

FERNDALE VILLAGE HOMES THORNTON ROAD & MALLOY ROAD

BEING A PTN. OF THE SW 1/4, SW 1/4, SEC. 17, TWP. 39N., RGE. 2 E., W.M., CITY OF FERNDALE, WHATCOM COUNTY

LEGEND

- | | |
|--|--|
| | |
|--|--|
- NOTE:
AS-BUILT STORMWATER AND UTILITY INFORMATION
SHOWN PROVIDED BY NORTHWEST SURVEYING &
GPS, INC INFORMATION RECEIVED 12/10/2015

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
FERNDALE VILLAGE HOMES HAVE BEEN INSPECTED
BY FREELAND & ASSOCIATES, INC. AND
CONSTRUCTED IN CONFORMANCE WITH THE PLANS
APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID
DEVELOPMENT AND THE GENERAL SPECIFICATIONS
ADOPTED BY THE CITY OF FERNDALE DEPARTMENT
OF PUBLIC WORKS.

BY: DATE: 2-3-16

ONLY INFORMATION NOTED AS
"AS-BUILT" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

AS-BUILT DRAWING

SHEET INDEX

- | | |
|-----|--|
| C1 | COVER SHEET |
| C2 | EXISTING CONDITIONS |
| C3 | TEMPORARY EROSION & SEDIMENTATION
CONTROL PLAN |
| C4 | TEMPORARY EROSION & SEDIMENTATION
CONTROL DETAILS & SWPPP |
| C5 | SITE PLAN |
| C6 | DRIVEWAY ACCESS "A" PAVING, DRAINAGE
PLAN & PROFILE |
| C7 | DRIVEWAY ACCESS "B" PAVING, DRAINAGE
PLAN & PROFILE |
| C8 | MALLOY ROAD OVERLAY PLAN & PROFILE |
| C9 | THORNTON ROAD OVERLAY PLAN & PROFILE |
| C10 | DETAILS |
| C11 | DETAILS |
| C12 | DETAILS |
| C13 | DETAILS |
| C14 | DETAILS |
| C15 | DETAILS |
| C16 | DETAILS |

- | | |
|----|-------------------|
| L1 | LANDSCAPE PLAN |
| L2 | LANDSCAPE DETAILS |

APPROVED

FEB 12 2016

BY: CITY OF FERNDALE

SURVEY

LAND DESCRIPTION:
LOT 3, OXFORD SHORT PLAT (PHASE II)
LOT LINE REVISION ACCORDING TO THE
MAP THEREOF, RECORDED IN BOOK 22
OF SHORT PLATS, PAGE 92, UNDER
AUDITOR'S FILE No. 901213107,
RECORDS OF WHATCOM COUNTY,
WASHINGTON, BEING A PORTION OF THE
SOUTHWEST QUARTER OF SECTION 18,
TOWNSHIP 39 NORTH, RANGE 2 EAST
OF W.M.

SITUATE IN WHATCOM COUNTY,
WASHINGTON.

SUBJECT TO AND/OR TOGETHER WITH
ALL EASEMENTS, COVENANTS,
RESTRICTIONS AND/OR AGREEMENTS OF
RECORD, OR OTHERWISE.

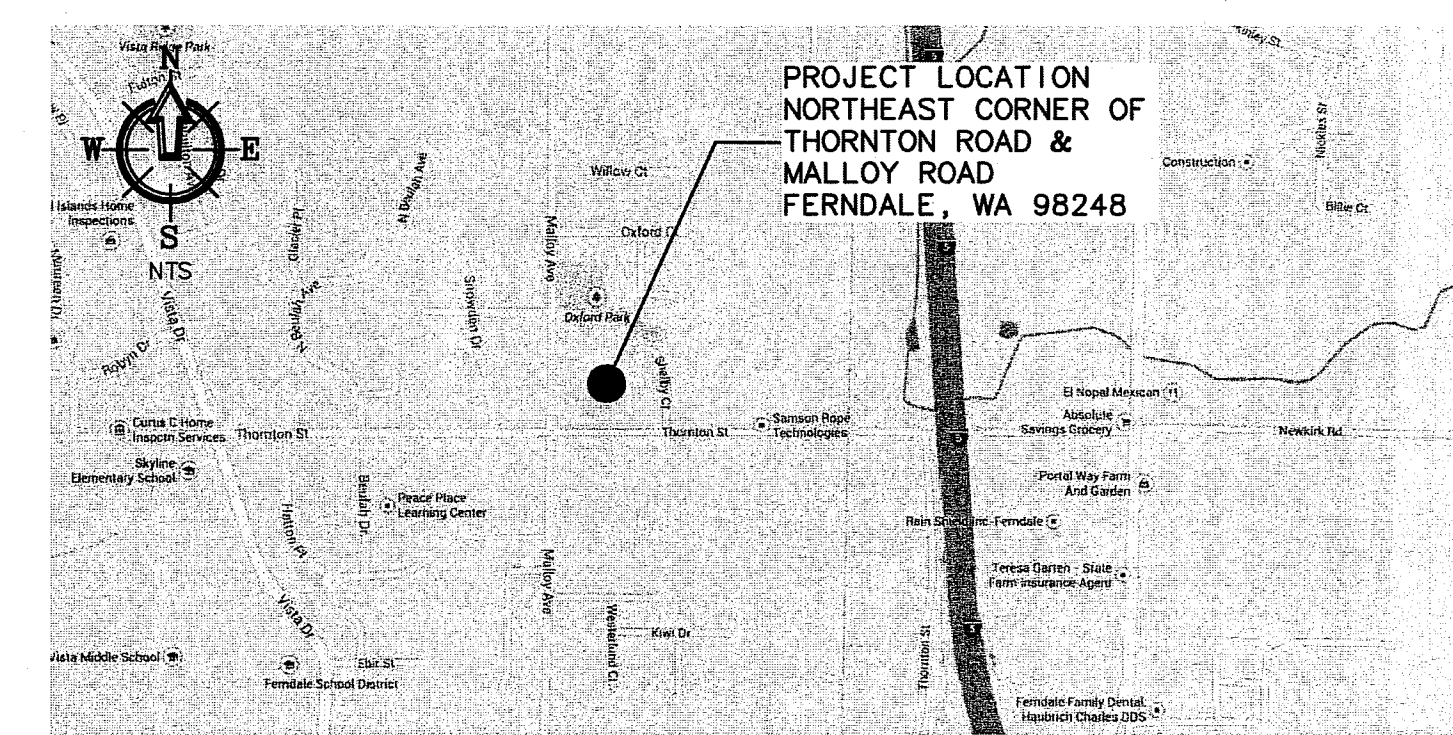
SURVEYORS NOTES:
1. THIS SURVEY WAS PERFORMED BY
STANDARD FIELD TRAVERSE SURVEY
USING A NIKON NPL-352 TOTAL STATION WITH A
CARLSON EXPLORER 600
COLLECTOR/FIELD COMPUTER IN JULY
OF 2013.

2. THIS SURVEY TIED INTO STREET
MONUMENTATION AS SHOWN AND LOT
CORNERS AS SHOWN AND REPLIED UPON
THE CITY OF FERNDALE SURVEY
MONUMENT NETWORK FOR BASIS OF
BEARINGS.

3. THIS SURVEY WAS COMPLETED
WITHOUT THE BENEFIT OF A CURRENT
TITLE REPORT AND DOES NOT PURPORT
TO SHOW ANY OR ALL EASEMENTS THAT
A CURRENT TITLE REPORT MIGHT
REVEAL.

4. VERTICAL DATUM IS PER THE CITY
OF FERNDALE SURVEY MONUMENT
NETWORK (NGVD29).

VICINITY MAP



PROJECT INFORMATION

OWNER

JOHN FRIBERG
6425 W. 20TH AVE
FERNDALE, WA 98248
(360) 815-0314

SURVEYOR

NORTHWEST SURVEYING & GPS, INC.
JEROME DMEYER, PLS
407 5TH STREET
LYNDEN, WA 98264
(360) 354-1950

CONTRACTOR

FRIBERG CONSTRUCTION, INC.
JOHN FRIBERG
6425 W. 20TH AVE
FERNDALE, WA 98248
(360) 380-4369

CIVIL ENGINEER

FREELAND & ASSOCIATES, INC.
J.P. SLAGLE, PE
220 W. CHAMPION ST., SUITE 200
BELLINGHAM, WA 98225
(360) 650-1408
(360) 650-1401 [FAX]

TAX PARCEL NO.

390217 020015 0000

GENERAL NOTES

GENERAL REQUIREMENTS

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF FERNDALE DEVELOPMENT STANDARDS AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB-SURFACE CONDITIONS AND SOILS TYPES.
- THE SURVEYOR SHALL LAY OUT AND SET ANY CONSTRUCTION STAKES AND MARKS NEEDED TO ESTABLISH THE LINES, GRADES, SLOPES OR CROSS-SECTIONS AS SHOWN ON THE PLANS OR AS STAKED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
- WHEN THE CONTRACTOR CONSIDERS THE WORK PHYSICALLY COMPLETE AND READY FOR FINAL INSPECTION, THE CONTRACTOR SHALL REQUEST THAT CITY INSPECTOR SCHEDULE A FINAL INSPECTION. THE INSPECTOR WILL MAKE A FINAL INSPECTION AND NOTIFY THE CONTRACTOR IN WRITING OF ALL PARTICULARS IN WHICH THE FINAL INSPECTION REVEALS THE WORK INCOMPLETE OR UNACCEPTABLE. THE CONTRACTOR SHALL IMMEDIATELY TAKE SUCH CORRECTIVE MEASURES AS ARE NECESSARY TO REMEDY THE LISTED DEFICIENCIES.
- BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN THE CONTRACTOR, OWNER, CITY ENGINEER AND PROJECT ENGINEER. (MINIMUM 3 DAYS PRIOR TO STARTING WORK)
- A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23-PUBLIC CONVENIENCE AND SAFETY, SHALL APPLY.
- PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
- NO WORK SHALL OCCUR BETWEEN 7:00 PM & 7:00 AM.
- ALL HARD SURFACED PAVEMENTS MUST BE REPAIRED AT THE CLOSE OF EACH WORK DAY. THE REPAIRS CAN BE TEMPORARY WITH ASPHALT COLD MIX OR PERMANENT WITH HOT MIX ASPHALT OR CONCRETE. ALL REPAIRS SHALL BE ACCORDING TO CITY OF FERNDALE DRAWING R-11.
- ALL WORK MUST BE INSPECTED BY A REPRESENTATIVE OF THE CITY OF FERNDALE ENGINEERING DIVISION, AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS IN ACCORDANCE WITH SECTION 302 OF THE DEVELOPMENT STANDARDS.
- THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
- AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDALE DATUM-VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.
- METHOD OF SURVEY, SURVEY DATA, AND SURVEY EQUIPMENT UTILIZED TO CREATE THE BASE MAP/EXISTING CONDITIONS ARE NOTED ON SHEET C2 OF THIS PLAN SET.

GENERAL REQUIREMENTS CONTINUED

- THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CALL 1-800-424-5555 FOR UTILITY LOCATE 48 HOURS PRIOR TO WORK. CONTRACT TO HOLD. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL ADJACENT UTILITIES WHICH INCLUDE BUT ARE NOT LIMITED TO: WATER, SEWER, STORM SEWER, POWER, TELEPHONE, CABLE TV, IRRIGATION, AND STREET LIGHTING. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISTURBED BY THE PROJECT UPON COMPLETION OF THE PROJECT.
- A REVOCABLE ENCROACHMENT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING WORK IN THE PUBLIC RIGHT-OF-WAY.

BASES

- GRAVEL BASES AND BALLAST MAXIMUM PARTICLE SIZE PASSING THE U.S. NO. 200 SIEVE SHALL NOT EXCEED 5%.
- BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY.
- THE CONTRACTOR OR PROPONENT SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

PAVEMENTS

- WHERE SHOWN ON THE PLANS, PAVEMENT MARKINGS SHALL BE OBLITERATED UNTIL BLEMISHES CAUSED BY THE PAVEMENT MARKING REMOVAL CONFORM TO THE COLORATION OF THE ADJACENT PAVEMENT.
- SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
- A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
- ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT.
- ASPHALT CONCRETE PAVEMENT SHALL NOT BE PLACED NOR COMPACTED DURING HOURS OF DARKNESS.
- SUBGRADE SHALL BE CERTIFIED IN WRITING BY THE ENGINEER PRIOR TO PAVING.

WATER MAINS

- TEST PRESSURE FOR WATERMAIN ACCEPTANCE SHALL BE 225 p.s.i. AT THE HIGHEST POINT ON THE WATER LINE AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. ALL PURIFICATION ACCEPTANCE TESTING SHALL BE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. THE PIPE WILL NOT PASS UNLESS A ZERO BACTERIA COUNT IS OBTAINED FOR TWO CONSECUTIVE TESTS 24 HOURS APART.
- ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF WSDOT STANDARD SPECIFICATIONS.
- ALL BACKFILL SHALL BE IMPORTED GRAVEL COMPACTED TO 95% OF MAXIMUM DENSITY AND SHALL CONFORM TO SECTION 2-09 OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
- ALL PIPE SHALL HAVE A MINIMUM COVER OF 3.0 FEET.

EARTHWORK

- THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER. IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL ENGINEERING STUDY.
- MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.

EARTHWORK CONTINUED

- THE UNSUITABLE MATERIAL NOT FIT FOR A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.

STORM DRAINAGE

- ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT 7-08. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED PIPE BEDDING TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
- ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
- ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- ALL DRIVEWAY CULVERTS LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH. CULVERTS SHALL HAVE BEVELED END SECTIONS PER WSDOT.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).
- EACH STORM STUB MUST BE CAPPED WITH A WATERTIGHT PLUG. EACH STORM STUB MUST BE MARKED FOR LOCATION WITH A 2" DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) AND STENCILED WITH THE WORD "STORM" WITH THE PIPE INVERT ELEVATION INDICATED ON THE MARKER. THE LOCATION MARKER MUST BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

SANITARY SEWER

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF FERNDALE DEVELOPMENT STANDARDS SECTION 5 AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.
- FOUR INCH THROUGH TWELVE-INCH PIPE SHALL BE PVC PIPE CONFORMING TO ASTM D-3034, SDR-35 OR EQUAL. PIPE JOINTS SHALL BE MADE WITH FLEXIBLE GASKETS CONFORMING TO THE REQUIREMENTS OF SECTION 7-17.3G (2)E OF THE STANDARD SPECIFICATIONS.
- TRENCH EXCAVATION SHALL BE ACCORDING TO SECTION 7-08.3(1) OF THE STANDARD SPECIFICATIONS.
- THE BEDDING SHALL BE PEA GRAVEL PER SS-1.
- PIPE LAYING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(2)B OF THE STANDARD SPECIFICATIONS.
- ALL SIDE SEWERS SHALL BE CONSTRUCTED ACCORDING TO THE CITY OF FERNDALE STANDARD PLAN SS-6 THROUGH SS-8. CONNECT SIDE SEWERS PER COF DWG SS-12.
- ALL TRENCH BACKFILL UNDER EXISTING OR FUTURE PAVING SHALL BE BANK RUN GRAVEL, CLASS "B" AND SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
- ALL SEWER PIPE WILL BE PRESSURE TESTED AND WILL BE SCANNED BY MEANS OF A TV CAMERA PRIOR TO ACCEPTANCE BY THE CITY OF FERNDALE.
- ALL MANHOLES WILL BE ACCORDING TO THE CITY OF FERNDALE STANDARD PLAN NO. SS-2, THROUGH SS-4 AND WSDOT MH TYPE 1 STANDARD PLAN B-15.20.01.
- ALL CLEANOUTS SHALL BE ACCORDING TO CITY OF FERNDALE STANDARD PLAN NO. SS-5.
- ALL HARD SURFACED PAVEMENTS MUST BE REPAIRED AT THE CLOSE OF EACH WORK DAY. THE REPAIRS CAN BE TEMPORARY WITH ASPHALT COLD MIX OR PERMANENT WITH HOT MIX ASPHALT OR CONCRETE.
- ALL WORK MUST BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE CITY OF FERNDALE PUBLIC WORKS, AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS. 13. ALL TESTING SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE CITY OF FERNDALE.
- EACH SIDE SEWER STUB MUST BE CAPPED WITH A WATERTIGHT PLUG. EACH SIDE SEWER STUB MUST BE MARKED FOR LOCATION WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER" WITH THE PIPE INVERT ELEVATION INDICATED ON THE MARKER. THE LOCATION MARKER MUST BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

ABBREVIATIONS

1' / 1"	ONE FOOT/ONE INCH	K	LENGTH OF VERTICAL CURVE PER PERCENT GRADE DIFFERENCE
AC	ACRE	PT/POT	POINT OF TANGENCY
AD	ABSOLUTE VALUE OF THE ALGEBRAIC	PVC	POLYVINYL CHLORIDE
AF#	GRADE DIFFERENCE	PVI	POINT OF VERTICAL INFLECTION
APPROX	AUDITOR'S FILE NUMBER	PWR	POWER
ASB/AB	AS-BUILT	R	RADIUS
ASPH	ASPHALT	R/C	REBAR WITH CAP
BLDG	BUILDING	RCR	REINFORCED CONCRETE PIPE
BMP	BEST MANAGEMENT PRACTICE	RET	RETAINING
BNDRY	BOUNDARY	RM	RIGHT-OF-WAY
BVCS	BEGINNING OF VERTICAL CURVE STATION	RPP	REDUCED PRESSURE PRINCIPAL
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION	RR	RAILROAD
CC	CURB OUT	R/S	SOUTH
CB	CATCH BASIN	SAN	SANITARY
CL	CENTERLINE	SCH	SCHEDULE
CM	CORRUGATED METAL PIPE	SD	STORM DRAIN
CONTR	CONTRACT	SDCB	STORM DRAIN CATCH BASIN
CO	CLEANOUT	SDCO	STORM DRAIN CLEANOUT
COR	CORNER	SDMH	STORM DRAIN MAN HOLE
CORP	CORRUGATED POLYETHYLENE PIPE	SERV	SERVICE
CONC	CONCRETE	STND/STD	STANDARD
CSTC	CRUSHED SURFACING TOP COURSE	SS	SANITARY SEWER
CULV	CULVERT	SSCO	SANITARY SEWER CLEANOUT
#	DIAMETER	SDMH	SANITARY SEWER MANHOLE
DEMO	DEMOLITION	ST	STREET
DI	DUCTILE IRON	TBM	TEMPORARY BENCH MARK
DWGS	DRAWINGS	TC	TOP OF CURB
E	EAST	TEL/TELE	TELEPHONE
EA	EACH	TESC	TEMPORARY EROSION & SEDIMENTATION CONTROL
ELEV	ELEVATION	TP	TOP OF PAVEMENT
ENC	REVOCABLE ENCROACHMENT PERMIT	TS	TOP OF SIDEWALK
EP/EOP	EDGE OF PAVEMENT	TYP	TOP OF WALL
ESMT	EASEMENT	UG	UNDERGROUND
EVCS	END OF VERTICAL CURVE STATION	UG	UNDERGROUND
EVCE	END OF VERTICAL CURVE ELEVATION	VEG	VEGETATION
EX/EXIST	EXISTING	W	WEST
FDC	FIRE DEPARTMENT CONNECTION	WA	WATER
FTE/FF	FINISH FLOOR ELEVATION	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
FG	FINISH GRADE		
FD	FIRE HYDRANT		
FND	FOUND		
GND	GROUND		
GUTT	GUTTER		
HP	HIGH POINT		
INVERT	INVERT ELEVATION		
IE/LE	INVERT ELEVATION		
IRIG	IRRIGATION		
LF	LINEAR FOOT		
L.S.	LAND SURVEYOR		
MAX	MAXIMUM		
MIN	MINIMUM		
MON	MONUMENT		
NIC	NOT IN CONTRACT		
N	NORTH		
No./#	NUMBER		
ON	ON CENTER		
PC	POINT OF CURVATURE		
PCL	PARCEL		
PERF	PERFORATED		
PI	POINT OF INTERSECTION		
PIV	POINT INDICATOR VALVE		
POB	POINT OF BEGINNING		
PP	POWER POLE		
PROP	PROPERTY		

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

220 W. Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

**FREELAND
& ASSOCIATES**

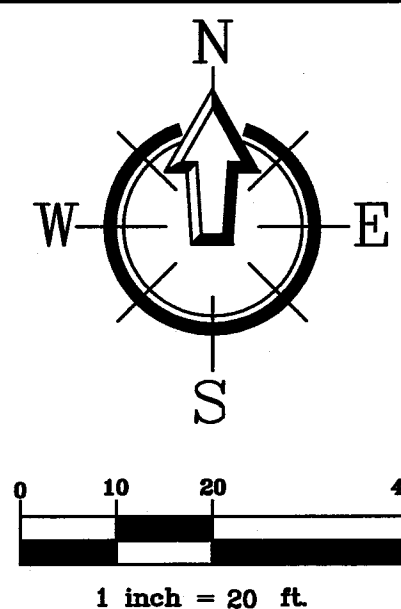


13022AB1.DWG

DATE: 1-27-2016

JOB #: 13022

SHEET: C1



WATER METER X2
SDCB
RIM EL.=113.85'
INV. N. 8" PVC. EL.=112.0'
INV. S. 8" PVC. EL.=111.8'

CONCRETE DRIVE

MALLOY RD.

