PVC



SLOPED LID	NO
SOLID COVER	NO
NOTES/SPECIAL REQUIREMENTS:	

**1 CARTRIDGE CATCHBASIN STORMFILTER STANDARD DETAIL**



www.contechES.com  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-526-3999 513-645-7000 513-645-7993 FAX



07/07/2021

117 VOILA LANE - CASHMERE, WA 98815 - TEL: (509)782-1897 - FAX: (509) 782-5436

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**STORMWATER DETAILS**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

CHECKED BY:  
**JAT**

ISSUE DATE:  
**07/07/2021**

CALL  
TWO WORKING DAYS  
BEFORE YOU DIG  
**1-800-424-5555**

UTILITIES ARE KNOWN TO EXIST  
AND NOT ALL ARE SHOWN. VERIFY  
ALL UTILITIES PRIOR TO CONSTRUCTION.

11  
OF: 14



P:\Engineering Projects\2018\2018034\_C8\_HazSpill\_5\_Experts\Working Drawings\2018\2018-07-07\_CHEL401\_BAY\_FE-REV.dwg, Jul 07, 2021 - 5:46pm

**1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSIONS OF THE FOLLOWING:**

- CITY OF CHELAN DEVELOPER EXTENSION AGREEMENT (When applicable)
- CITY OF CHELAN STANDARD DETAILS (INCLUDING REVISIONS AFTER PLAN APPROVAL)
- CITY OF CHELAN SERVICE POLICES AND CONSTRUCTION STANDARDS
- WA STATE DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

**2. ALL METAL PRODUCTS (VALVE BOXES & CASING PIPES EXCLUDED) & FITTING COMPONENTS (e.g. BOLTS, GASKETS, ETC) SHALL BE OF DOMESTIC FABRICATION & CONSTRUCTION. TEMPORARY MATERIALS NOT PART OF THE PERMANENT FACILITY NEED NOT BE DOMESTIC.**

**3. ONLY FORD, McDONALD, AND MULLER PRODUCTS ARE APPROVED FOR USE AS SERVICE BRASS, EXCEPT WHERE OTHERWISE NOTED IN THESE STANDARD DETAILS.**

**4. A RECONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO CONSTRUCTION AND 48 HOURS ADVANCE NOTIFICATION OF THE LOCAL MUNICIPALITY, THE CITY OF CHELAN, AND ALL AFFECTED UTILITY COMPANIES PRIOR TO THE ACTUAL START OF WORK.**

**5. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE RIGHT-OF-WAY/STREET CONSTRUCTION PERMIT AS ISSUED BY THE CITY OF CHELAN FOR THIS PROJECT.**

**6. LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE ESTIMATED UNLESS STATED OTHERWISE. THE CONTRACTOR SHALL VERIFY, LOCATE AND PROTECT ALL UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL REPLACE OR REPAIR ANY UTILITIES DAMAGED DURING CONSTRUCTION. SHOW ALL UTILITIES WITHIN THE AS-BUILT.**

**7. LOCATION AND EXTENT OF IRRIGATION PIPELINES WITHIN THE PROJECT LIMITS ARE UNKNOWN. CONTRACTOR SHALL CONTACT PROPERTY OWNERS ADJACENT TO THE PROJECT FOR LOCATING PRIVATE IRRIGATION SYSTEMS. CONTRACTOR IS RESPONSIBLE FOR LOCATING IRRIGATION MAINS AND REPLACING OR REPAIRING PIPELINES DAMAGED DURING CONSTRUCTION. SHOW IRRIGATION ON THE AS-BUILTS.**

**8. WATER MAIN TRENCH SECTION AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE STANDARD DETAILS AND WITH SECTIONS 7-3(10) AND 7-3(11) OF THE STANDARD SPECIFICATIONS. COMPACTION TESTING IS REQUIRED DURING BACKFILLING OPERATIONS AT THE DISCRETION OF THE CITY. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RECOMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.**

**9. RESTORATION OF DAMAGED ROAD SURFACING SHALL BE IN ACCORDANCE WITH THE CITY OF CHELAN'S REQUIREMENTS. ALL OTHER AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR AS DIRECTED BY THE CITY. THIS INCLUDES SHOULDER, LANDSCAPING, WALLS, FENCES AND OTHER IMPROVEMENTS.**

**10. ALL SERVICES, FIRE HYDRANTS, AND THRUST BLOCKING SHALL BE INSPECTED BY THE CITY BEFORE BURY.**

**11. CITY APPROVED THRUST RESTRAINTS ARE REQUIRED FOR ALL UNRESTRAINED FITTINGS. RESTRAINED JOINTS ARE ALLOWED INSTEAD OF THRUST BLOCKING WHERE APPROPRIATE, AND ARE REQUIRED FOR MAINS THAT MAY BE EXTENDED.**

**12. PROVIDE A SANITARY GAP BETWEEN THE EXISTING AND NEW WATER SYSTEMS. CONNECTION TO THE EXISTING WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR ONLY AFTER COMPLETING AN ACCEPTABLE HYDROSTATIC PRESSURE TEST AND THE PIPELINE IS DISINFECTED, FLUSHED AND RECEIPT OF APPROVAL OF WATER QUALITY TEST RESULTS FROM THE HEALTH DISTRICT OR LAB.**

**13. PERFORM PRESSURE TEST AT 250 PSI. THE CITY INSPECTOR HAS DISCRETION TO MODIFY THE TESTING REQUIREMENTS:**

- PRESSURE TEST INCLUDES MAINLINE, HYDRANTS, SERVICE LINES, SETTERS, AND CUSTOMER SERVICE SIDE TALKPIPE
- TEST MAINLINE IN SECTIONS OF NO MORE THAN 1,500 FEET. PRESSURE DROP SHALL NOT EXCEED 5 PSI IN 60 MINUTES.
- ASSEMBLE AND TEST VALVE CLUSTERS OUTSIDE OF THE TRENCH PRIOR TO INSTALLATION.
- TEST GAUGE RANGE SHALL NOT EXCEED HOSE OF TEST PRESSURE (400 PSI MAY FOR 250 PSI TEST).