RIGHT-OF-WAY CENTERLINE
S 01°21'35"W 328.73'

S 01°21'35"W
328.73'

CAP EL.=119.55'

FOUND CAPPED REBAR
MARKED "BPS&E LS.12870"
N88°E @ 0.3' OF CALC. CAP
N88°16'39"W EL.=107.27'
150.00'

PARCEL NO.
390217 020038

PYRAMIDAL TREES

CASCADE PEAK ESTATES DIVISION III

PARCEL NO.
390217 033032

PARCEL NO.
390217 044031

INV. 12" CMP.
EL.=90.9'

10" STORM DRAIN EASEMENT
PER AF 910906044

PARCEL NO.
390217 044031

FOUND CAPPED REBAR
MARKED "BPS&E LS.12870"
@ CALCULATED POSITION

SDCB
INV. E. 12" CPDP EL.=81.5'
INV. W. 12" CPDP EL.=81.7'
INV. N. 8" PVC. EL.=81.7'
INV. S. 6" PVC. EL.=81.7'

PARCEL NO.
390217 044033

PARCEL NO.
390217 044077

FOUND CAPPED REBAR
MARKED "BPS&E LS.12870"
S 00°W @ 0.37' OF CALC.
CAP EL.=94.79'

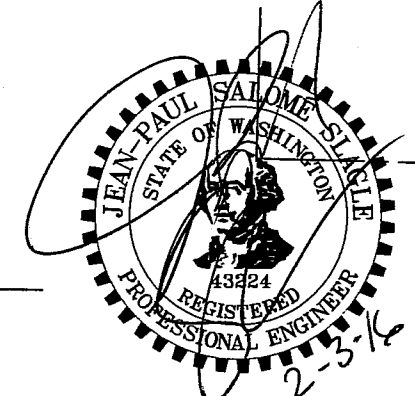
PYRAMIDAL TREES

EXISTING FORCE MAIN NOTE:
THE EXISTING SANITARY SEWER FORCE MAIN TO THE
EAST OF THE MANHOLE IN THORNTON ROAD MUST
BE LOCATED BY THE OWNER OF SAMPSON ROPE OR
THEIR DESIGNER.

THORNTON RD.

APPROVED
FEB 12 2016

BY
CITY OF FERNDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



220 West Champion Street, Suite 200 t: 360.650.1408
Bellingham, WA 98225 f: 360.650.1401
FREELAND & ASSOCIATES

CLIENT:

JOHN FRIBERG
6425 WEST 20TH AVENUE
FERNDALE, WA 98248

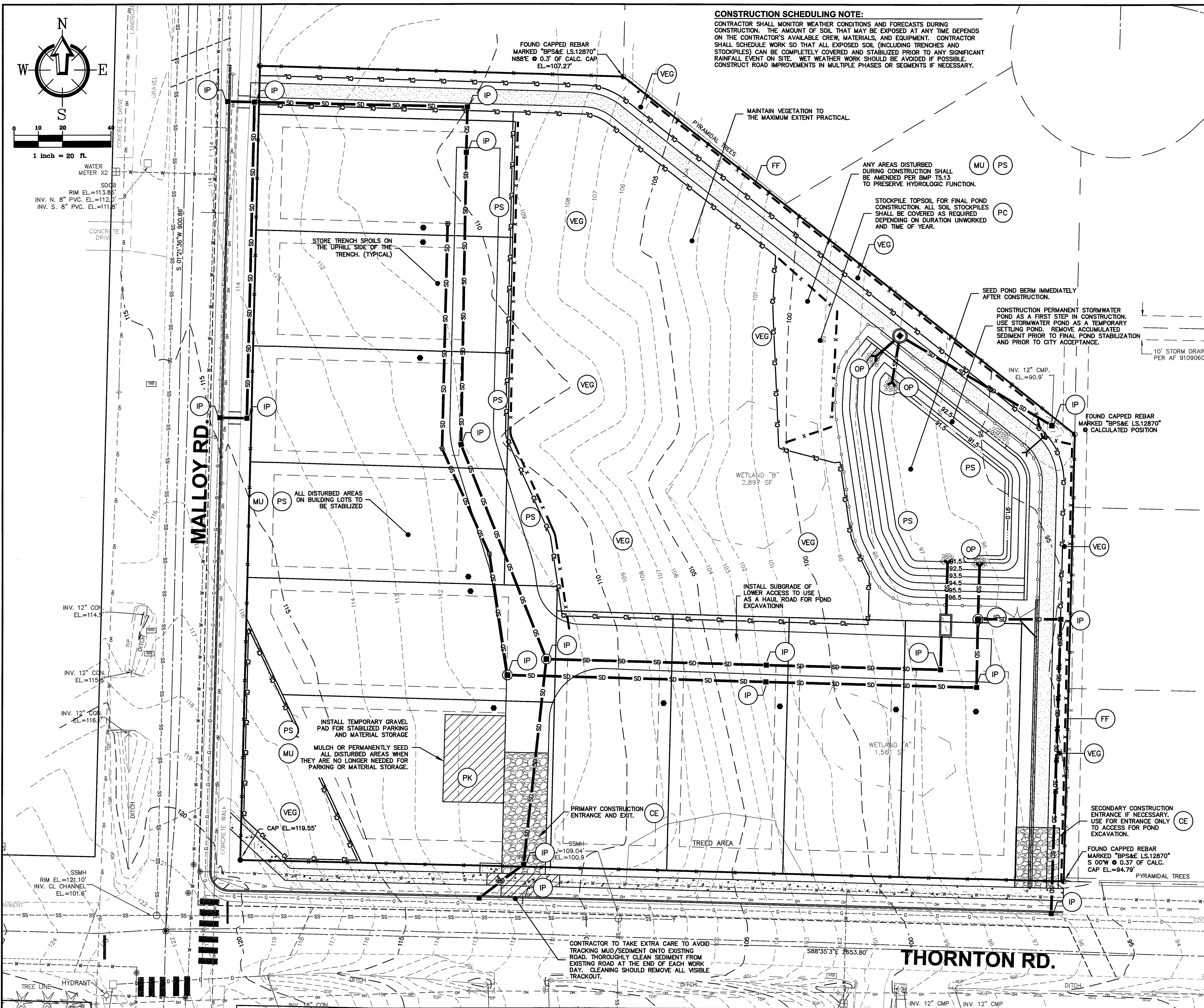
PROJECT LOCATION:

THORNTON ROAD & MALLOY ROAD
FERNDALE, WA 98248

SHEET CONTENTS:

EXISTING CONDITIONS

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C2
SCALE:	H: 1"=20' V: N/A		



CONSTRUCTION SCHEDULING NOTE:
CONTRACTOR SHALL MONITOR WEATHER CONDITIONS AND FORECASTS DURING CONSTRUCTION. THE AMOUNT OF SOIL THAT MAY BE EXPOSED AT ANY TIME DEPENDS ON THE CONTRACTOR'S AVAILABLE CREW, MATERIALS, AND EQUIPMENT. CONTRACTOR SHALL SCHEDULE WORK SO THAT ALL EXPOSED SOIL (INCLUDING TRENCHES AND STOCKPILES) CAN BE COMPLETELY COVERED AND STABILIZED PRIOR TO ANY SIGNIFICANT RAINFALL EVENT ON SITE. WET WEATHER WORK SHOULD BE AVOIDED IF POSSIBLE. CONSTRUCT ROAD IMPROVEMENTS IN MULTIPLE PHASES OR SEGMENTS IF NECESSARY.

CIVIL CONSTRUCTION PHASING PLAN

- BEGIN CLEARING SITE TO INSTALL INITIAL EROSION AND SEDIMENTATION CONTROLS, SUCH AS CONSTRUCTION ENTRANCES, LAY DOWN YARD, SOIL STORAGE AREA, ETC.
- CLEAR STORMWATER POND LOCATION AND APPROPRIATE HAUL ROUTES. STABILIZE SURROUNDING AREA AND INSTALL APPROPRIATE TESC BMPs. CONSTRUCT FINAL STORMWATER POND. UTILIZE STORMWATER POND DURING CONSTRUCTION AS A TEMPORARY SEDIMENT POND.
- BEGIN CLEARING ROADWAY ALIGNMENTS. CLEAR SUFFICIENT AREAS TO INSTALL TESC BMPs.
- ROUGH GRADE ROADWAYS AND INSTALL UTILITIES.
- CONSTRUCT ROADWAYS AND FINAL SITE STABILIZATION.
- STABILIZE POND AND TRANSITION FROM TEMPORARY POND TO PERMANENT STORMWATER POND.
- REMOVE ALL LARGE CONSTRUCTION EQUIPMENT FROM SITE.
- INSTALL PLANTINGS PER LANDSCAPE PLAN.
- REMOVE TEMPORARY EROSION CONTROL.

NOTES:
• TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.

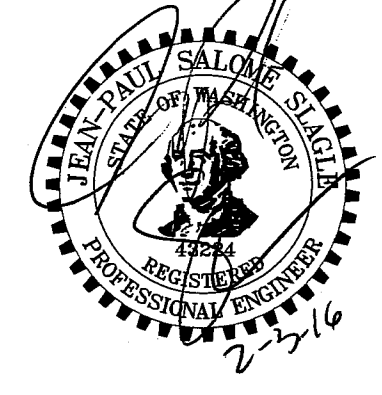
TESC LEGEND

- VEG WSDOE BMP C101 PRESERVING NATURAL VEGETATION
- CE WSDOE BMP C105 STABILIZED CONSTRUCTION EXIT
- PK WSDOE BMP C107 PARKING AREA STABILIZATION
- PS WSDOE BMP C120 TEMPORARY AND PERMANENT SEEDING
- MU WSDOE BMP C121 MULCHING
- PC WSDOE BMP C123 PLASTIC COVERING
- OP WSDOE BMP C209 OUTLET PROTECTION
- IP WSDOE BMP C220 STORM DRAIN INLET PROTECTION
- FF WSDOE BMP C233 SILT FENCE
- CL WSDOE BMP C103 OR BMP C104 CLEARING LIMITS
- SA WSDOE BMP C152 SAWCUTTING AND SURFACE POLLUTION PREVENTION

TEMPORARY EROSION/SEDIMENTATION CONTROL

- A COPY OF THE APPROVED TESC PLAN MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- APPROVAL OF THIS TEMPORARY EROSION & SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STRUCTURES, DRIVEWAYS OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- THE IMPLEMENTATION OF THIS TESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE CONSTRUCTION.
- TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, UNLESS REVISED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD. TESC FACILITIES SHALL BE INSTALLED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
- THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
- THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CESCL AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.
- ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN TEN (10) DAYS.
- THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK OR WITHIN 24 HOURS FOLLOWING A STORM EVENT THAT PRODUCES RUNOFF FROM THE SITE.
- WASH PADS MAY BE NECESSARY TO ENSURE PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- MULCHING OF ANY TYPE SHALL BE INSTALLED PER THE RATES AND STANDARDS PRESENTED IN VOL. II, TABLE 4.1.8 OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, 2012 EDITION BY DEPARTMENT OF ECOLOGY.
- ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- EROSION & SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THIS PLAN. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE CONTRACTORS CESCL OR ENGINEER OF RECORD.
- COVER ALL DIRT/TOPSOIL PILES WITH PLASTIC SHEETING (BMP C123) DURING CONSTRUCTION WHEN NOT IN USE.
- NETS AND/OR EROSION CONTROL BLANKETS (BMP C122) MAY BE USED IN LIEU OF TEMPORARY MULCHING.
- CONSTRUCTION SCHEDULE- PENDING APPROVAL OF PLANS FROM THE CITY OF FERDALE.
- ADDITIONAL BMPs MAY BE USED OR REQUIRED AS CONDITIONS WARRANT. BMPs SHALL BE INSTALLED PER RECOMMENDATIONS IN THE DOE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, CURRENT EDITION.
- FROM MAY 1 THROUGH SEPTEMBER 30, STABILIZE ANY EXPOSED/UNWORKED SOILS WITHIN 7 DAYS. FROM OCTOBER 1 THROUGH APRIL 30, STABILIZE ANY EXPOSED/UNWORKED SOILS WITHIN 2 DAYS.

APPROVED
FEB 12 2016
BY
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF

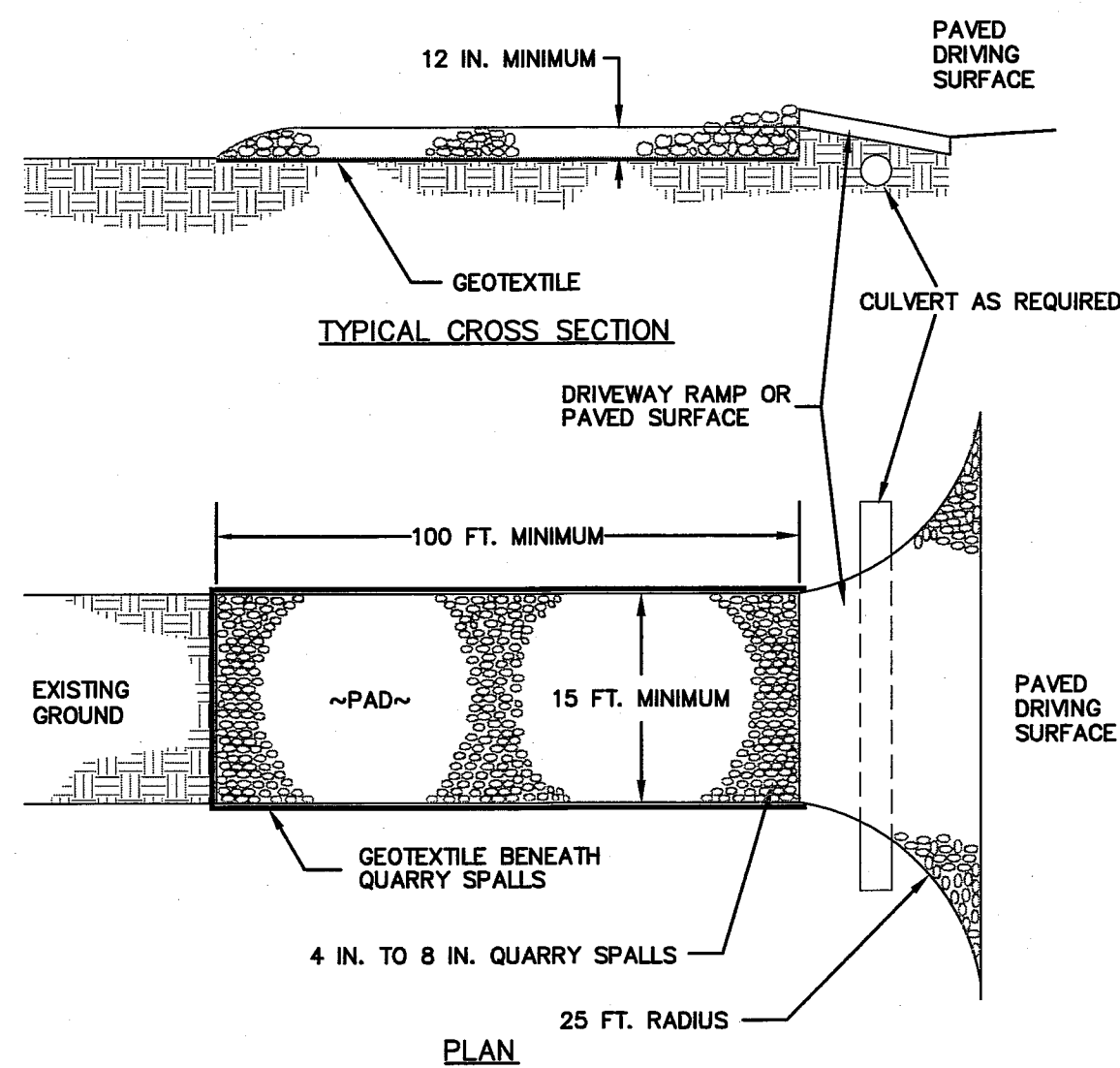
FREELAND & ASSOCIATES
220 West Champion Street, Suite 200 t: 360.650.1408
Bellingham, WA 98225 f: 360.650.1401

CLIENT:
JOHN FRIBERG
6425 WEST 20TH AVENUE
FERDALE, WA 98248
PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:
TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C3
SCALE:	H: 1"=20' V: N/A		

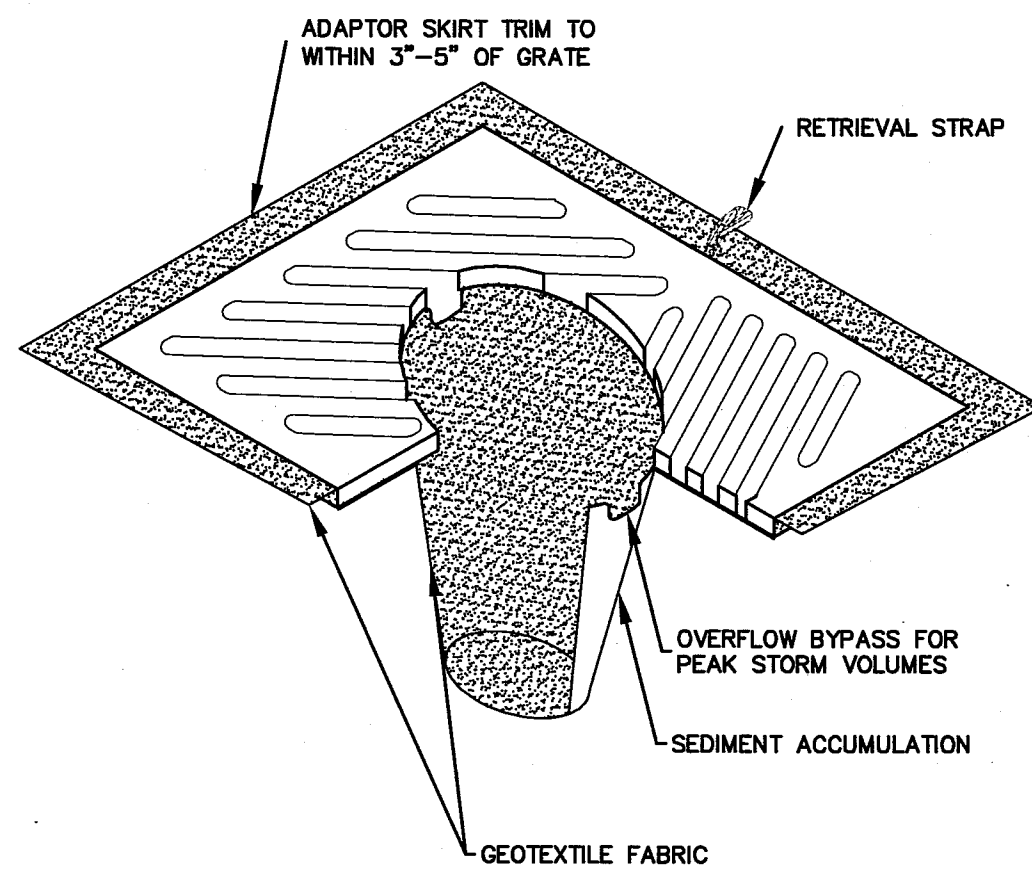
00594.03 2/19/16



NOTES:

- PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY CITY OF FERNDALE.
- PAD SHALL BE INSTALLED IN PLANTING STRIP AS APPROPRIATE.
- PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE OR PER THE DIRECTION OF ENGINEER OF RECORD OR THE CERTIFIED EROSION & SEDIMENTATION CONTROL LEAD (CESCL).
- MINIMUM DIMENSIONS MAY BE MODIFIED AS REQUIRED BY SITE CONDITIONS UPON APPROVAL OF THE ENGINEER OF RECORD.