**14. AN INFLATABLE PIPE PLUG SHALL BE USED ON EACH JOINT DURING INSTALLATION TO PROTECT AGAINST SOIL INTRUSION AND FLOODING OF THE PIPE. OPEN ENDS OF VALVES SHALL BE PLUGGED OR BAGED UNTIL EXTENDED WITH PIPE.**

**15. NO OTHER PARALLEL UTILITIES SHALL BE INSTALLED WITHIN 36" HORIZONTALLY OF ANY ACTIVE WATER LINE UNLESS OTHERWISE APPROVED BY THE CITY.**

**16. CONTRACTOR SHALL POTHOLE A SUFFICIENT DISTANCE AHEAD OF PLYING TO VERIFY DEPTH OF EXISTING WATER MAINS AND CROSSING UTILITIES AND TO ANTICIPATE ANY NECESSARY CHANGES IN FITTINGS OR ALIGNMENT.**

**17. HDPE SERVICE PIPE SHALL BE 200 PSI RATED (DR9) CTS (Copper Tube Size), ONLY "QUICK-JOINT" OR EQUAL FITTINGS ALLOWED FOR HDPE OR COPPER PIPE CONNECTIONS, NO PACK JOINTS.**

**18. AN AS-BUILT RECORD MUST BE SUBMITTED TO THE CITY BEFORE WATER SERVICE WILL BE PROVIDED.**

**19. DEFLECTION AT PIPE AND FITTING JOINTS WILL BE ALLOWED UP TO 3.0" PER JOINT (1" OVER 10", WHICH IS 350' RADIUS) OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS LESS.**

**20. CONTRACTOR SHALL ONLY DISPOSE OF WASTE MATERIAL AT SITES APPROVED BY CHELAN COUNTY. STOCKPILE MATERIALS ONLY ON CITY APPROVED SITES.**

**21. ALL PIPE 3" AND LARGER SHALL BE DUCTILE IRON. PIPE SHALL BE MINIMUM CLASS 50 EXCEPT WHERE TRENCH BACKFILL AND LOADING DICTATE A STRONGER CLASS PIPE. CLASS 52 SHALL BE USED FOR HYDRANT RUNS AND IN AREAS WHERE PRESSURE EXCEEDS 150 PSI.**

**22. CONTRACTORS WORKING WITHIN THE RIGHT OF WAY OR ON EXISTING CITY INFRASTRUCTURE SHALL BE LICENSED, BONDED AND HAVE EXPERIENCE INSTALLING PUBLIC DOMESTIC WATER SYSTEMS AND BE PREPARED TO PRESENT EXAMPLES OF 5 SUCH PROJECTS UPON REQUEST BY THE CITY.**

**23. VAULT LID NOTE: FOR ALL TAPER-TOP STYLE VAULTS FOR WATER SERVICES, AIR VALVES, PERMANENT BLOW-OFFS AND OTHER PURPOSES, CONTRACTOR TO PURCHASE LID AND FRAME EQUAL TO DAN FOUNDRY'S CITY OF CHELAN SPECIFICATION, FRAME/LID 1-4429-R1/1-4429-10 FOR NON-TRAFFIC AREAS, AND 36192/3619C FOR DRIVEWAYS AND TRAFFIC AREAS.**

**23.1. ANCHOR FRAME TO VAULT INCLUDE TWO INTEGRAL 2" x 3/16" DIAMETER HOLES WITH 4-1/4" DIAMETER x 9/16" DEEP RECESS FOR RADIO.**

**23.2. WATER SERVICE VAULT LIDS TO INCLUDE TWO INTEGRAL 2-3/16" DIAMETER HOLES WITH 4-1/4" DIAMETER x 9/16" DEEP RECESS FOR RADIO.**

**23.3. FOR AIR VALVES AND BLOW-OFFS, DO NOT DRILL HOLE IN LIDS, NOR PROVIDE "METER" TEXT ON FRAME.**

**23.4. LID SURFACE TO HAVE A STATIC COEFFICIENT OF FRICTION NO LESS THAN 0.60 AS DETERMINED BY ASTM C-1028.**

**24. REPAIR EXISTING IRRIGATION SYSTEMS DAMAGED DURING CONSTRUCTION WITH PRODUCTS OF NO LESSER QUALITY THAN SCH 40 PVC.**

**25. CONTRACTOR TO PROVIDE NO LESS THAN 48 HOURS NOR MORE THAN 72 HOURS NOTICE TO THE CITY PRIOR TO ANY REQUESTED SHUTDOWN OR CUSTOMER OUTAGE. CITY WILL PROVIDE NOTICE TO CUSTOMERS 24 HOURS IN ADVANCE OF OUTAGE.**

**26. RESTRAINTS, GASKETS, OR RESTRAINED PIPES (PORTIONS GOUGED BY RESTRAINTS) MAY NOT BE REUSED ONCE ASSEMBLED.**

**27. FLANGE GASKETS MUST BE RING TYPE (NOT FULL FACE) AND MINIMUM 1/8" THICK. FLANGE BOLTS ASTM A307 GRADE A OR B. STEEL BOLTS, NUTS AND WASHERS TO BE ZINC PLATED.**

**28. BURIED VALVES SMALLER THAN 4" DIAMETER TO BE CURB STOP OR CORP STOP PER DETAILS, OR STYLE AT THE DISCRETION OF THE CITY. BURIED VALVES SMALLER THAN 4" SHALL NOT BE GATE VALVES.**

**29. CONTRACTOR SHALL MAINTAIN AND RETURN ANY TEMPORARY EQUIPMENT PROVIDED BY THE CITY. CONTRACTOR SHALL REIMBURSE THE CITY FOR ANY DAMAGE OR LOSS OF EQUIPMENT.**

**WATER SERVICE TAP AND PIPE**

**MINIMUM SIZING GUIDELINES:**

- SHADLE, COPR STOP, AND SERVICE LINE TO BE THE SAME DIAMETERS.
- 1 1/2" DIAMETER SERVICE LINE FOR ALL 3/4" AND 1" SINGLE AND DOUBLE METERS.
- 1 1/2" DIAMETER MINIMUM SERVICE LINE FOR 1 1/2" METERS.
- 2" DIAMETER MINIMUM SERVICE LINE FOR 2" METERS.
- LARGER SIZES MAY BE REQUIRED DEPENDING ON THE SPRINKLER DEMANDS, AVAILABLE PRESSURE, OR LONG PIPE RUNS.

**EXISTING SERVICE RECONNECTION**

**WATER SYSTEM STANDARD DETAIL**  
 150 S Johnson Ave  
 509 682-4037  
 FILE: CHE-WB2.DWG REVISID:4/19/21 DETAIL NO.: WS02  
 PRELIMINARY

**WITHIN SIDEWALK**

**WHEN NO SIDEWALK**

**LID WITHIN SIDEWALK**

**WATER SYSTEM STANDARD DETAIL**  
 150 S Johnson Ave  
 509 682-4037  
 FILE: CHE-WB2.DWG REVISID:4/20/21 DETAIL NO.: WS17  
 PRELIMINARY

**ELEVATION**

**UTILITY CONFLICT**

**WATER SYSTEM STANDARD DETAIL**  
 150 S Johnson Ave  
 509 682-4037  
 FILE: CHE-WB2.DWG REVISID:4/20/21 DETAIL NO.: WS18  
 PRELIMINARY

**PRECAST THRUST BLOCK**

**TABLE 1 - BEARING FACTOR**

REST PRESSURE (PSI)	FEET SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3	300	2.3*	2.5	2.3*	2.3*
4	300	2.3*	2.5	2.3*	2.3*
6	300	2.3*	2.5	2.3*	2.3*
8	300	2.3*	2.5	2.3*	2.3*
10	300	2.3*	2.5	2.3*	2.3*
12	300	2.3*	2.5	2.3*	2.3*
14	300	2.3*	2.5	2.3*	2.3*
16	300	2.3*	2.5	2.3*	2.3*
18	300	2.3*	2.5	2.3*	2.3*
20	300	2.3*	2.5	2.3*	2.3*
24	300	2.3*	2.5	2.3*	2.3*

**TABLE 2 - MULTIPLICATION FACTOR**

**TABLE 3 - BLOCK SHAPE**

**WATER SYSTEM STANDARD DETAIL**  
 150 S Johnson Ave  
 509 682-4037  
 FILE: CHE-WB2.DWG REVISID:4/19/21 DETAIL NO.: WS04  
 PRELIMINARY

**SECTION TWO - WATER DESIGNS**

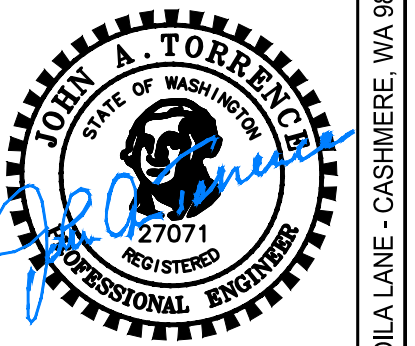
**FIRE HYDRANT ASSEMBLY**

**CITY STANDARDS** Adopted July, 1998 (Revised 03/15)

**SECTION TWO - WATER DESIGNS**

**DOUBLE CHECK VALVE ASSEMBLY INSTALLATION 3/4" TO 1"**

**CITY STANDARDS** Adopted July, 1998 (Revised 03/15)



07/07/2021

CHELAN BAY PRIVATE DRIVE AND SITE IMPROVEMENTS WATER DETAILS

PARCEL NO. 27-22-14-662-228  
 CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER: 2018034  
 DESIGNED/DRAWN BY: CG/JB  
 CHECKED BY: JAT  
 ISSUE DATE: 07/07/2021