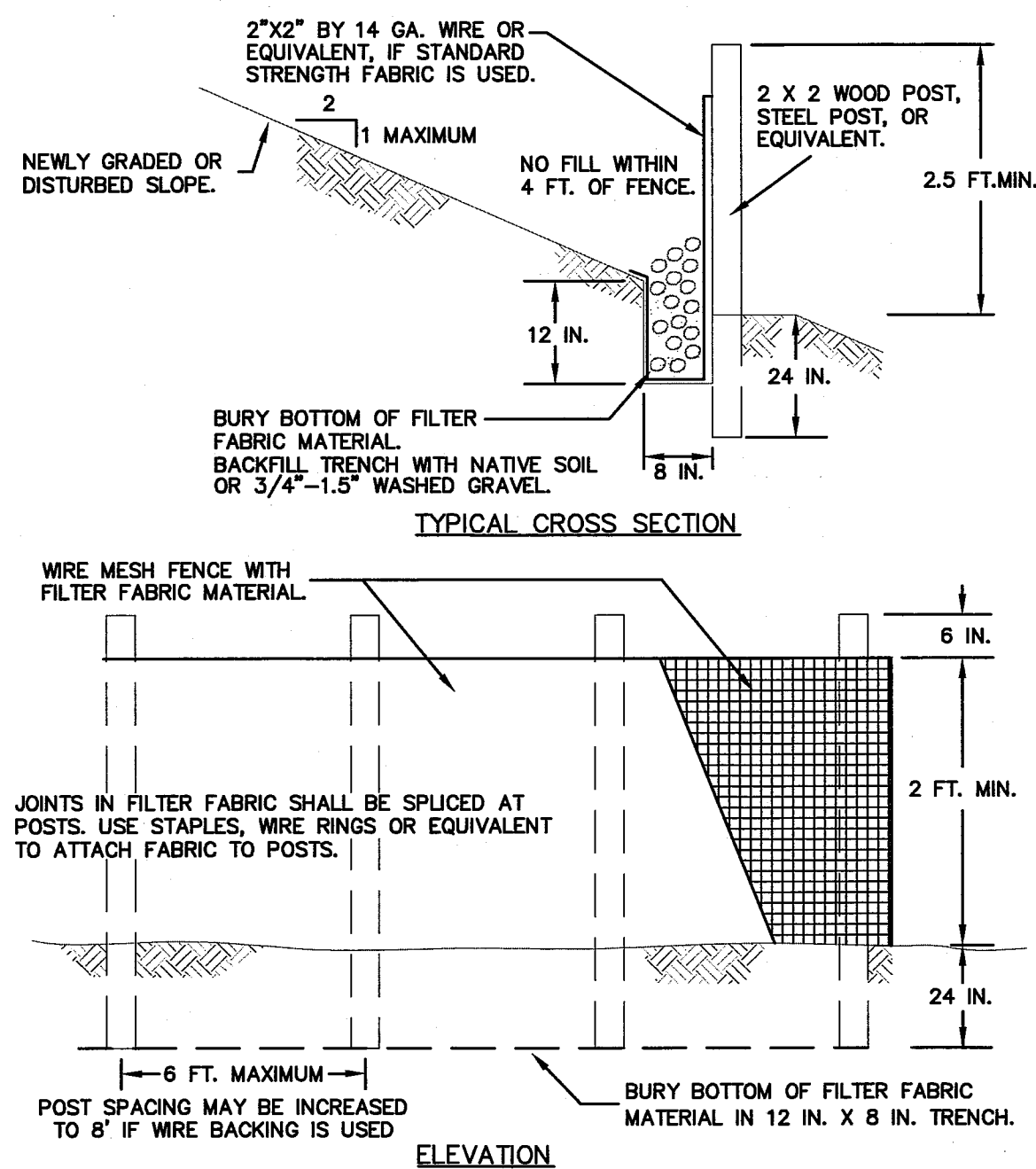
A **STABILIZED CONSTRUCTION ENTRANCE**



NOTES:

- INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
- SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
- SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

B **INLET PROTECTION**



NOTES:

- FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2 : 1.
- JOINTS IN FILTER FABRIC SHALL BE OVERLAPPED 6 INCHES AT POST.
- USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO WIRE FENCE.
- REMOVE SEDIMENT WHEN IT REACHES 1/3 FENCE HEIGHT.

C **SILT FENCE**

APPROVED
FEB 12 2016



STORMWATER POLLUTION PREVENTION PLAN

ELEMENT #1: MARK CLEARING LIMITS

CLEARING LIMITS AND NEARBY SENSITIVE AREAS AND THEIR BUFFERS, WILL BE CLEARLY MARKED PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, WHICH INCLUDES CLEARING AND GRADING. THESE AREAS WILL BE CLEARLY MARKED; BOTH IN THE FIELD AND ON SITE PLANS, TO PREVENT DAMAGE AND OFFSITE IMPACTS.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #1 INCLUDE:

- BMP C101: PRESERVING NATURAL VEGETATION
- BMP C103: HIGH VISIBILITY PLASTIC OR METAL FENCE
- BMP C104: STAKE AND WIRE FENCE

ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS

A SINGLE ENTRANCE POINT WILL BE INSTALLED FOR CONSTRUCTION ACCESS TO THE PROPOSED ONSITE IMPROVEMENTS. IF NECESSARY, A SECOND ACCESS WILL BE INSTALLED FOR ACCESS TO THE POND. EARTHWORK EQUIPMENT WILL REMAIN WITHIN THE DISTURBED AREA TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION TRAFFIC THAT WILL ROUTINELY LEAVE THE SITE (E.G. WORK TRUCKS, PERSONAL VEHICLES) SHALL REMAIN ON PAVED SURFACES TO THE MAXIMUM EXTENT PRACTICABLE. PAVED ROADS & PARKING AREAS SHALL BE CLEANED AT THE END OF EACH DAY. SEDIMENT TRANSPORTED TO ROADS FROM THE SITE SHALL BE SWEEPED AND DISPOSED OF AT A CONTROLLED SEDIMENT DISPOSAL AREA ON SITE OR REMOVED OFF SITE AND DISPOSED AT AN APPROVED FILL SITE. IF STREET WASHING IS NEEDED, IT WILL ONLY OCCUR AFTER SEDIMENT HAS BEEN REMOVED AS DESCRIBED. THE RESULTING WASH WASTEWATER WOULD THEN BE CONTROLLED BY PUMPING IT BACK ON SITE. ALL CONSTRUCTION ACCESS POINTS WILL BE RESTORED TO PRE-CONSTRUCTION OR PROPOSED CONDITIONS.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #2 INCLUDE:

- BMP C105: STABILIZED CONSTRUCTION ENTRANCE
- HOUSEKEEPING/MAINTENANCE BMP: DAILY STREET SWEEPING
- HOUSEKEEPING/MAINTENANCE BMP: BMP C140 DUST CONTROL

ELEMENT #3: CONTROL FLOW RATES

FLOW RATES SHALL BE CONTROLLED TO THE MAXIMUM EXTENT PRACTICAL. CONTRACTOR SHALL PRESERVE VEGETATED AREAS ON THE SITE AS ALLOWABLE THROUGHOUT THE CONSTRUCTION PROCESS. TEMPORARY SEDIMENT TRAPS OR PONDS MAY BE DESIGNED, LOCATED, AND INSTALLED IF THE PROJECT ENGINEER OR CESCL DEEMS NECESSARY.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #3 INCLUDE:

- BMP C241: TEMPORARY SEDIMENT POND

ELEMENT #4: INSTALL SEDIMENT CONTROLS

THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL AND EXISTING VEGETATION WILL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. ELEMENT #1 OF THIS PLAN, INCLUDING IMPLEMENTING PRESERVING NATURAL VEGETATION, WILL HELP RETAIN SOME AREAS IN AN UNDISTURBED STATE. SILT FENCING WILL BE INSTALLED DOWNHILL FROM DISTURBED AREAS TO TRAP AND RETAIN SEDIMENT ON SITE. OTHER SEDIMENT CONTROLS, SUCH AS TEMPORARY SEDIMENT TRAPS, SUMPS, GRAVEL FILTER BERMS, STRAW WATTLES, ETC. MAY BE INSTALLED IF WARRANTED AS CONDITIONS CHANGE ON SITE DURING CONSTRUCTION.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #4 INCLUDE:

- BMP C233: SILT FENCE
- BMP C208: TRIANGULAR SILT DIKE

ELEMENT #5: STABILIZE SOILS

IF CONSTRUCTION OCCURS IN THE DRY SEASON, (5/1 THROUGH 9/30) SOILS WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. IF CONSTRUCTION OCCURS IN THE WET SEASON (10/1 THROUGH 4/30) SOILS WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. WHEN ACTIVE GRADING IS IN PROGRESS, THE DEADLINE FOR SOIL STABILIZATION MAY BE EXTENDED UPON DETERMINING THAT THE LIKELIHOOD OF EROSION IMPACTS IS LOW BASED ON THE TYPE AND AMOUNT OF SOIL EXPOSED, SITE TOPOGRAPHY, POTENTIAL FOR DISCHARGE TO CRITICAL AREAS AND LAKES, AND OTHER FACTORS. IN ADDITION, WEATHER CONDITIONS WILL CONTINUALLY BE MONITORED, INCLUDING BEFORE HOLIDAYS AND WEEKENDS, FOR PURPOSES OF PREPARING THE SITE FOR PREDICTED WEATHER CONDITIONS. BMP'S THAT ARE EFFECTIVE IN STABILIZING SOILS AND PROTECTING THEM FROM EXPOSURE TO RAIN AND WIND OR OTHER CLIMATIC CONDITIONS WILL BE IMPLEMENTED THROUGHOUT THE PROJECT. EVALUATION AND MONITORING OF BMP EFFECTIVENESS WILL OCCUR ON A DAILY BASIS. IN ADDITION, IN THE EVENT OF FORECASTED PRECIPITATION EVENTS, ADDITIONAL MEASURES TO STABILIZE SOILS WILL BE TAKEN.

BMP'S THAT WILL BE CONSIDERED THROUGHOUT CONSTRUCTION INCLUDE BUT ARE NOT LIMITED TO TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED, AND DUST CONTROL.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #5 INCLUDE:

- BMP C120: TEMPORARY AND PERMANENT SEEDING
- BMP C121: MULCHING
- BMP C122: NETS AND BLANKETS
- BMP C123: PLASTIC COVERING
- BMP C124: SODDING
- BMP C125: TOPSOILING
- BMP C140: DUST CONTROL

ELEMENT #6: PROTECT SLOPES

SIGNIFICANT CUT OR FILL SLOPES ARE NOT PROPOSED AS PART OF THIS PROJECT.

ELEMENT #7: PROTECT DRAIN INLETS

STORM DRAIN INLETS ARE PROPOSED AS PART OF THIS PROJECT. OPERABLE STORM DRAIN INLETS ON THE SITE AND WITHIN 500 FEET DOWNSTREAM OF THE CONSTRUCTION AREA ROADS WILL BE PROTECTED SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FILTRATION OR OTHER TREATMENT FOR SEDIMENT. STORM DRAIN INLET PROTECTION WILL BE USED TO DETERMINE THE MOST APPROPRIATE INLET PROTECTION DESIGN FOR THE SITE AND THE DOWNSTREAM AREA.

INLETS WILL BE INSPECTED WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS. INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACED BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE. CONSTRUCTION ACCESS POINTS AND APPROACHES WILL BE MONITORED AND SWEEPED TO MINIMIZE THE POTENTIAL OF SEDIMENT TRANSPORT. IF STREET WASHING OCCURS, THE WASH WASTEWATER WILL BE PUMPED BACK ON SITE.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #7 INCLUDE:

- BMP C220: STORM DRAIN INLET PROTECTION

ELEMENT #8: STABILIZE CHANNELS AND OUTLETS

PERMANENT/TEMPORARY DRAINAGE SWALE/CHANNEL IS NOT PROPOSED AS A PART OF THIS PROJECT. IF A TEMPORARY ON-SITE CONVEYANCE CHANNEL BE NECESSARY, IT WILL BE DESIGNED, CONSTRUCTED, AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED FLOW VELOCITY OF A 2-YEAR, 24-HOUR FREQUENCY STORM.

OUTLETS OF ALL CONVEYANCE SYSTEMS WILL BE PROTECTED AND STABILIZED TO PREVENT EROSION OF OUTLETS AND SWALES. OUTLET PROTECTION WILL BE CONSIDERED FOR PURPOSES OF DESIGNING AND IMPLEMENTING THE MOST EFFECTIVE OUTLET PROTECTION APPROACH.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #8 INCLUDE:

- BMP C202: CHANNEL LINING
- BMP C209: OUTLET PROTECTION

ELEMENT #9: CONTROL POLLUTANTS

WASTE MATERIALS GENERATED ON SITE WILL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER; INCLUDING COVERING SOIL STOCKPILES. ROUTINE INSPECTIONS OF THE WASTE MATERIAL STORAGE AREAS WILL BE CONDUCTED TO MAKE SURE THAT LEAKS OR SPILLS DO NOT OCCUR. ANY LEAKAGE OR SPILLS WILL BE CLEANED UP IMMEDIATELY.

MAINTENANCE OF HEAVY EQUIPMENT INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING AND/OR OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF WILL BE CONDUCTED WITH SPILL PREVENTION MEASURES IN PLACE, INCLUDING CONDUCTING MAINTENANCE ON A TEMPORARY PAD THAT CAN BE USED TO CAPTURE LARGE SPILLS AND THE USE OF DRIP PANS. IN THE EVENT THAT EMERGENCY REPAIRS NEED TO BE PERFORMED AND CLIMATIC CONDITIONS MAY RESULT IN A PRECIPITATION EVENT PRIOR TO THE REPAIR BEING COMPLETED, THE REPAIR AREA, WHICH INCLUDES THE VEHICLE, WILL BE COVERED WITH TARPS OR OTHER PLASTIC SHEETING. DISCHARGES, SPILLS, OR LEAKS WILL BE CLEANED IMMEDIATELY. THE NOTIFICATION PROCEDURE OUTLINED IN THE PERMANENT SITE SWPPP IS AS FOLLOWS:

ALL SPILLS WILL BE REPORTED TO THE DEPARTMENT OF ECOLOGY, SPILL RESPONSE PROGRAM (425) 649-7000.

BMP'S CONSIDERED FOR ELEMENT #9 INCLUDE: SPILL CLEANUP AND RESPONSE PRACTICES

ELEMENT #10: CONTROL DE-WATERING

NO DE-WATERING IS PROPOSED AS PART OF THIS PROJECT. IF NECESSARY, CLEAN, NON-TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO STATE SURFACE WATERS, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. THESE CLEAN WATERS SHOULD NOT BE ROUTED THROUGH A STORMWATER SEDIMENT POND.

HIGHLY TURBID OR CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CONCRETE TREMIE, POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER.

OTHER DISPOSAL OPTIONS, DEPENDING ON SITE CONSTRAINTS, MAY INCLUDE:

- INFILTRATION
- TRANSPORT OFF SITE IN VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS,
- ON-SITE TREATMENT USING CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES,
- SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, OR
- USE OF A SEDIMENTATION BAG WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DEWATERING.

ELEMENT #11: MAINTAIN BMP'S

ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMP'S WILL BE INSPECTED BY THE CESCL, AND SHALL BE MAINTAINED, AND REPAIRED BY THE CONTRACTOR TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH THE RELEVANT BMP IDENTIFIED IN ELEMENTS #1 THROUGH #10. TEMPORARY EROSION AND SEDIMENT CONTROL'S IDENTIFIED ABOVE WILL BE INSPECTED DAILY DURING THE WET SEASON. NEEDED REPAIRS AND MAINTENANCE WILL OCCUR AS SOON AS PRACTICABLE OR, IN THE EVENT OF A FORECAST OF INCLEMENT WEATHER, REPAIRS AND MAINTENANCE WILL OCCUR IMMEDIATELY.

TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S WILL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT WILL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL RESULTING FROM REMOVAL OF BMP'S OR VEGETATION SHALL BE PERMANENTLY STABILIZED.