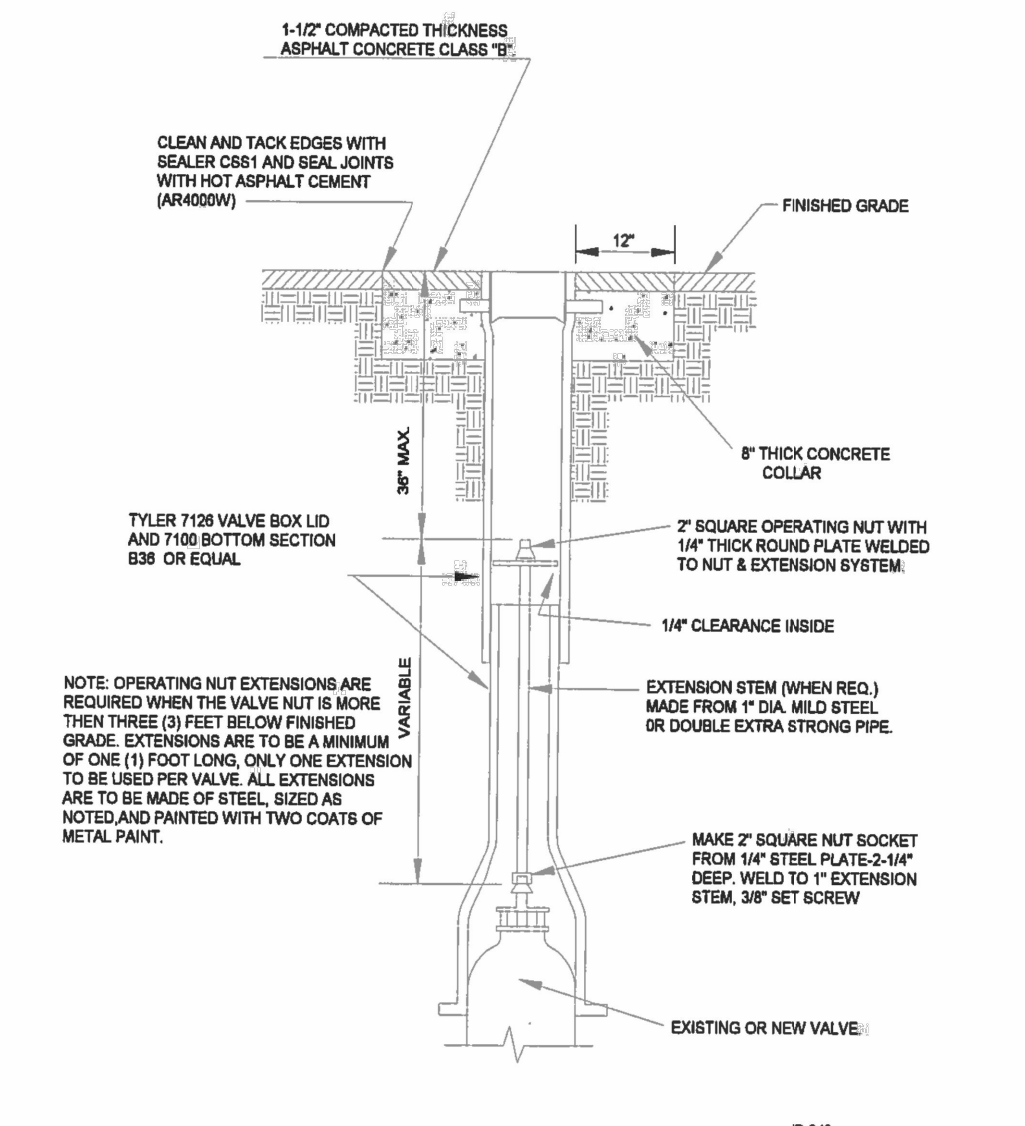
12 OF 14



**SECTION TWO - WATER DESIGNS** CITY OF CHELAN

**WATER VALVE BOX SETTING**

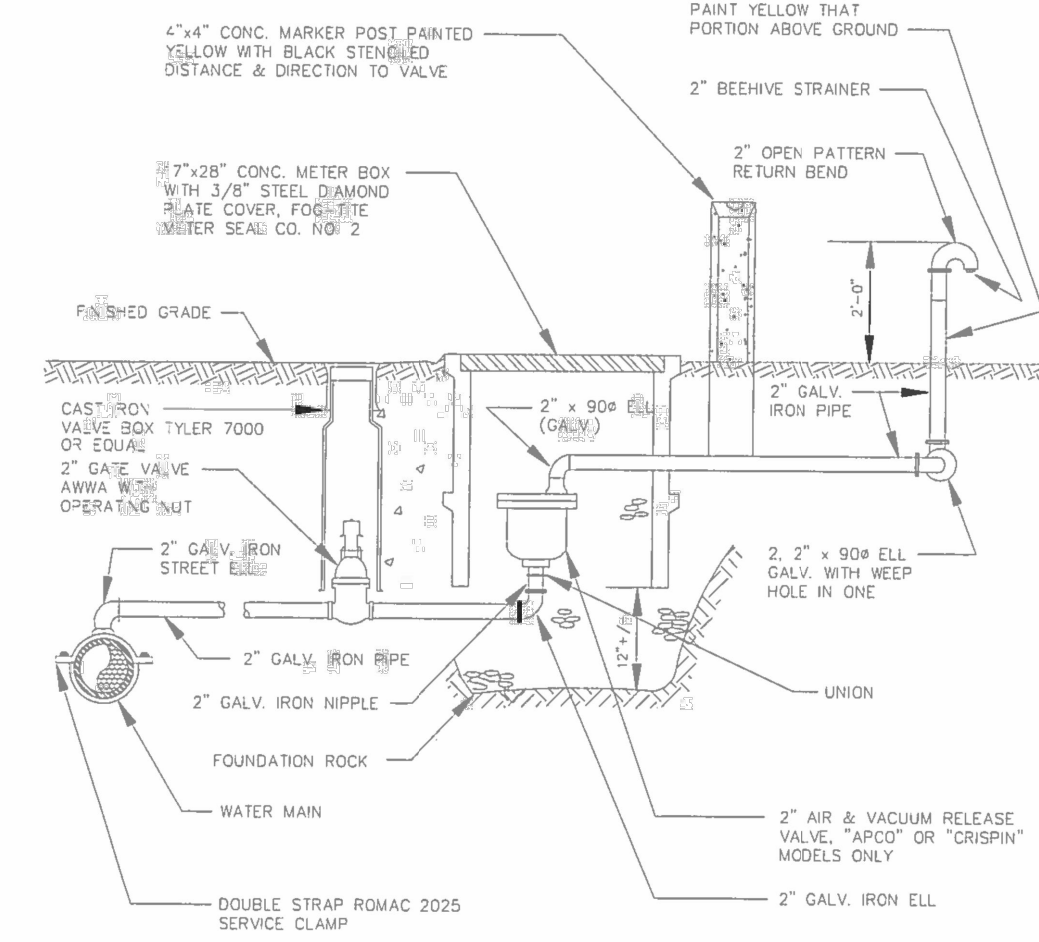
All existing concrete valve boxes shall be replaced with cast iron boxes and adjusted to grade.  
All existing cast iron valve boxes shall be adjusted to grade with cast iron components.  
Alignment of the valve box shall be the developer's responsibility and care shall be taken to ensure that the valve may be operated.