ELEMENT #12: MANAGE THE PROJECT

CONSTRUCTION EXPOSED AREAS DURING THE CLEARING AND GRADING PROCESS WILL BE MULCHED AS PART OF THE CLEARING AND GRADING ACTIVITIES. CLEARING AND GRADING ACTIVITIES WILL OCCUR AFTER THE APPLICABLE PERMITS HAVE BEEN OBTAINED. REVEGETATION OF EXPOSED AREAS AND MAINTENANCE OF THAT VEGETATION WILL OCCUR AS PART OF THE PLANTING PHASE OF THE PROJECT TO BE INSTALLED AFTER SUB-GRADE ROAD BASE MATERIAL HAS BEEN INSTALLED AND PRIOR TO FINAL GRAVEL SURFACING.

SEASONAL WORK LIMITATIONS

FROM MAY 1 THROUGH SEPTEMBER 30, SOIL WILL NOT BE EXPOSED/UNWORKED FOR 7 DAYS. FROM OCTOBER 1 THROUGH APRIL 30, SOIL WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. IN ADDITION, WEATHER CONDITIONS WILL CONTINUALLY BE MONITORED INCLUDING BEFORE HOLIDAYS AND WEEKENDS FOR PURPOSES OF PREPARING THE SITE FOR PREDICTED WEATHER CONDITIONS. BMP'S THAT ARE EFFECTIVE IN STABILIZING SOILS AND PROTECTING THEM FROM EXPOSURE TO RAIN AND WIND OR OTHER CLIMATIC CONDITIONS WILL BE IMPLEMENTED THROUGHOUT THE PROJECT. INSPECTION AND EVALUATION OF THE EFFECTIVENESS OF THE BMP'S WILL OCCUR ON A DAILY BASIS. IN ADDITION, IN THE EVENT OF FORECASTED PRECIPITATION EVENTS, ADDITIONAL MEASURES TO STABILIZE SOILS WILL BE TAKEN.

COORDINATION WITH UTILITIES AND OTHER CONTRACTORS

THE STORMWATER MANAGEMENT REQUIREMENTS FOR ALL ASPECTS OF THE CONSTRUCTION PROJECT, INCLUDING UTILITIES, WERE CONSIDERED IN PREPARING THE CONSTRUCTION SWPPP.

INSPECTION AND MONITORING

AS PREVIOUSLY MENTIONED, ALL BMP'S WILL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. IN THE EVENT THAT INSPECTION AND/OR MONITORING REVEALS THAT THE BMP'S IDENTIFIED IN THIS CONSTRUCTION SWPPP ARE INADEQUATE, DUE TO THE ACTUAL DISCHARGE OF OR POTENTIAL TO DISCHARGE A SIGNIFICANT AMOUNT OF ANY POLLUTANT, THIS SWPPP SHALL BE MODIFIED, AS APPROPRIATE, IN A TIMELY MANNER.

MAINTENANCE OF THE CONSTRUCTION SWPPP

THE CONSTRUCTION SWPPP WILL BE RETAINED ON-SITE AND WILL BE UPDATED ON A REGULAR BASIS. MODIFICATIONS TO THE CONSTRUCTION SWPPP WILL BE MADE WHENEVER THERE IS A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF ANY BMP.

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No. Date REVISION

By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



FREELAND & ASSOCIATES

220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

CLIENT:

JOHN FRIBERG
6425 WEST 20TH AVENUE
FERNDAL, WA 98248

PROJECT LOCATION:

THORNTON ROAD & MALLOY ROAD
FERNDAL, WA 98248

SHEET CONTENTS:

TEMPORARY EROSION & SEDIMENTATION CONTROL DETAILS & SWPPP

DWG #:

13022SP8.DWG

JOB #:

13022

SCALE:

H: N/A V: N/A

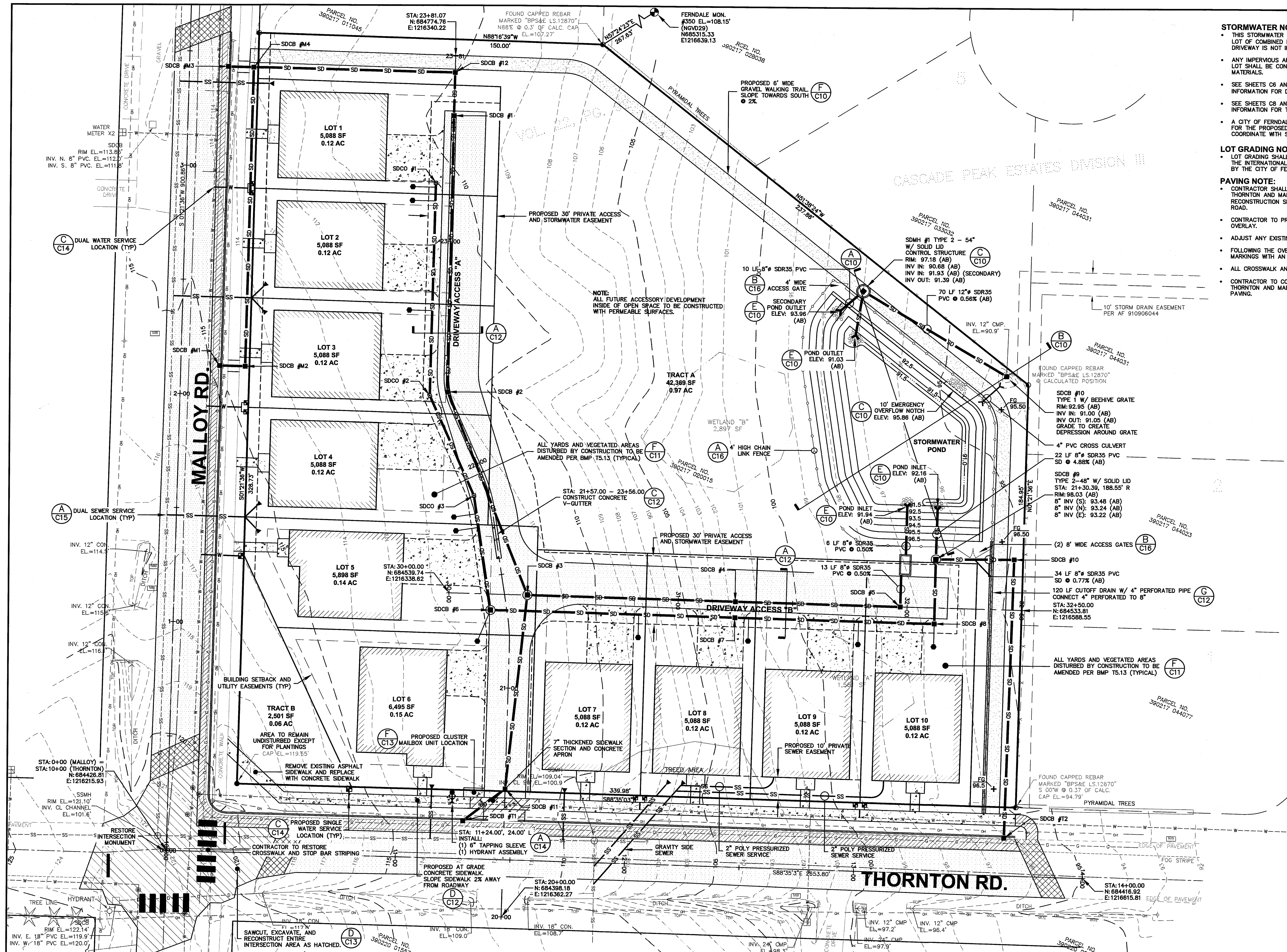
DATE:

1-27-2016

SHEET:

C4

00594.000 2/19/16 stf



STORMWATER NOTE:

- THIS STORMWATER DESIGN ALLOWS FOR 1,800 SF PER LOT OF COMBINED ROOF/SIDEWALK/PATIO/ETC AREA. DRIVEWAY IS NOT INCLUDED IN THIS AREA.
- ANY IMPERVIOUS AREA IN EXCESS OF 1,800 SF PER LOT SHALL BE CONSTRUCTED OF PERVIOUS MATERIALS.
- SEE SHEETS C6 AND C7 FOR STORM DRAIN DESIGN INFORMATION FOR DRIVEWAY ACCESSES "A" AND "B".
- SEE SHEETS C8 AND C9 FOR STORM DRAIN DESIGN INFORMATION FOR THORNTON AND MALLOY ROADS.
- A CITY OF FERDALE BUILDING PERMIT IS REQUIRED FOR THE PROPOSED POND RETAINING WALL. COORDINATE WITH STRUCTURAL ENGINEER.

LOT GRADING NOTE:

- LOT GRADING SHALL CONFORM TO APPENDIX J OF THE INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF FERDALE.

PAVING NOTE:

- CONTRACTOR SHALL COORDINATE WITH CITY OF FERDALE TO LOCATE AND MARK AREAS OF THORNTON AND MALLOY ROADS THAT REQUIRE RECONSTRUCTION PRIOR TO OVERLAY.
- RECONSTRUCTION SHALL BE PER DETAILS D/C13 FOR MALLOY ROAD AND E/C13 FOR THORNTON ROAD.
- CONTRACTOR TO PRE-LEVEL THORNTON AND MALLOY ROADS WITH PRE-LEVEL COURSE PRIOR TO OVERLAY.
- ADJUST ANY EXISTING UTILITY CASTINGS TO MATCH FINAL OVERLAY OR RECONSTRUCTION GRADE.
- FOLLOWING THE OVERLAY OF THORNTON AND MALLOY ROADS, REPLACE EXISTING PAVEMENT MARKINGS WITH AN EQUAL OR APPROVED EQUAL MATERIAL.
- ALL CROSSWALK AND STOP BARS SHALL BE HOT EXTRUDED PLASTIC.
- CONTRACTOR TO COORDINATE WITH DRY UTILITY COMPANIES (PSE, CNG, ETC) PRIOR TO PAVING THORNTON AND MALLOY ROADS. NO OPEN CUTS IN ROADWAYS WILL BE ALLOWED AFTER FINAL PAVING.

NOTE:
AS-BUILT STORMWATER AND UTILITY INFORMATION SHOWN PROVIDED BY NORTHWEST SURVEYING & GPS, INC INFORMATION RECEIVED 12/10/2015

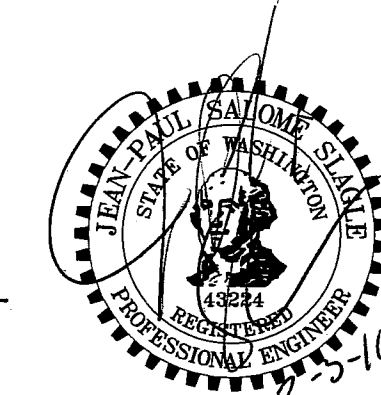
ONLY INFORMATION NOTED AS "AB" HAS BEEN FIELD SURVEYED OR MEASURED DURING CONSTRUCTION.

AS-BUILT DRAWING

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS IN FERDALE VILLAGE HOMES HAVE BEEN INSPECTED BY FREELAND & ASSOCIATES, INC. AND CONSTRUCTED IN CONFORMANCE WITH THE PLANS APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID DEVELOPMENT AND THE GENERAL SPECIFICATIONS ADOPTED BY THE CITY OF FERDALE DEPARTMENT OF PUBLIC WORKS."

BY: *[Signature]* DATE: 2-3-16

APPROVED
FEB 12 2016
BY: *[Signature]*
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF

FREELAND & ASSOCIATES
220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

CLIENT:
JOHN FRIBERG
6425 WEST 20TH AVENUE
FERDALE, WA 98248
PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:

SITE PLAN

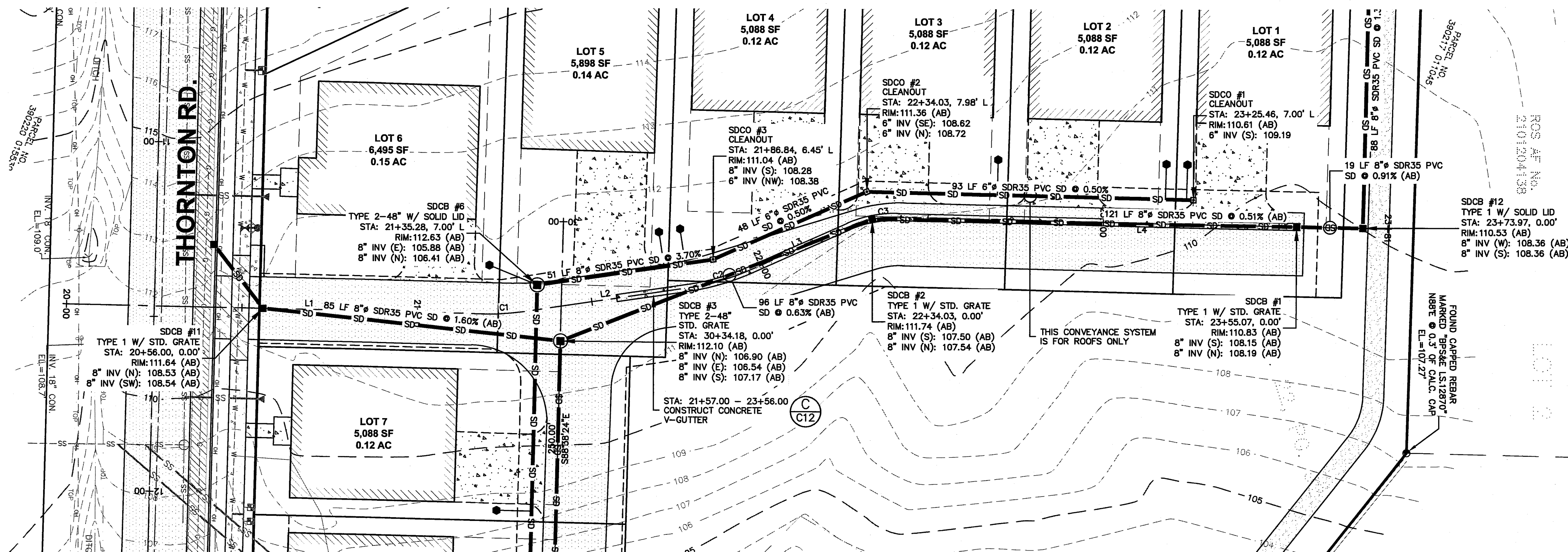
DWG #:	13022SP8.DWG	DATE:	
JOB #:	13022	SHEET:	1-27-2016
SCALE:	H: 1"=20' V: N/A		

C5

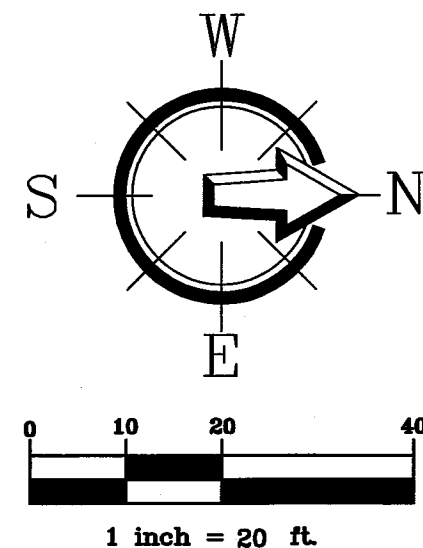
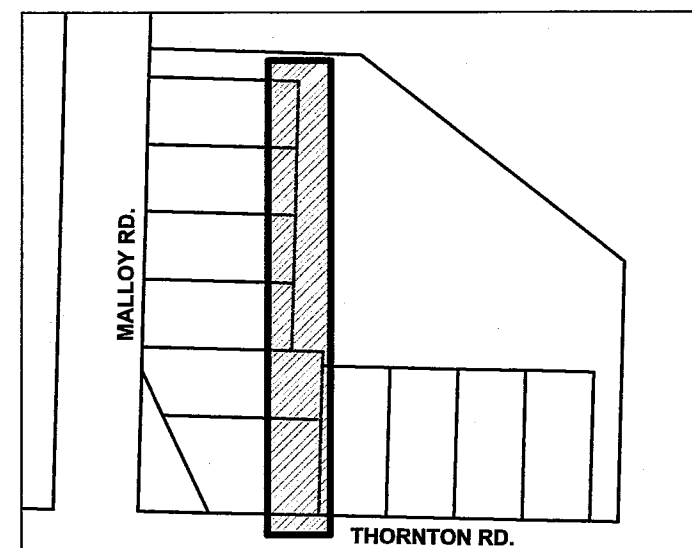
11/11/17 2:00 PM

4591/10/12 9004500

SEGMENT TABLE - DRIVEWAY ACCESS A			
NUMBER	LENGTH	RADIUS	DIRECTION/DELTA
L1	118.85'		N01° 21' 36.41"E
C1	11.71'	68.00'	9°52'00"
L2	47.18'		N08° 30' 23.51"W
C2	18.49'	68.00'	15°35'00"
L3	30.69'		N24° 05' 23.60"W
C3	14.21'	32.00'	25°27'00"
L4	139.94'		N01° 21' 36.41"E

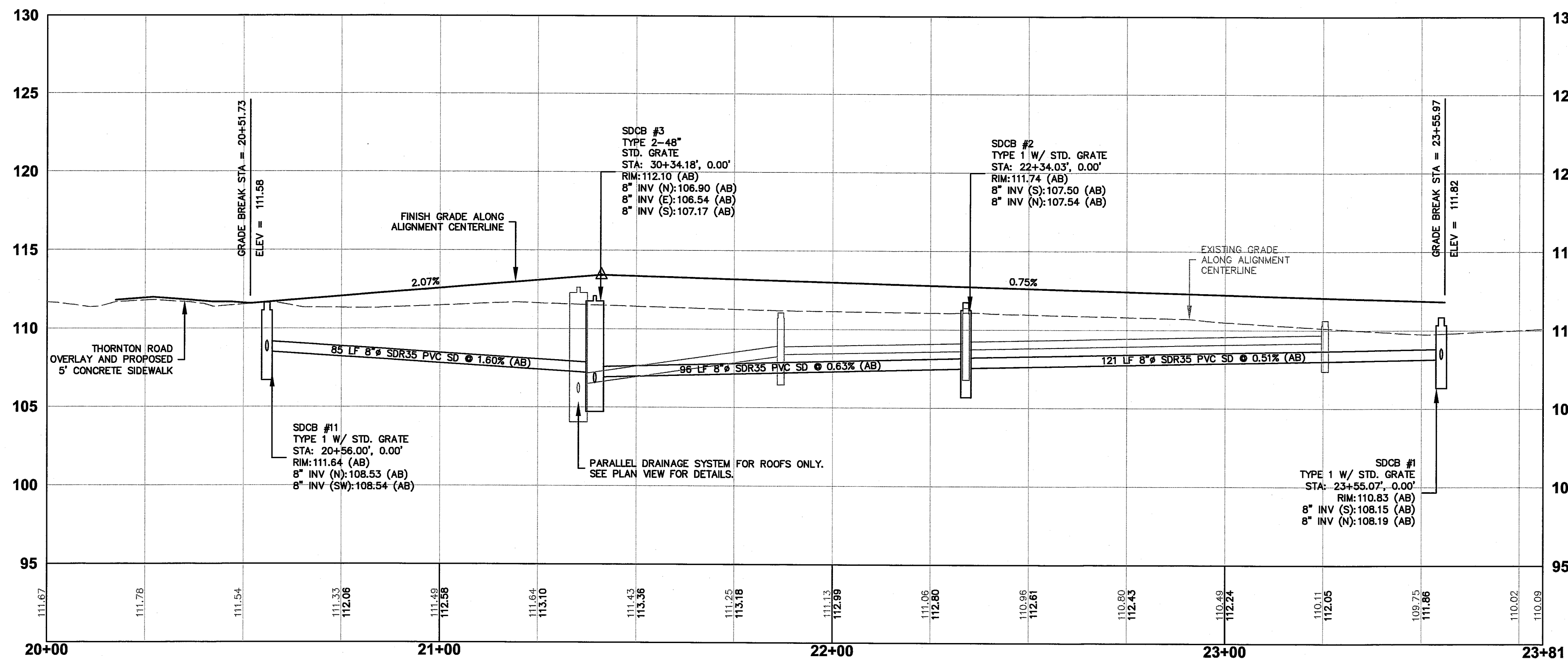


DRIVEWAY ACCESS "A" PLAN
1" = 20'



SHEET KEY
(NTS)

LOT GRADING NOTE:
LOT GRADING SHALL CONFORM TO APPENDIX J OF THE
INTERNATIONAL BUILDING CODE AS ADOPTED BY THE
CITY OF FERDALE.