CITY STANDARDS Adopted July, 1998 (Revised 01/05) 2-6

**SECTION TWO - WATER DESIGNS** CITY OF CHELAN

**AIR & VACUUM RELEASE ASSEMBLY**

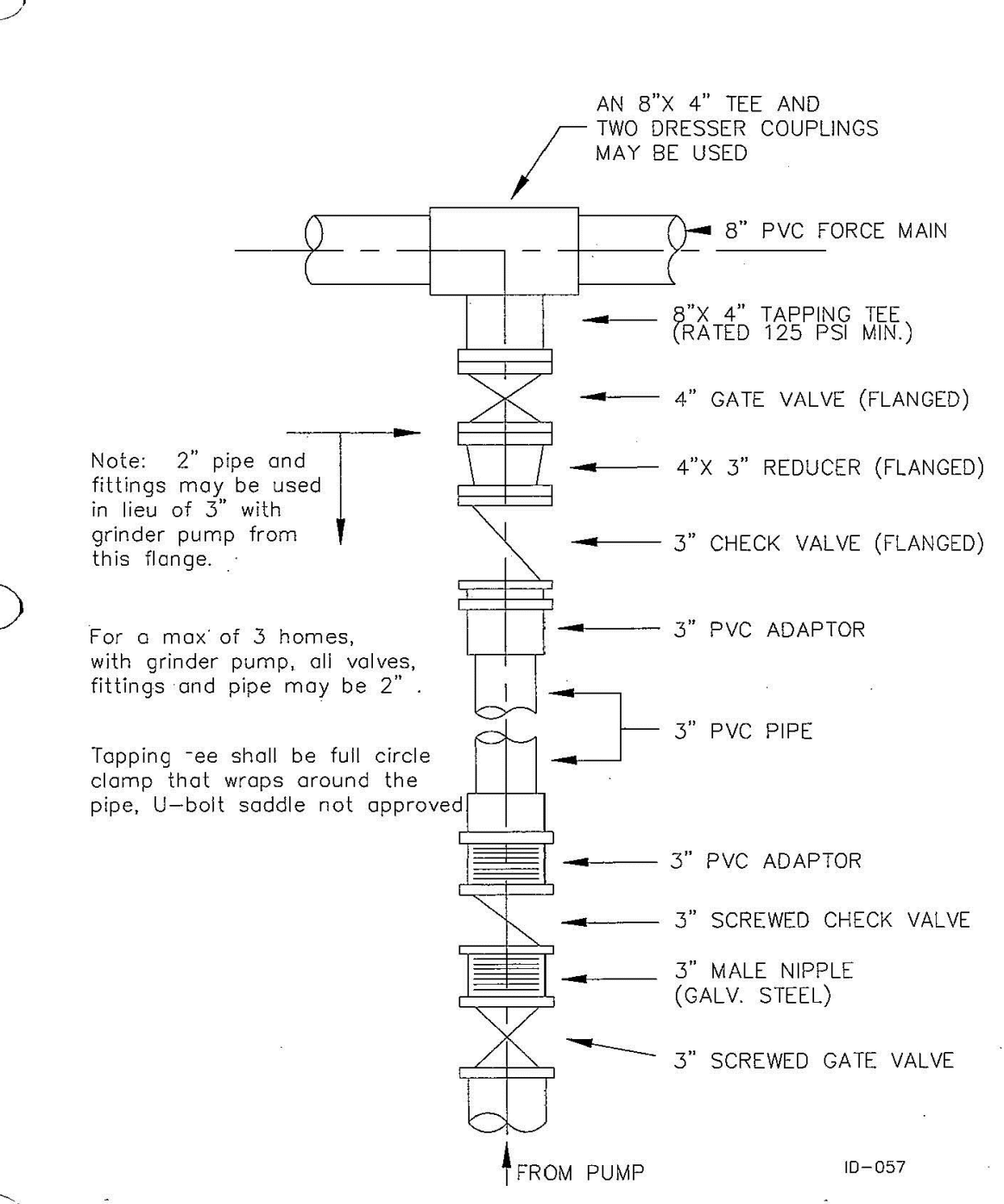


NOTE: AIR & VACUUM VALVE ASSEMBLY MUST BE INSTALLED AT HIGHEST POINT OF LINE, IF HIGH POINT FALLS IN A LOCATION WHERE ASSEMBLY CANNOT BE INSTALLED, PROVIDE ADDITIONAL DEPTH OF LINE TO CREATE HIGH POINT AT A LOCATION WHERE ASSEMBLY CAN BE INSTALLED. GUARDPOSTS TO BE INSTALLED AS NEEDED. DRAWING NOT TO SCALE.

CITY STANDARDS Adopted July, 1998 (Revised 01/05) 2-5

**SECTION FOUR - SEWER DESIGNS** CITY OF CHELAN

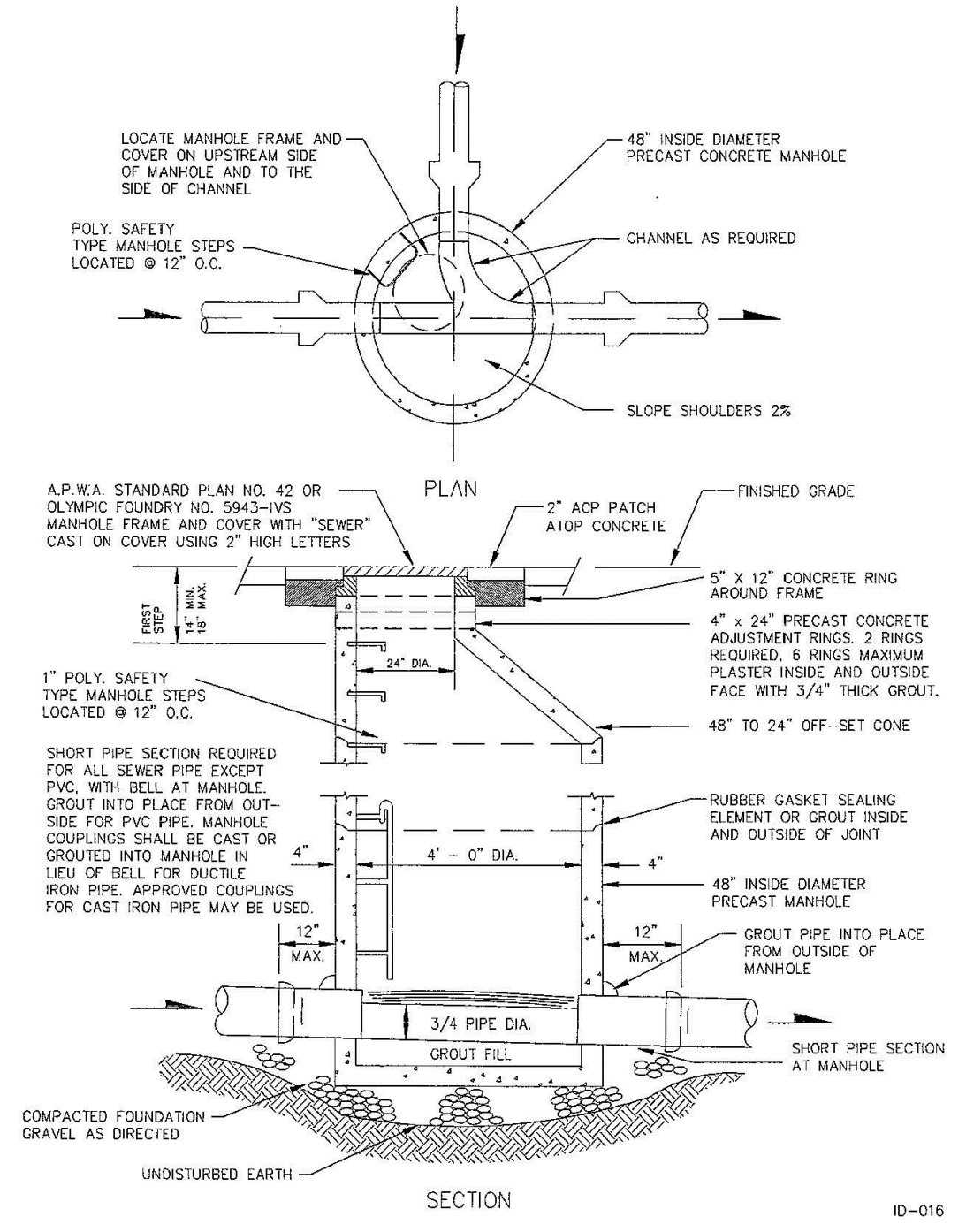
**FORCE MAIN SERVICE CONNECTION**



CITY STANDARDS Adopted July, 1998 (Revised 02/03) 4-10

**SECTION FOUR - SEWER DESIGNS** CITY OF CHELAN

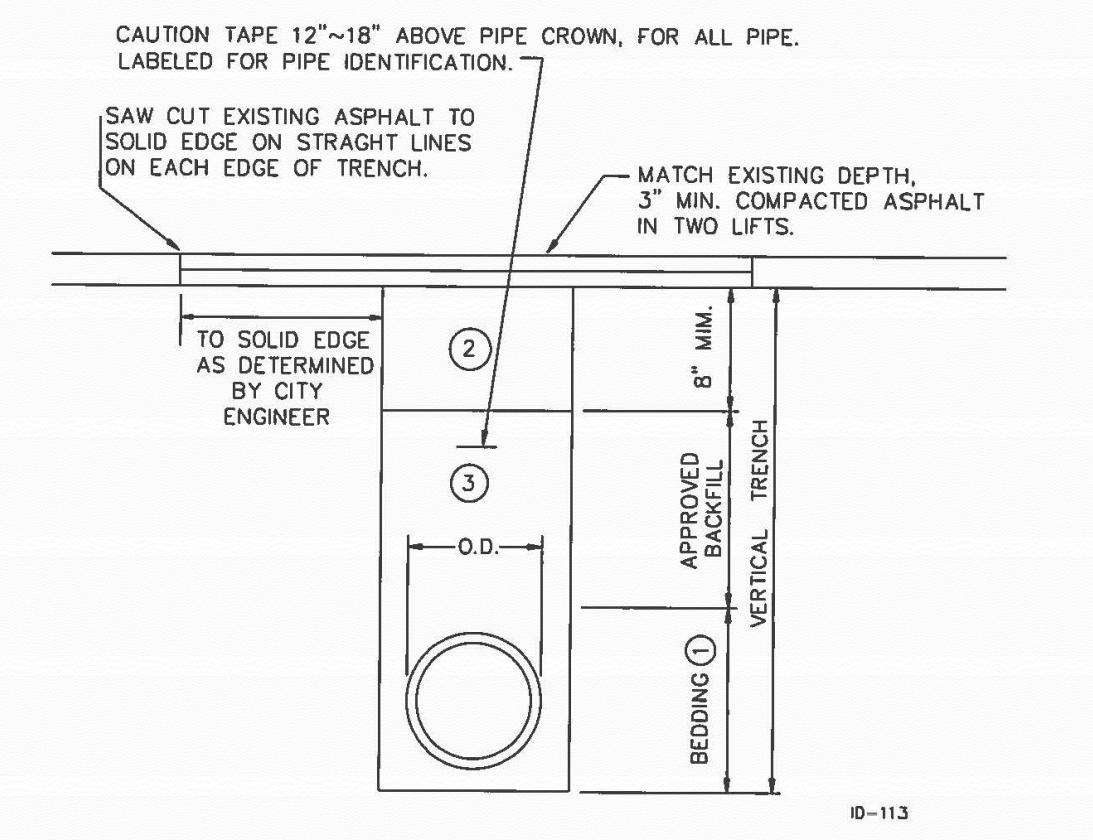
**TYPICAL PRECAST MANHOLE**



CITY STANDARDS Adopted July, 1998 (Revised 02/2010) 4-4

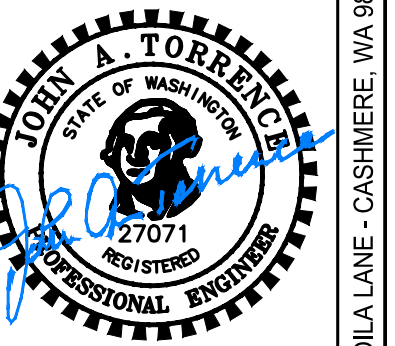
**SECTION TEN - UTILITY DESIGNS** CITY OF CHELAN

**UTILITY TRENCH REPAIR STANDARD**



NOTES:  
1. BEDDING FOR FLEXIBLE PIPE SHALL BE A MINIMUM THICKNESS OF 4\"/>  
2. COMPACTED CRUSHED SURFACING TOP COURSE.  
3. SELECT BACKFILL SHALL BE 5/8-0 CRUSHED ROCK. \*CONTROLLED DENSITY FILL (CDF) MAY BE REQUIRED BY THE CITY ENGINEER AS NEEDED.  
4. BACKFILL MECHANICALLY COMPACTED TO 95% MAX. DENSITY IN 6\"/>  
5. 4\" MIN. COVER ON ALL WATER AND SEWER MAINS.  
6. TRENCH EXCAVATION SAFETY SYSTEM PER WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT.  
\* CDF SHALL CONSIST OF:  
1.5 SACK CEMENT  
1750 LBS. PEAGRAVEL  
1750 LBS. SAND  
6 OZ./100 WEIGHT WATER REDUCING AGENT  
4\" TO 5\" SLUMP  
CDF SHALL BE APPROVED BY THE CITY ENGINEER FOR SPECIFICATIONS AND USE.

CITY STANDARDS Adopted July, 1998 (Revised 01/2015) 10-12



07/07/2021  
117 VOILLA LANE - CASHMERE, WA 98815 - TEL: (509)792-1897 - FAX: (509) 762-3436

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**WATER DETAILS & SEWER DETAILS**  
PARCEL NO. 27-22-14-662-228  
CITY OF CHELAN, WASHINGTON