DRIVEWAY ACCESS "A" PROFILE
H: 1" = 20', V: 1" = 5'

NOTE:
AS-BUILT STORMWATER AND UTILITY INFORMATION
SHOWN PROVIDED BY NORTHWEST SURVEYING &
GPS, INC INFORMATION RECEIVED 12/10/2015

ONLY INFORMATION NOTED AS
"AB" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

AS-BUILT DRAWING

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
FERDALE VILLAGE HOMES HAVE BEEN INSPECTED
BY FREELAND & ASSOCIATES, INC. AND
CONSTRUCTED IN CONFORMANCE WITH THE PLANS
APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID
DEVELOPMENT AND THE GENERAL SPECIFICATIONS
ADOPTED BY THE CITY OF FERDALE DEPARTMENT
OF PUBLIC WORKS."

BY: DATE: 2-2-16

APPROVED
FEB 12 2016
BY: CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF

**FREELAND
& ASSOCIATES**

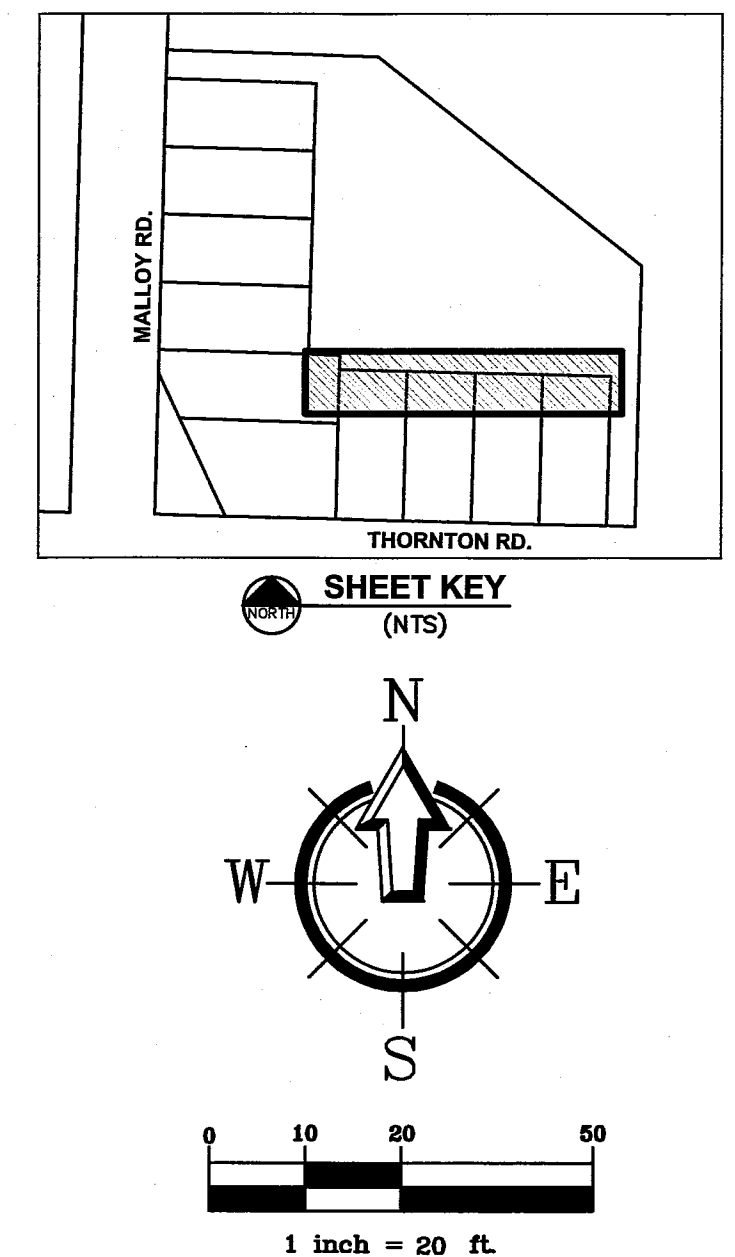
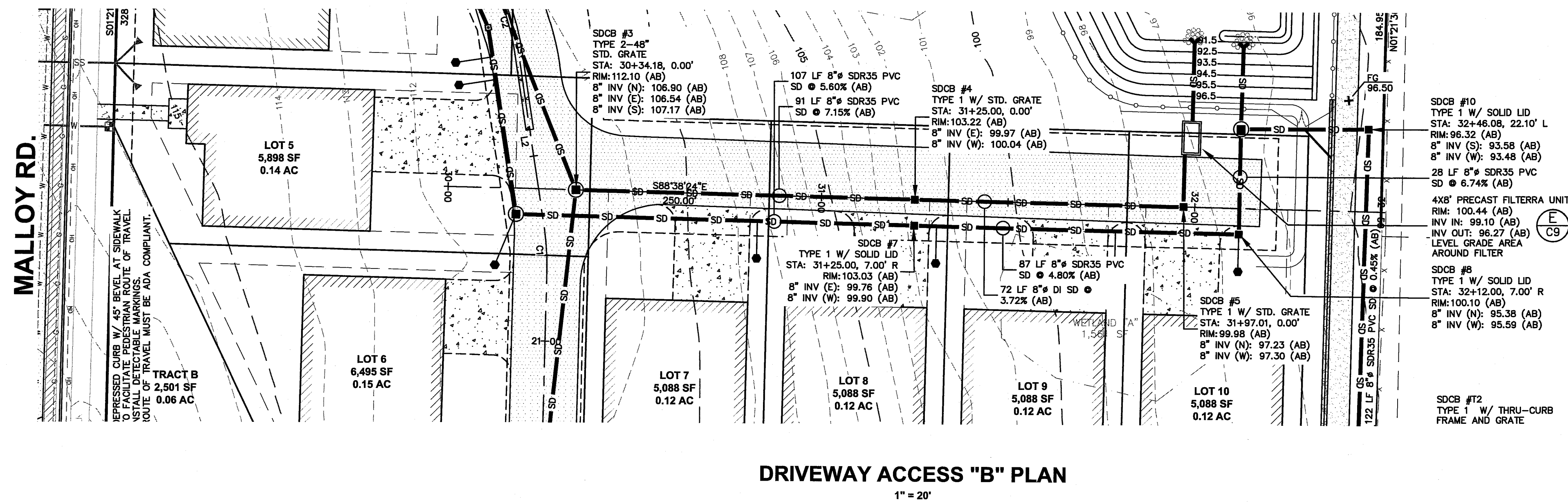
220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

CLIENT:
JOHN FRIBERG
6425 WEST 20TH AVENUE
FERDALE, WA 98248
PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:
**DRIVEWAY ACCESS "A"
PAVING, DRAINAGE
PLAN & PROFILE**

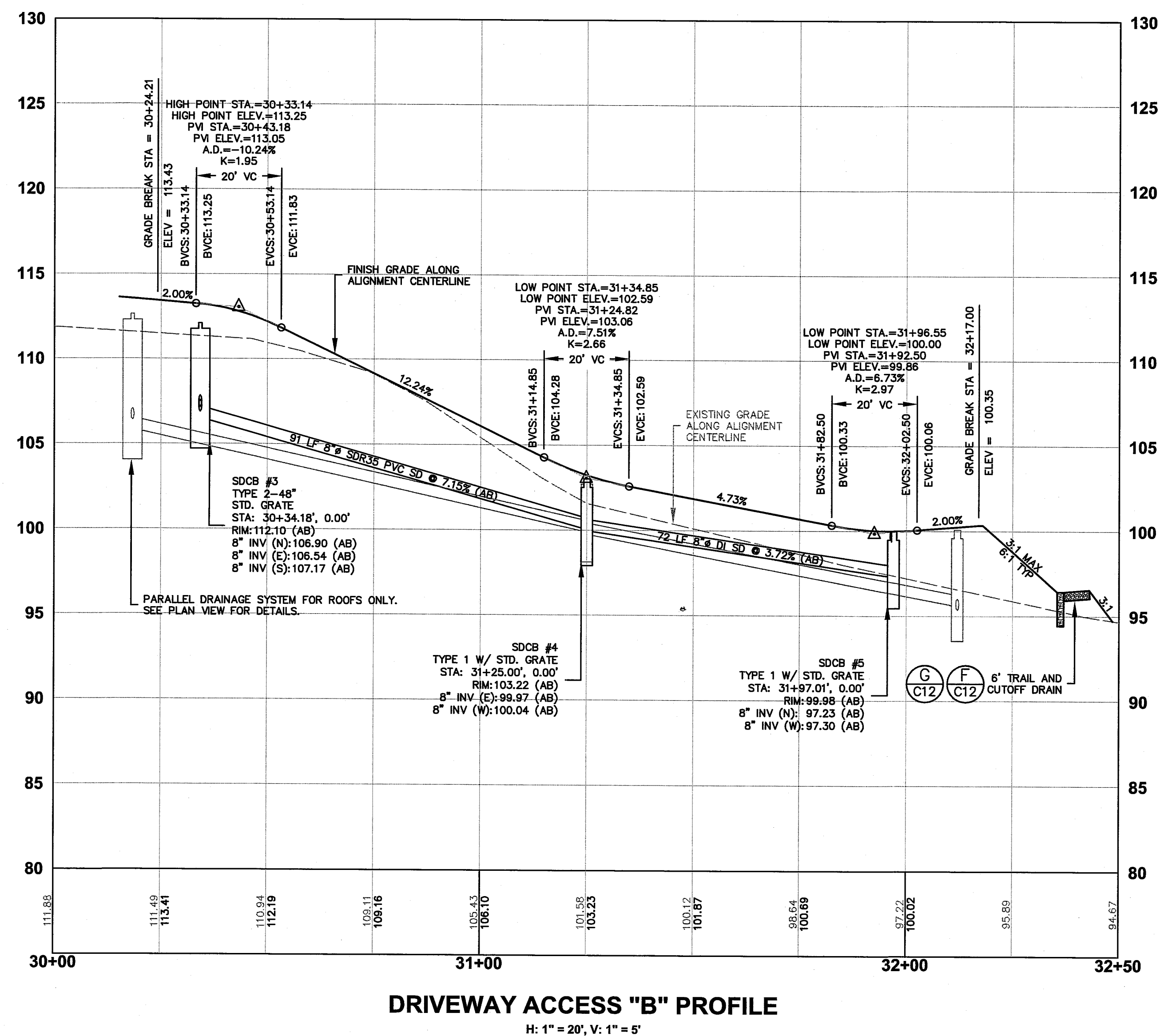
DWG #:	130223P8.DWG	DATE:	
JOB #:	13022	1-27-2016	
SCALE:		SHEET:	
H: 1"=20'	V: 1" = 5'		

C6



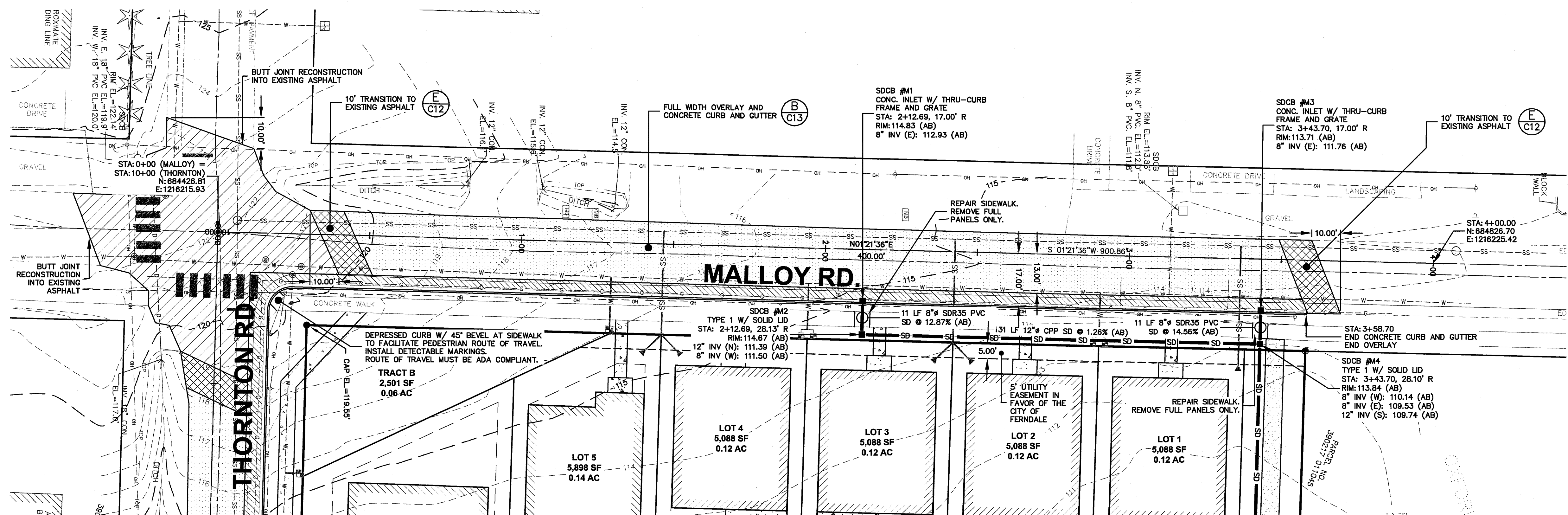
ONLY INFORMATION NOTED AS
"AB)" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

**AS-BUILT
DRAWING**

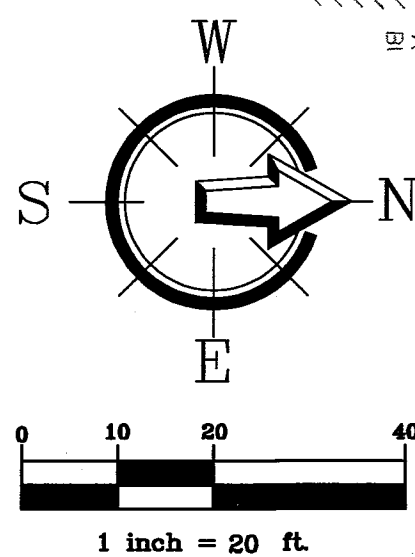
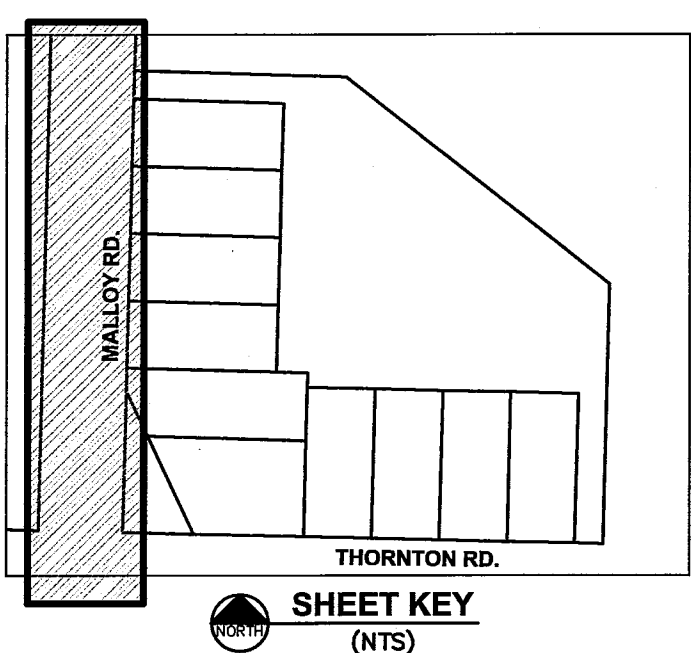


**CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555**

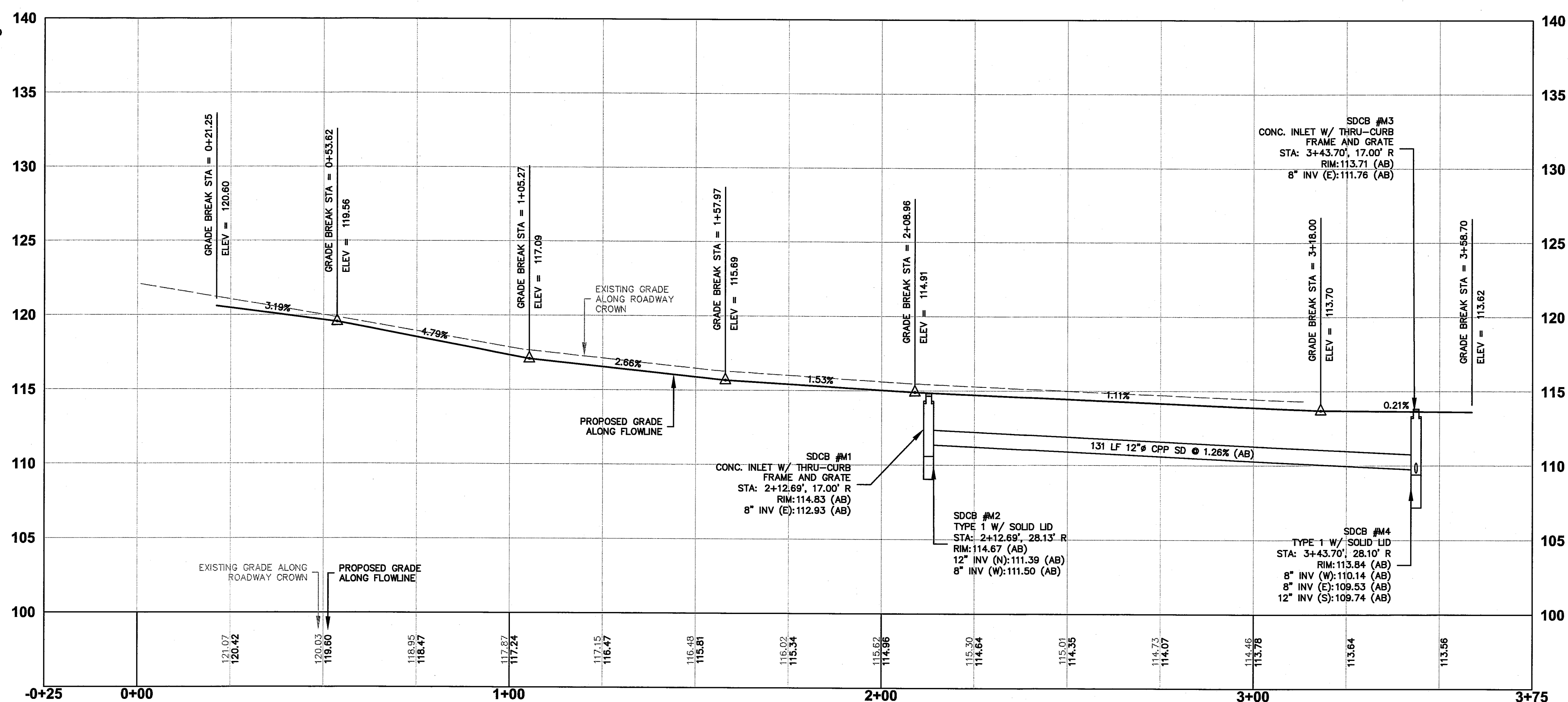
005941.00B 2/19/16 SH



MALLOY ROAD OVERLAY PLAN
1" = 20'



- PAVING NOTE:**
- CONTRACTOR SHALL COORDINATE WITH CITY OF FERNDAL TO LOCATE AND MARK AREAS OF THORNTON AND MALLOY ROADS THAT REQUIRE RECONSTRUCTION PRIOR TO OVERLAY. RECONSTRUCTION SHALL BE PER DETAILS D/C13 FOR MALLOY ROAD AND E/C13 FOR THORNTON ROAD.
 - CONTRACTOR TO PRE-LEVEL THORNTON AND MALLOY ROADS WITH PRE-LEVEL COURSE PRIOR TO OVERLAY.
 - ADJUST ANY EXISTING UTILITY CASTINGS TO MATCH FINAL OVERLAY OR RECONSTRUCTION GRADE.
 - FOLLOWING THE OVERLAY OF THORNTON AND MALLOY ROADS, REPLACE EXISTING PAVEMENT MARKINGS WITH AN EQUAL OR APPROVED EQUAL MATERIAL.
 - ALL CROSSWALK AND STOP BARS SHALL BE HOT EXTRUDED PLASTIC.
 - CONTRACTOR TO COORDINATE WITH DRY UTILITY COMPANIES (PSE, CNG, ETC) PRIOR TO PAVING THORNTON AND MALLOY ROADS. NO OPEN CUTS IN ROADWAYS WILL BE ALLOWED AFTER FINAL PAVING.