REV.	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
**2018034**

DESIGNED/DRAWN BY:  
**CG/JB**

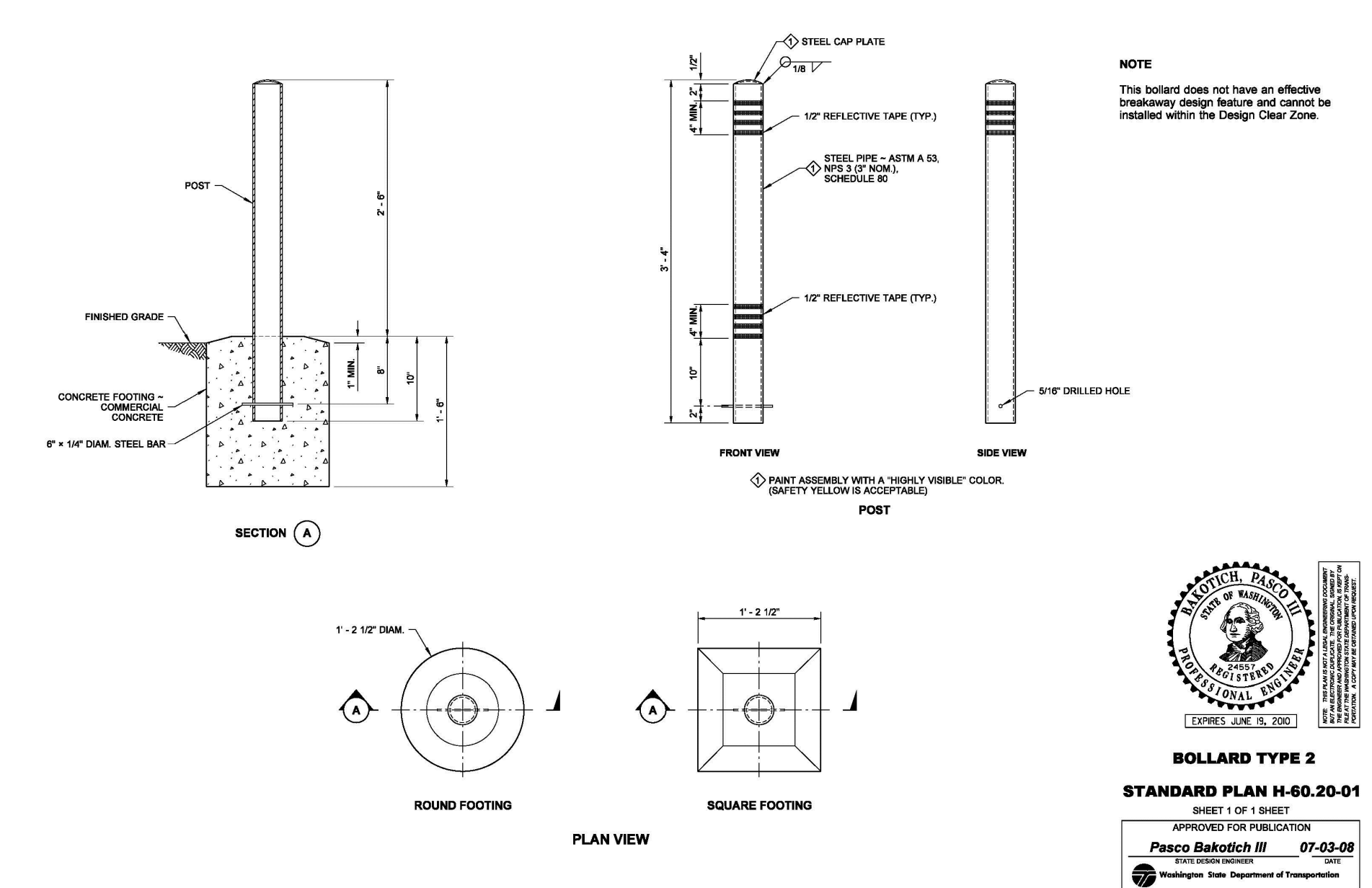
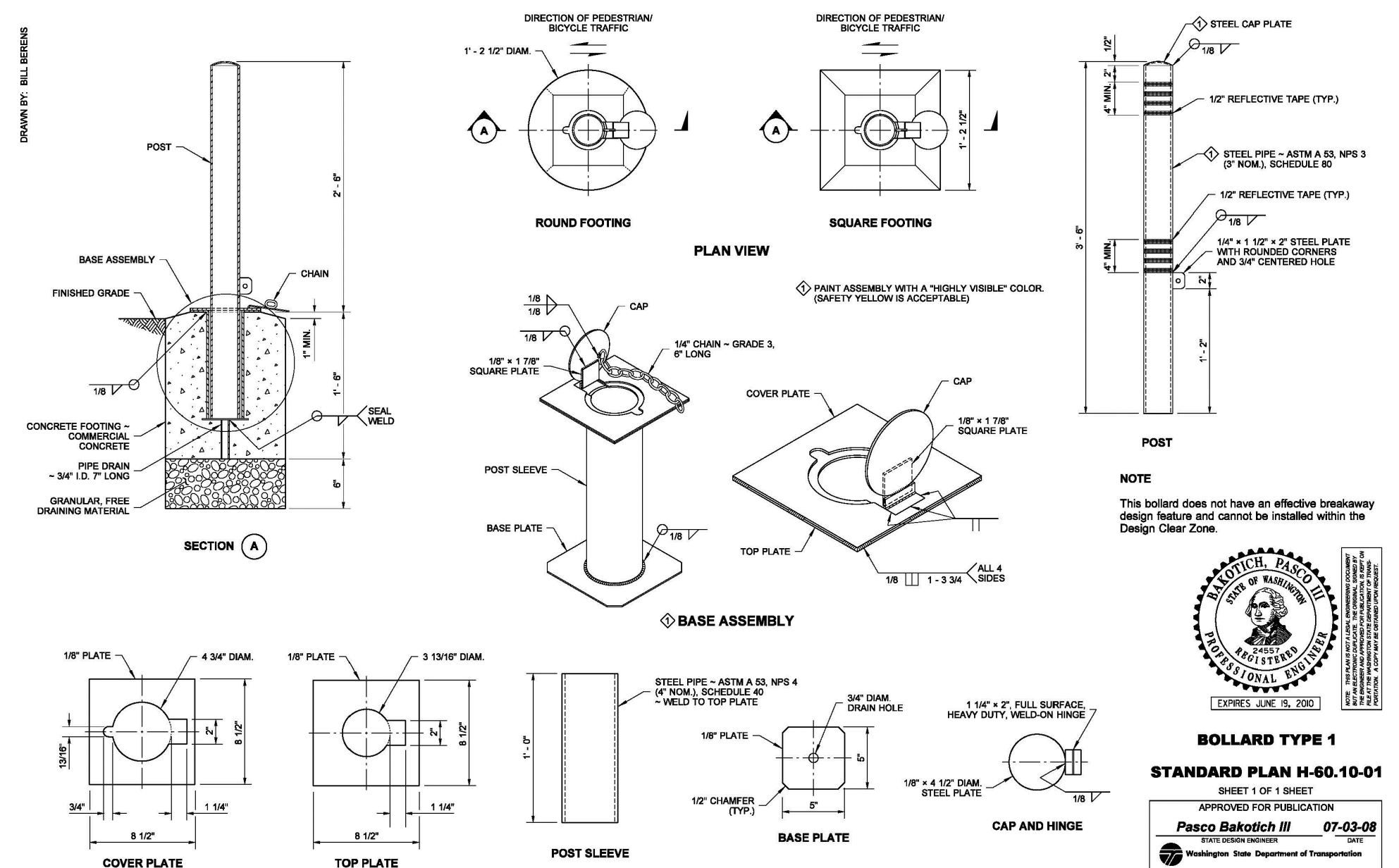
CHECKED BY:  
**JAT**

ISSUE DATE:  
**07/07/2021**

13  
OF  
14

P:\Engineering Projects\2018 2018034 - Chelab Bay Water Improvements\2021-07-07\_CHELAB BAY FE-REV.dwg, Jul 07, 2021, 3:46pm