MALLOY ROAD OVERLAY PROFILE
H: 1" = 20', V: 1" = 5'

NOTE:
AS-BUILT STORMWATER AND UTILITY INFORMATION SHOWN PROVIDED BY NORTHWEST SURVEYING & GPS, INC INFORMATION RECEIVED 12/10/2015

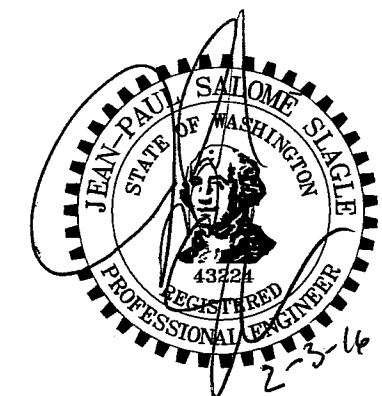
ONLY INFORMATION NOTED AS
"AS-BUILT" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

**AS-BUILT
DRAWING**

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS IN FERNDAL VILLAGE HOMES HAVE BEEN INSPECTED BY FREELAND & ASSOCIATES, INC. AND CONSTRUCTED IN CONFORMANCE WITH THE PLANS APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID DEVELOPMENT AND THE GENERAL SPECIFICATIONS ADOPTED BY THE CITY OF FERNDAL DEPARTMENT OF PUBLIC WORKS."

BY: *[Signature]* DATE: 2-3-16

APPROVED
FEB 12 2016
BY: *[Signature]*
CITY OF FERNDAL



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY: JPS
DRAWN BY: EJP
CHECKED BY: HAF

FREELAND & ASSOCIATES
220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

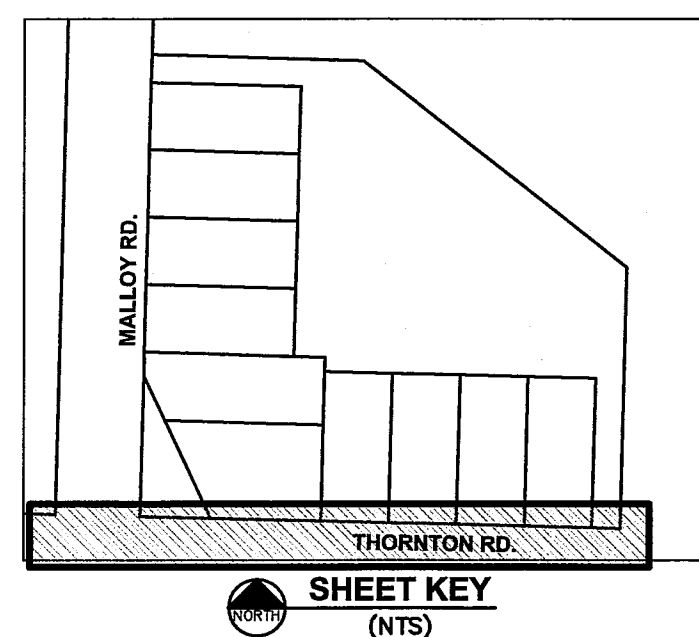
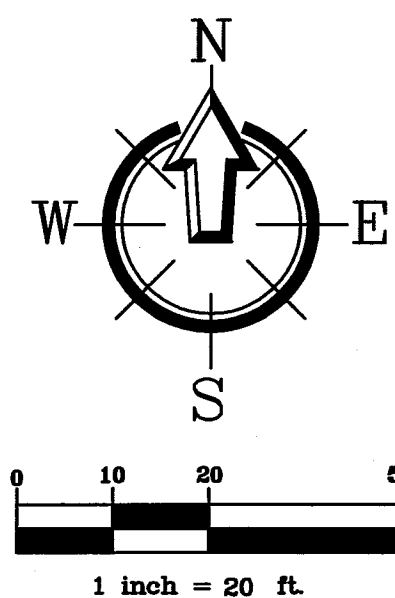
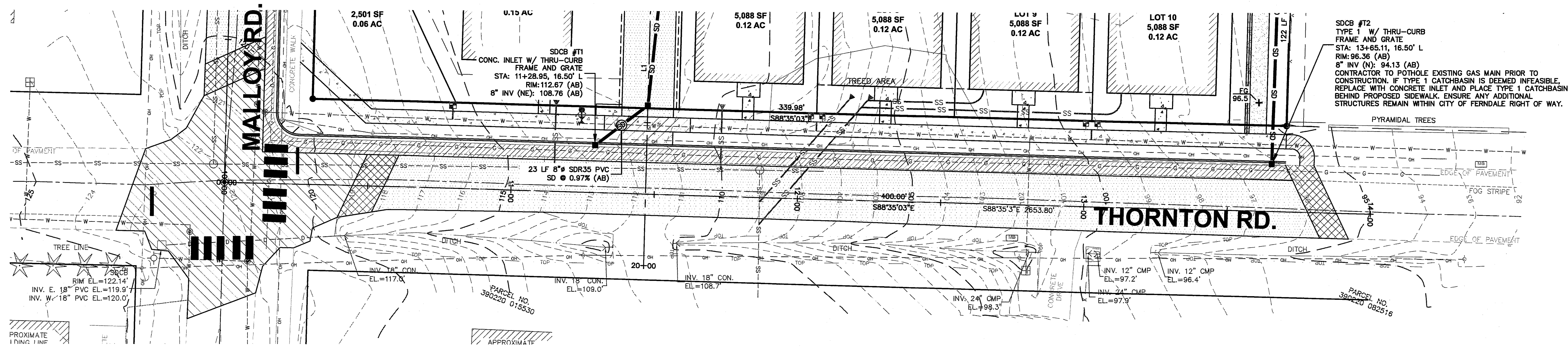
CLIENT: **JOHN FRIBERG**
6425 WEST 20TH AVENUE
FERNDAL, WA 98248

PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERNDAL, WA 98248

SHEET CONTENTS:
**MALLOY ROAD OVERLAY
PLAN & PROFILE**

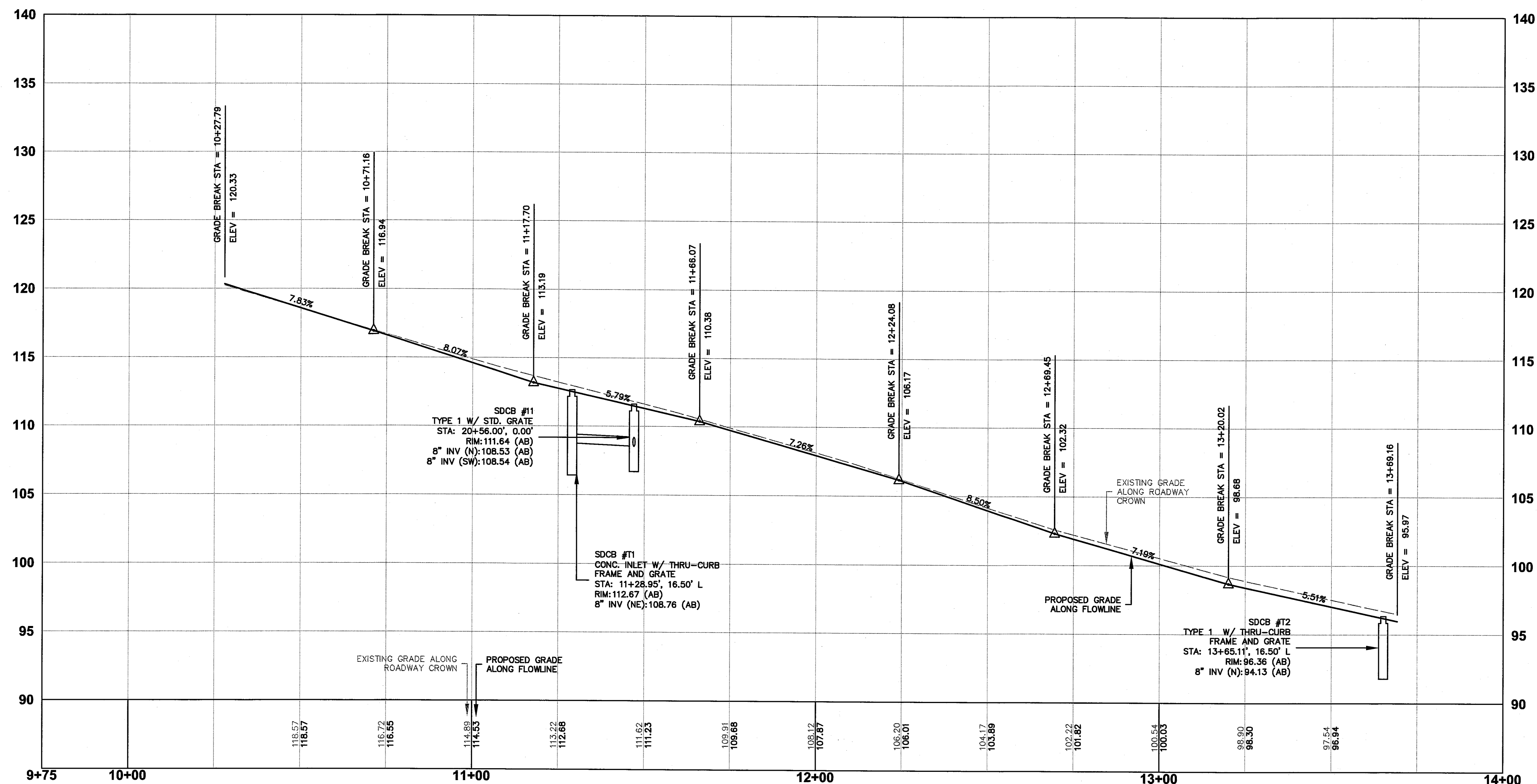
DWG #: 13022SP8.DWG
JOB #: 13022
SCALE: H: 1" = 20' V: 1" = 5'
DATE: 1-27-2016
SHEET: **C8**

00594.009 2/19/16 ST



THORNTON ROAD OVERLAY PLAN
1" = 20'

- PAVING NOTE:**
- CONTRACTOR SHALL COORDINATE WITH CITY OF FERDALE TO LOCATE AND MARK AREAS OF THORNTON AND MALLOY ROADS THAT REQUIRE RECONSTRUCTION PRIOR TO OVERLAY. RECONSTRUCTION SHALL BE PER DETAILS D/C13 FOR MALLOY ROAD AND E/C13 FOR THORNTON ROAD.
 - CONTRACTOR TO PRE-LEVEL THORNTON AND MALLOY ROADS WITH PRE-LEVEL COURSE PRIOR TO OVERLAY.
 - ADJUST ANY EXISTING UTILITY CASTINGS TO MATCH FINAL OVERLAY OR RECONSTRUCTION GRADE.
 - FOLLOWING THE OVERLAY OF THORNTON AND MALLOY ROADS, REPLACE EXISTING PAVEMENT MARKINGS WITH AN EQUAL OR APPROVED EQUAL MATERIAL.
 - ALL CROSSWALK AND STOP BARS SHALL BE HOT EXTRUDED PLASTIC.
 - CONTRACTOR TO COORDINATE WITH DRY UTILITY COMPANIES (PSE, CNG, ETC) PRIOR TO PAVING THORNTON AND MALLOY ROADS. NO OPEN CUTS IN ROADWAYS WILL BE ALLOWED AFTER FINAL PAVING.



NOTE:
AS-BUILT STORMWATER AND UTILITY INFORMATION
SHOWN PROVIDED BY NORTHWEST SURVEYING &
GPS, INC INFORMATION RECEIVED 12/10/2015

ONLY INFORMATION NOTED AS
"AB" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

**AS-BUILT
DRAWING**

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
FERDALE VILLAGE HOMES HAVE BEEN INSPECTED
BY FREELAND & ASSOCIATES, INC. AND
CONSTRUCTED IN CONFORMANCE WITH THE PLANS
APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID
DEVELOPMENT AND THE GENERAL SPECIFICATIONS
ADOPTED BY THE CITY OF FERDALE DEPARTMENT
OF PUBLIC WORKS."

BY: [Signature] DATE: 2-3-16

APPROVED
FEB 12 2016
BY: [Signature]
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY: JPS
DRAWN BY: EJP
CHECKED BY: HAF

FREELAND & ASSOCIATES
220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

CLIENT: **JOHN FRIBERG**
6425 WEST 20TH AVENUE
FERDALE, WA 98248
PROJECT LOCATION: THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:
**THORNTON ROAD OVERLAY
PLAN & PROFILE**

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C9
SCALE:	H: 1"=20' V: 1"= 5'		

SDMH #1
TYPE 2 - 54"
W/ SOLID LID
CONTROL STRUCTURE
RIM: 97.18 (AB)
INV IN: 90.68 (AB)
INV OUT: 91.39 (AB)

FENCING AND PLANTINGS PER
LANDSCAPE PLAN

POND RETAINING WALL, DESIGN
BY STRUCTURAL ENGINEER
TOP ELEV: 97.50

100 YEAR STORM ELEVATION: 95.50

INV: 91.03 (AB)
ARMOR AND INSTALL
TRASH RACK

INV: 91.03 (AB)

INV: 92.16 (AB)
ARMOR INLET PIPE

5:1 MAX

DRIVEWAY ACCESS
PER PLAN

SDCB #9

EXISTING GRADE
ALONG SECTION LINE

⊕ 91.50 (AB)

EXCAVATE 6" BELOW
BOTTOM OF POND AND
REPLACE WITH STOCKPILED
TOPSOIL FOR PLANTING

FLOW

(A) STORMWATER POND CROSS SECTION A-A
H: 1" = 20'
V: 1" = 5'

Diagram illustrating the cross-section of a pond retaining wall and stormwater management structure. The vertical axis represents elevation in feet, ranging from 80 to 110.

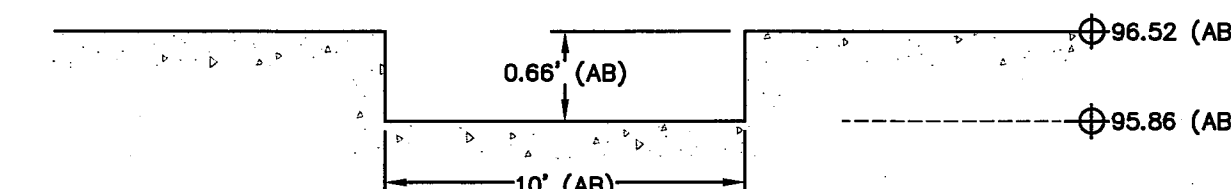
Key features and elevations:

- EXISTING GRADE ALONG SECTION LINE:** Indicated by a dashed line.
- 100 YEAR STORM ELEVATION: 95.50**: The elevation of the 100-year storm water level.
- POND RETAINING WALL - DESIGN BY STRUCTURAL ENGINEER TOP ELEV: 96.52 (AB)**: The elevation of the top of the retaining wall.
- INV: 91.00**: The invert elevation of the structure.
- 3:1 MAX.**: The maximum slope of the excavation.
- 91.50 (AB)**: A specific elevation point on the slope.
- EXCAVATE 6" BELOW BOTTOM OF POND AND REPLACE WITH STOCKPILED TOPSOIL FOR PLANTING**: Instruction for the excavation area below the pond bottom.

(B) STORMWATER POND CROSS SECTION B-B
H: 1" = 20'
V: 1" = 5'

**ONLY INFORMATION NOTED AS
"(AB)" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.**

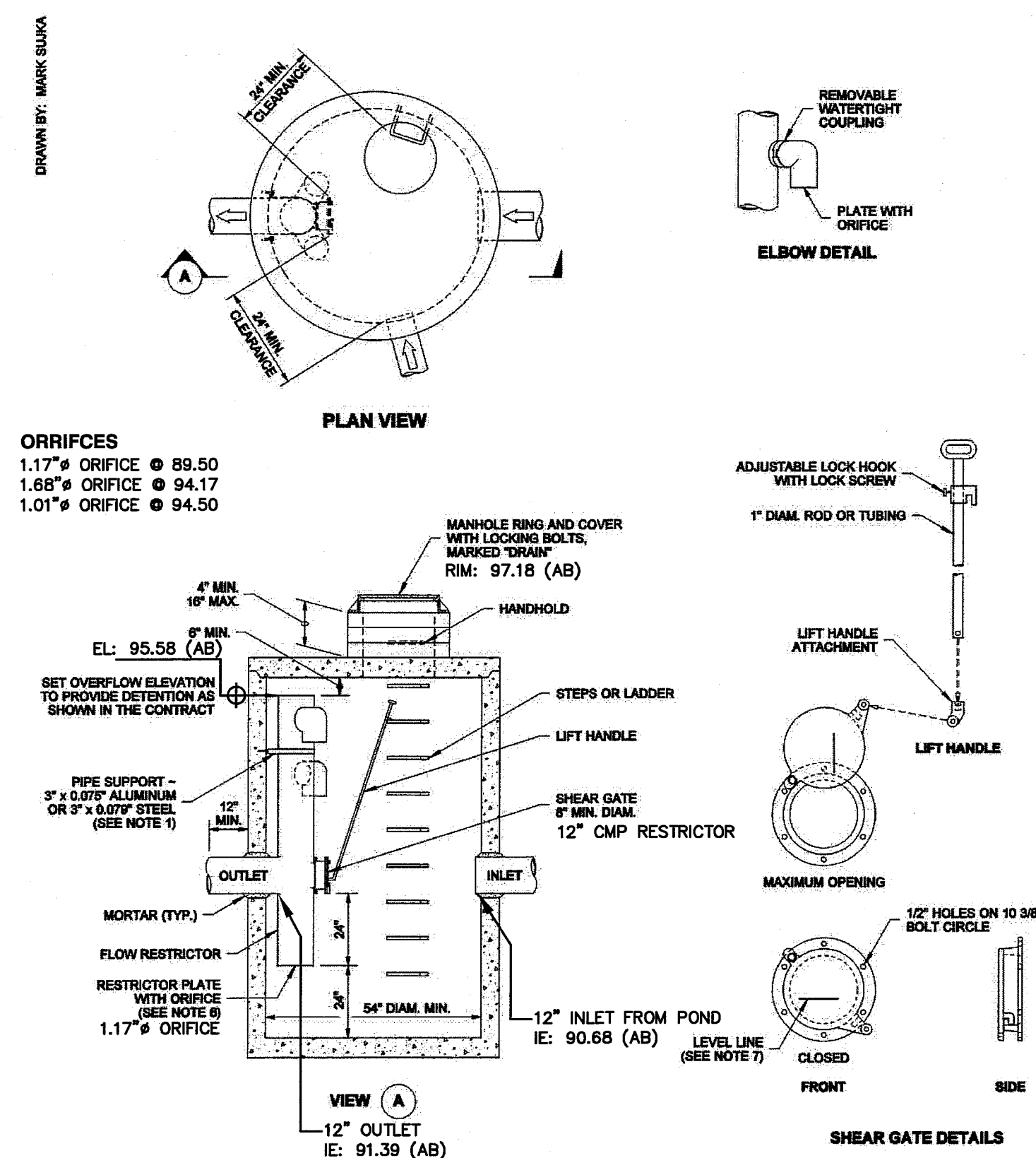
AS-BUILT DRAWING



ENGINEER'S CERTIFICATION:
 "I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
 FERNDALE VILLAGE HOMES HAVE BEEN INSPECTED
 BY FREELAND & ASSOCIATES, INC. AND
 CONSTRUCTED IN CONFORMANCE WITH THE PLANS
 APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID
 DEVELOPMENT AND THE GENERAL SPECIFICATIONS
 ADOPTED BY THE CITY OF FERNDALE DEPARTMENT
 OF PUBLIC WORKS."

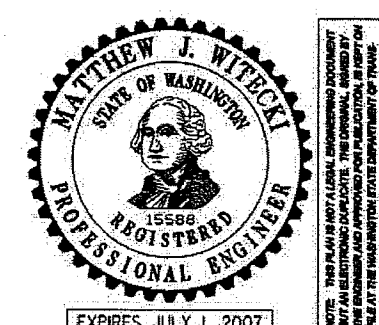
BY: [Signature] DATE: 2-3-16

C OVERFLOW SPILLWAY



D CATCH BASIN TYPE 2 WITH FLOW RISTRICTOR WSDOT STD. PLAN B-10.40-00

1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36". Attach the pipe supports to the manhole with 5/8" stainless steel expansion bolts or embed the supports into the manhole wall 2".
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 8".
3. The flow restrictor shall be fabricated from one of the following materials:
 - 0.060" Corrugated Aluminum Alloy Drain Pipe
 - 0.064" Corrugated Galvanized Steel Drain Pipe with Treatment 1
 - 0.064" Corrugated Aluminized Steel Drain Pipe
 - 0.060" Aluminum alloy flat sheet, in accordance with ASTM B 209, 5052 H32 or EPS
 - High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the gate is clear of the curb.
5. The multi-offside elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with ASTM B 28 and ASTM B 275, designation Z323A; or cast iron in accordance with ASTM A 48, Class 30B.
8. The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion); it may be of solid rod or hollow tubing, with adjustable hook as required.
9. A neoprene rubber gasket is required between the riser mounting flange and the gate flange.
10. Install the gate so that the level-line mark is level when the gate is closed.
11. The mating surfaces of the lid and the body shall be machined for proper fit.
12. All shear gate bolts shall be stainless steel.
13. The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
14. Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches



**CATCH BASIN TYPE 2
WITH FLOW RESTRICTOR
STANDARD PLAN B-10.40-00**

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Harold J. Peterfeso 06-01-06
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

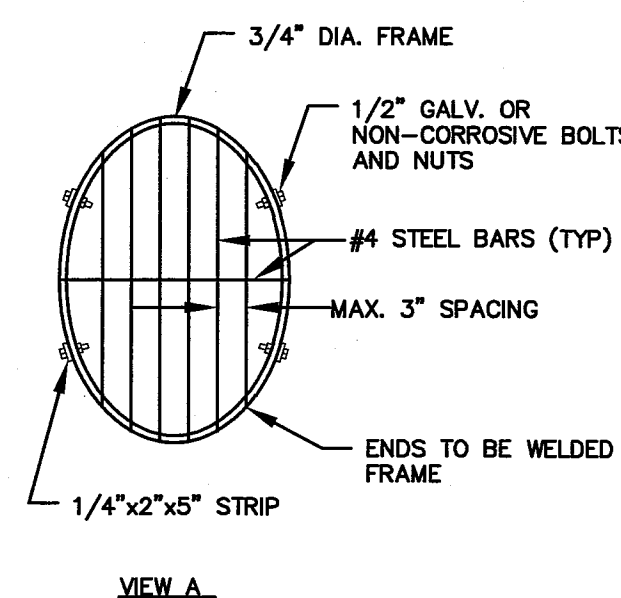
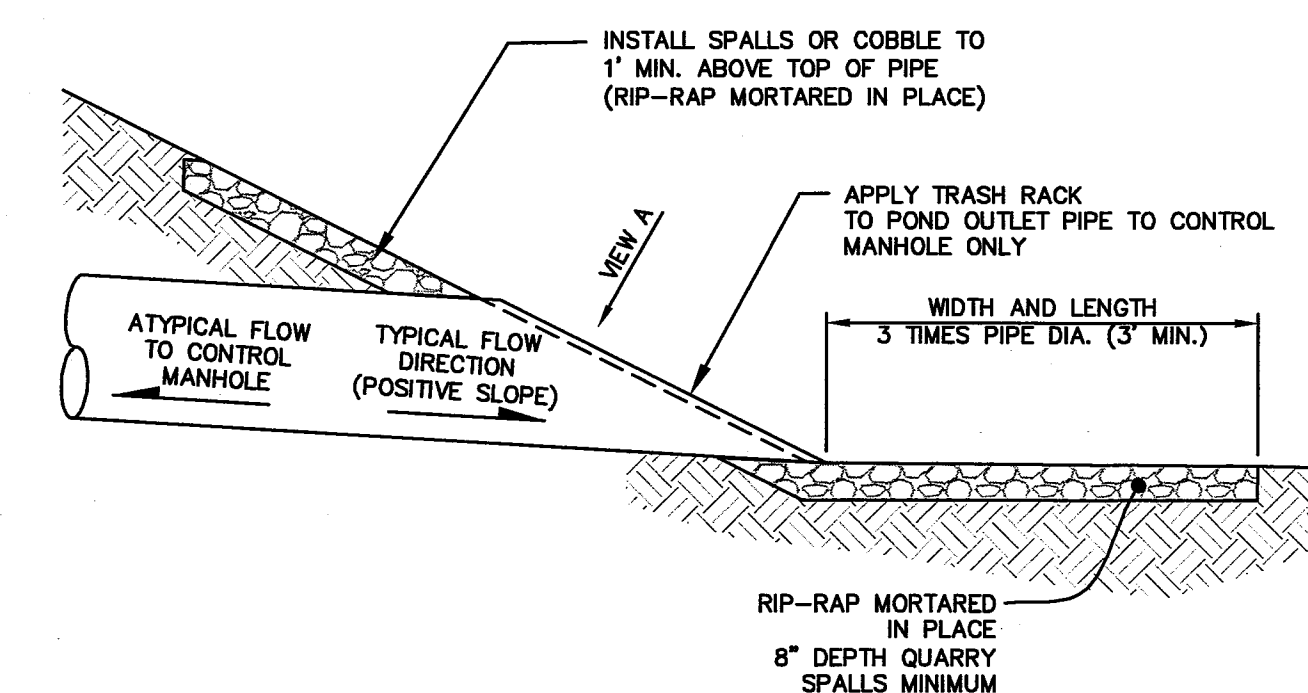
TOPSOIL
TOPSOIL FOR POND VEGETATION SHALL BE RECLAIMED FROM THE SITE OR IMPORTED "WINTERMIX" CONSISTING OF COMPOST & SANDY LOAM AS PROVIDED BY GREEN EARTH TECHNOLOGY (360.354.4936) OR EQUAL. SOIL MIX/MEDIA SHALL HAVE A SANDY LOAM TO LOAM TEXTURE PER USDA TEXTURAL TRIANGLE. MAXIMUM CLAY CONTENT IS <8% COMPOST (58% ORGANIC MATTER). THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN THREE-QUARTER INCH (3/4"). NO OTHER MATERIALS OR SUBSTANCES SHALL BE HINDERANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING MEDIA SHALL BE FREE OF ALL NOXIOUS WEEDS. THE SOIL/MIX MEDIA SHALL HAVE A NEUTRAL PH RANGE, 6.0 TO 7.5.

SOIL PLACEMENT AND DEPTH:
ON-SITE SOIL MIXING OR PLACEMENT IS NOT ALLOWED IF SOIL IS SATURATED OR SUBJECT TO WATER W/IN 48 HOURS. PLACEMENT OF THE TOPSOIL/WINTERMIX SHALL BE IN LIFTS OF 8 INCHES OR LESS AND LIGHTLY COMPACTED (80%). MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A BACKHOE FROM THE SIDE OF THE LANDSCAPE AREAS.

1. EXPOSED EARTH ON THE POND BOTTOM BELOW INTERIOR SIDE SLOPES SHALL BE PLANTED WITH POND SEED MIX.

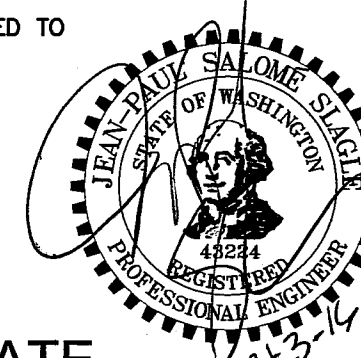
SEED TYPE	%
TALL OR MEADOW FESCUE (FESTUCA ARUNDACEA OR FESTUCA ELATOR)	68%
SEASIDE/CREeping BENTGRASS (AGROSTIS PALUSTRIS)	10%
MEADOW FOXTAIL (ALEPOCURUS PRATENSIS)	10%
ALELKE CLOVER (TRIFOLIUM HYDRIDUM)	6%
REDTOP (AGROSTIS ALBA)	6%

(E) STORMWATER POND PLANTING




FEB 12 2016

BY [Signature]
CITY OF FERNDALE



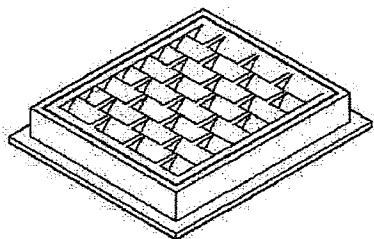
(F) PIPE END ARMORING AND GRATE

**CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555**

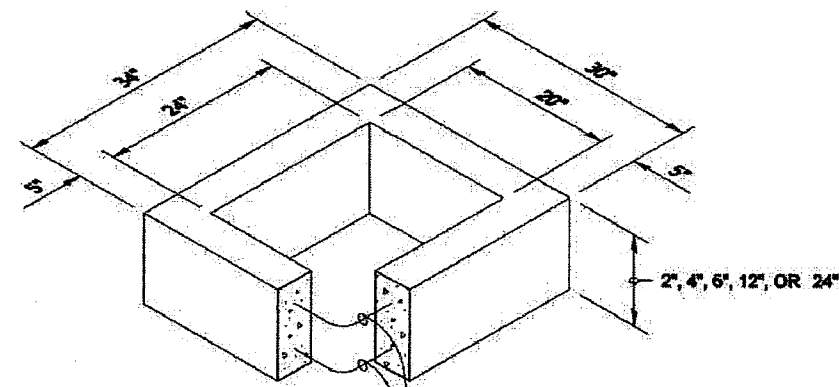
				DESIGNED BY: JPS	 FREELAND & ASSOCIATES	220 West Champion Street, Suite 200 Bellingham, WA 98225 t: 360.850.1408 f: 360.850.1401	CLIENT: JOHN FRIBERG 6425 WEST 20TH AVENUE FERNDAL, WA 98248	SHEET CONTENTS: DETAILS	DWG #: 13022SP8.DWG	DATE: 1-27-2016
				DRAWN BY: EJP		PROJECT LOCATION: THORNTON ROAD & MALLOY ROAD FERNDAL, WA 98248			JOB #: 13022	SHEET:
No.	Date	REVISION	By	CHECKED BY: HAF					SCALE:	

76500 010 2/19/16 544

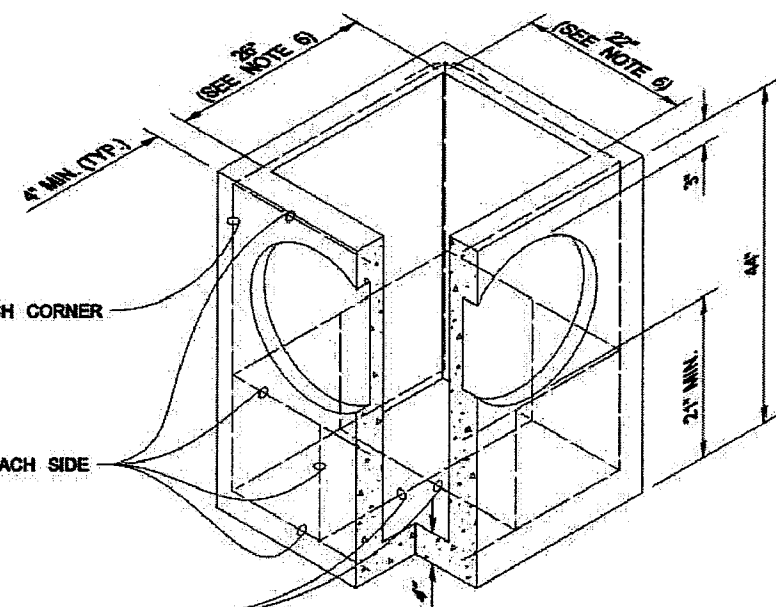
DRAWN BY: LISA OYFORD



FRAME AND VAINED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSP # (STD. SPEC. 9-05.29)	12"
SOLID WALL PVC (STD. SPEC. 9-05.14(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.14(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

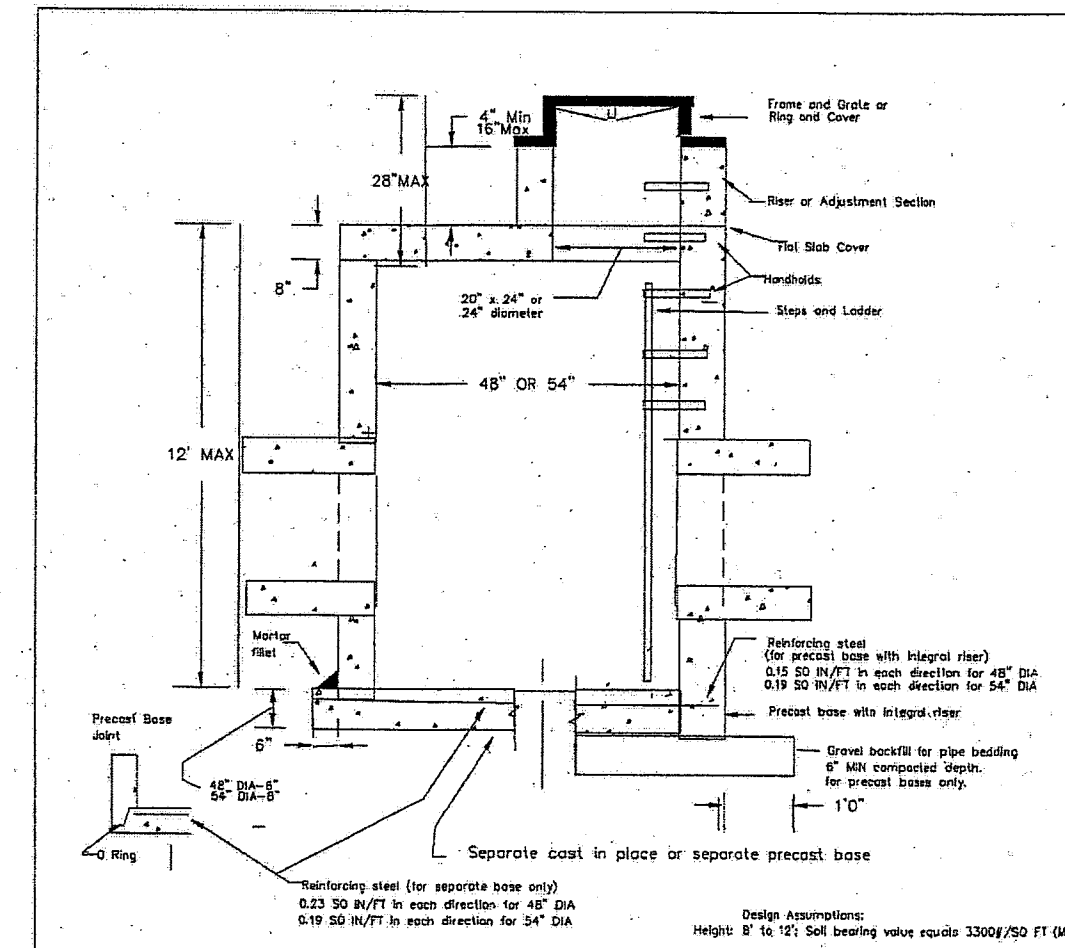
NOTES

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



CATCH BASIN TYPE 1
STANDARD PLAN B-5.20-01
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakolich III 06-16-11
WASH. STATE DEPARTMENT OF TRANSPORTATION