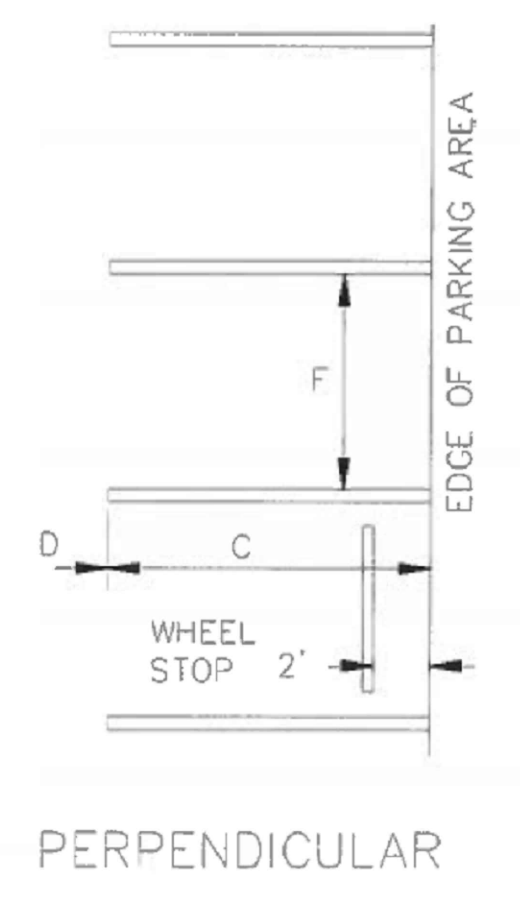


	A	B	C	D	E	F	B'	C'
0°	30'	9'	12'	24'	9'			
90°	58'	20'	18'	9'				
60°	59'	22'	15'	10.5'	9'	55'	20'	

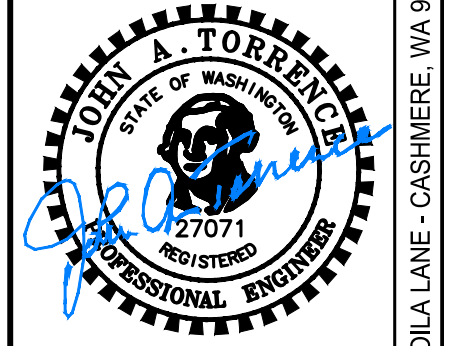
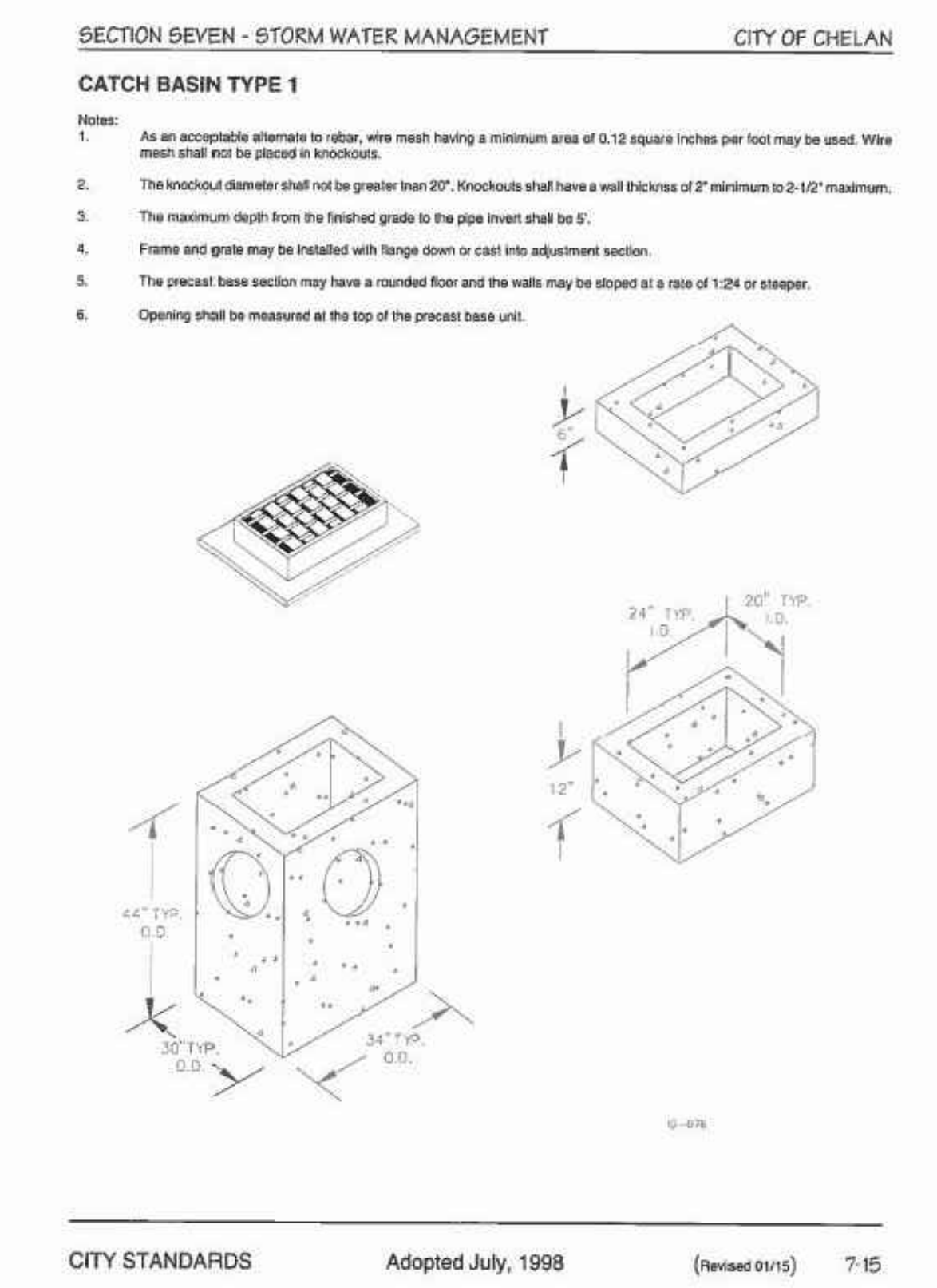
ONE WAY TRAFFIC

	A	B	C	D	E	F	B'	C'
0°	38'	9'	20'	24'	9'			
90°	64'	20'	24'	9'				
60°	64'	22'	20'	10.5'	9'	60'	20'	

TWO WAY TRAFFIC



CITY STANDARDS Adopted July, 1998 (Revised 01/2015) 9-14



07/07/2021

**CHELAN BAY**  
**PRIVATE DRIVE AND SITE IMPROVEMENTS**  
**STORM AND MISCELLANEOUS DETAILS**  
 PARCEL NO. 27-22-14-662-228  
 CITY OF CHELAN, WASHINGTON

REV	DATE	BY	DESCRIPTION

PROJECT NUMBER:  
2018034

DESIGNED/DRAWN BY:  
CG/JB

CHECKED BY:  
JAT

ISSUE DATE:  
07/07/2021

CALL  
 TWO WORKING DAYS  
 BEFORE YOU DIG  
 1-800-424-5555

UTILITIES ARE KNOWN TO EXIST  
 AND NOT ALL ARE SHOWN. VERIFY  
 ALL UTILITIES PRIOR TO CONSTRUCTION.

14  
 OF:  
 14