CATCH BASIN TYPE 1
nts WSDOT STD. PLAN B-5.20-01



Notes:
Catch basins to be constructed in accordance with ASTM C 478 (AASHTO M 199) C 690 unless otherwise shown on plans or noted in the standard specifications.
Handholds in river or adjustment section shall have 3" minimum clearance. Steps in catch basin shall have 6" minimum clearance. No steps are required when height is 4' or less.
All reinforced cast in place concrete shall be Class A. Non-reinforced concrete in channel and shell shall be Class C. Precast basins shall be furnished with cast-in-place concrete knockouts. Knockouts shall have a wall thickness of 2" minimum, 16" for 48" catch basin, 12" for 24" catch basin. Minimum distance between knockouts shall be 12".
Frame and grate or ring and cover shall be in accordance with standard specifications and meet the strength requirements of Federal Specification RR-F-621D. Mating surfaces shall be finished to assure a non-rocking fit.
The bottom of the precast catch basin may be rounded.
Frame and grate may be installed with flange down or cast into river.
NOT TO SCALE

APPROVED: *[Signature]* CITY OF FERDALE DRAWING
Public Works Director Date TYPE 2 CATCH BASIN ST-2
48" & 54"

CATCH BASIN TYPE 2 - 48"
nts

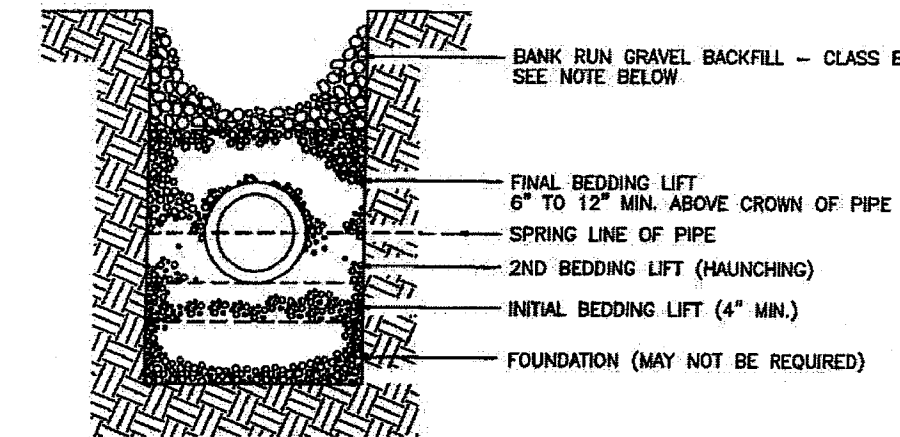
THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE—
BEDDING MATERIAL FOR PVC PIPE SHALL BE PEA GRAVEL CONFORMING TO THE FOLLOWING SPECIFICATIONS:

PEA GRAVEL — PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D422:

U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING, BY WT.
3/4"	100
3/8"	85-100
#20	0-10
#60	0-3

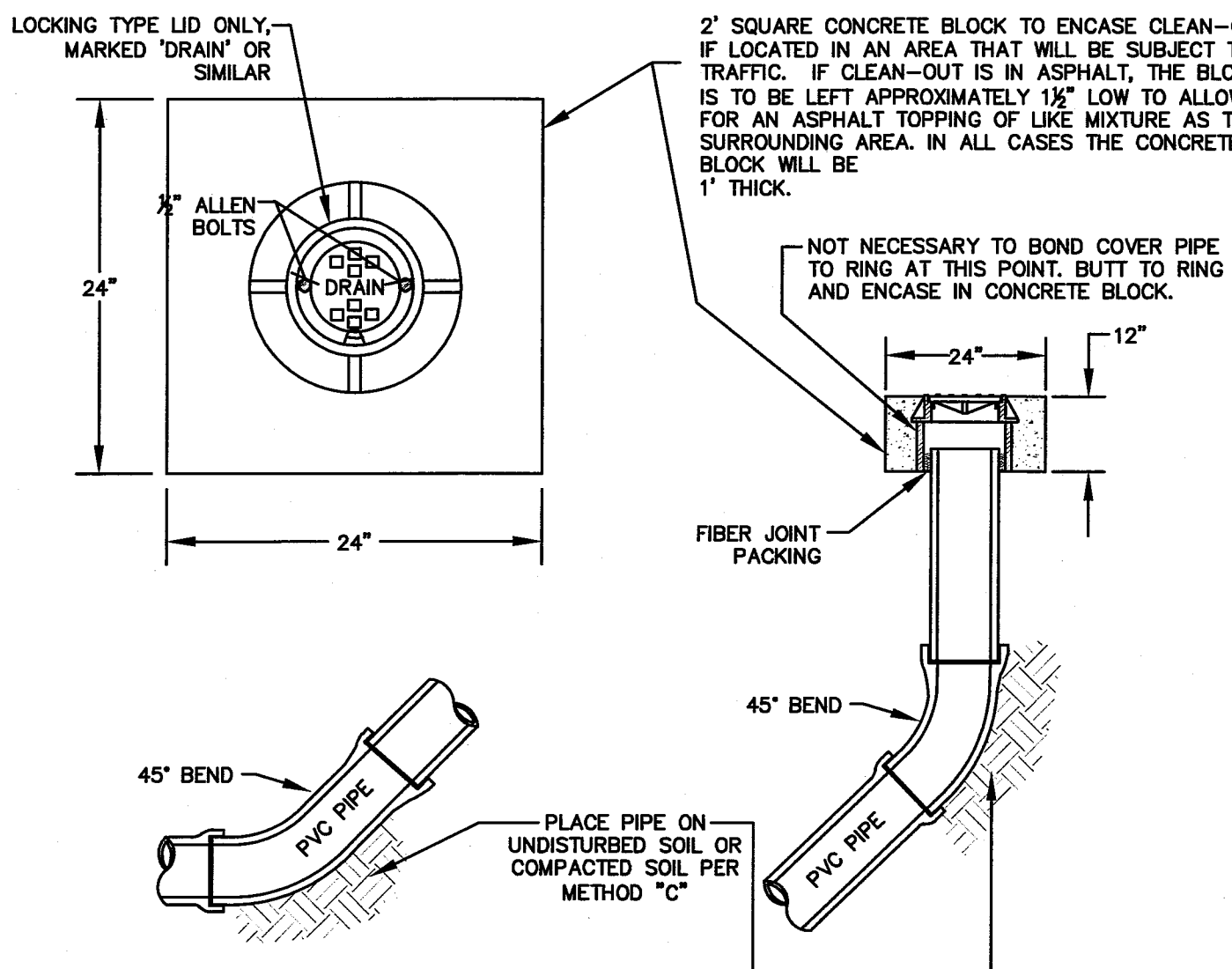
BACKFILL — WHENEVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.



APPROVED: *[Signature]* March 13, 2012
Public Works Director Date
BEDDING SPECIFICATIONS FOR PVC PIPE
STANDARD DETAIL ST-17

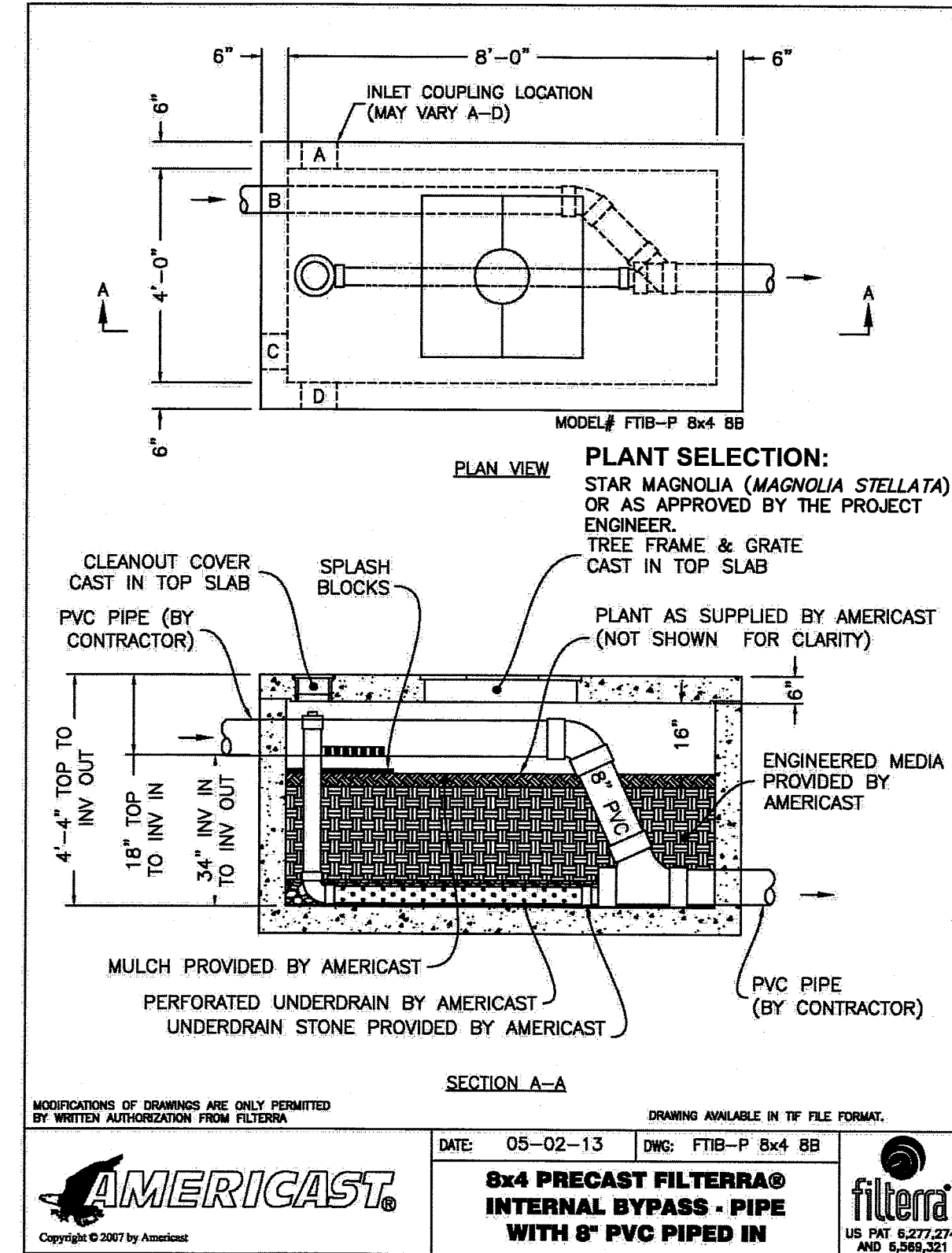
PVC PIPE BEDDING SPECIFICATIONS
nts

NOTE: PIPE SIZE VARIES — SEE STORM DRAIN PLANS FOR SPECIFIC SIZES



STORM SERVICE LOCATION TABLE			
LOT NO.	ALIGNMENT	STA. & OFFSET	STUB
1	DRIVEWAY ACCESS "A"	23+23, 17' L (AB)	
2	DRIVEWAY ACCESS "A"	23+17, 17' L (AB)	
3	DRIVEWAY ACCESS "A"	22+69, 17' L (AB)	
4	DRIVEWAY ACCESS "A"	21+78, 17' L (AB)	
5	DRIVEWAY ACCESS "A"	21+20, 14' L (AB)	
6	DRIVEWAY ACCESS "B"	30+02, 27' L (AB)	
7	DRIVEWAY ACCESS "B"	30+83, 17' R (AB)	
8	DRIVEWAY ACCESS "B"	31+31, 17' R (AB)	
9	DRIVEWAY ACCESS "B"	31+79, 17' R (AB)	
10	DRIVEWAY ACCESS "B"	32+12, 17' R (AB)	

TYPICAL STORMWATER CLEANOUT
nts



8'x4' FILTERRA BIORETENTION
nts

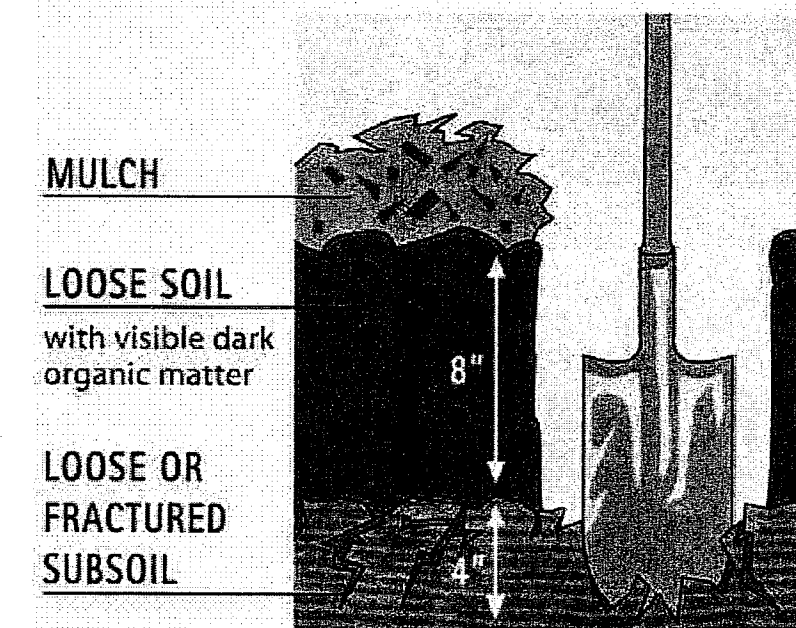


Figure 5.3.3 — Planting bed Cross Section

(Reprinted from *Guidelines and Resources For Implementing Soil Quality and Depth BMP T5.13 in WDOB Stormwater Management Manual for Western Washington*, 2010, Washington Organic Recycling Council)

Volume V — Runoff Treatment BMPs — August 2012
5-10

GENERAL NOTES

Establishing a minimum soil quality and depth is not the same as preservation of naturally occurring soil and vegetation. However, establishing a minimum soil quality and depth will provide improved on-site management of stormwater flow and water quality. Soil organic matter can be attained through numerous materials such as compost, composted woody material, biosolids, and forest product residuals. It is important that the materials used to meet the soil quality and depth BMP be appropriate and beneficial to the plant cover to be established. Likewise, it is important that imported topsoils improve soil conditions and do not have an excessive percent of clay fines. This BMP can be considered infeasible on till soil slopes greater than 33 percent.

Design Guidelines

Soil retention: Retain, in an undisturbed state, the duff layer and native topsoil to the maximum extent practicable. In any areas requiring grading remove and stockpile the duff layer and topsoil on site in a designated, controlled area, not adjacent to public resources and critical areas, to be respilled to other portions of the site where feasible.

Soil quality: All areas subject to clearing and grading that have not been covered by improving surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, demonstrate the following:

1. A topsoil layer with a minimum organic matter content of 10% dry weight in planting beds, and 5% organic matter content in turf areas, and a pH from 6.0 to 8.0 or matching the pH of the undisturbed soil. The topsoil layer shall have a minimum depth of eight inches except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible.
2. Mulch planting beds with 2 inches of organic material
3. Use compost and other materials that meet these organic content requirements:
 - a. The organic content for "pre-approved" amendment rates can be met only using compost that meets the definition of "composted materials" in WAC 173-350-100. This code is available online at: <http://www.wa.gov/wac/default.aspx?cite=173-350>. The compost must also have an organic matter content of 40% to 65%, and a carbon to nitrogen ratio below 25:1. The carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region.
 - b. Calculated amendment rates may be met through use of composted materials meeting (a) above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and meeting the contaminant standards of Grade A Compost.

The resulting soil should be conducive to the type of vegetation to be established.

Implementation Options: The soil quality design guidelines listed above can be met by using one of the methods listed below:

1. Leave undisturbed native vegetation and soil, and protect from compaction during construction.
2. Amend existing site topsoil or subsoil either at default "pre-approved" rates, or at custom calculated rates based on tests of the soil and amendment.
3. Stockpile existing topsoil during grading, and replace it prior to planting. Stockpiled topsoil must also be amended if needed to meet the organic matter or depth requirements, either at a default "pre-approved" rate or at a custom calculated rate.
4. Import topsoil mix of sufficient organic content and depth to meet the requirements.

More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.

SOIL AMENDMENTS - BMP T5.13
nts

APPROVED
FEB 12 2016
BY *[Signature]*
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401
FREELAND & ASSOCIATES
U.S. PAT. 6,227,224
AND 6,266,351

CLIENT:

JOHN FRIBERG
6425 WEST 20TH AVENUE
FERDALE, WA 98248

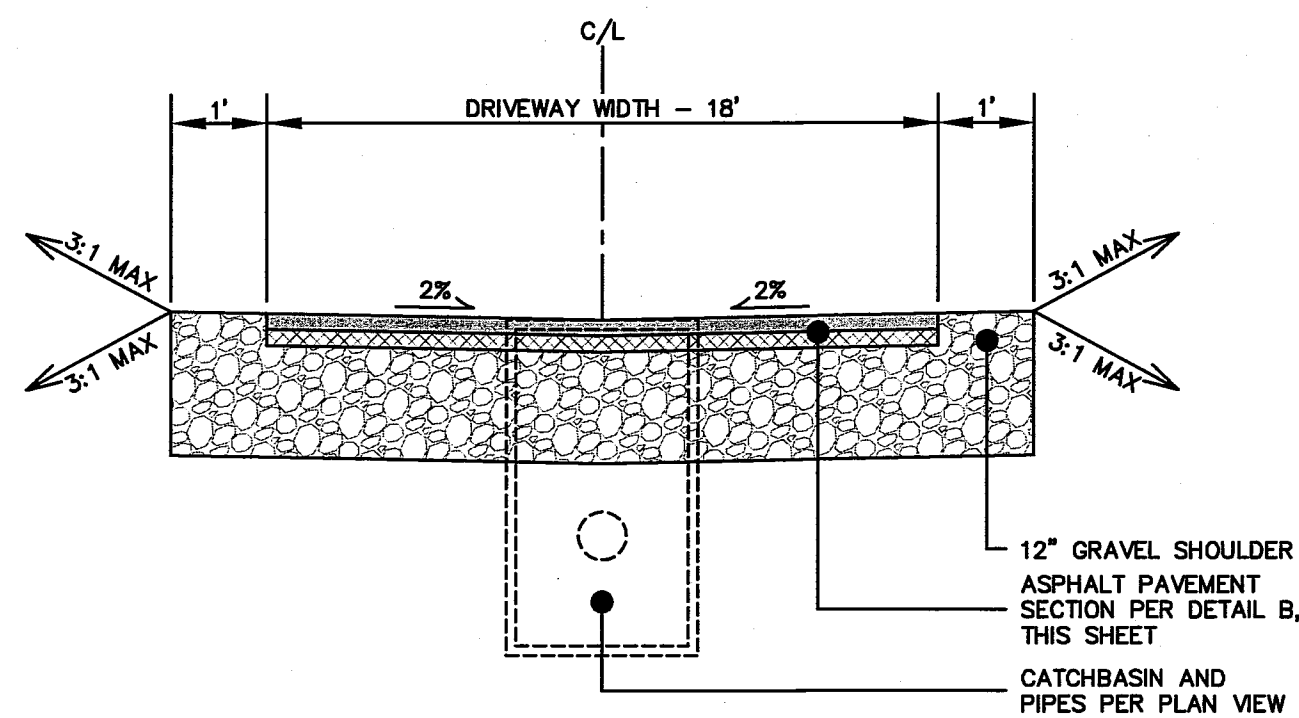
PROJECT LOCATION:

THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:

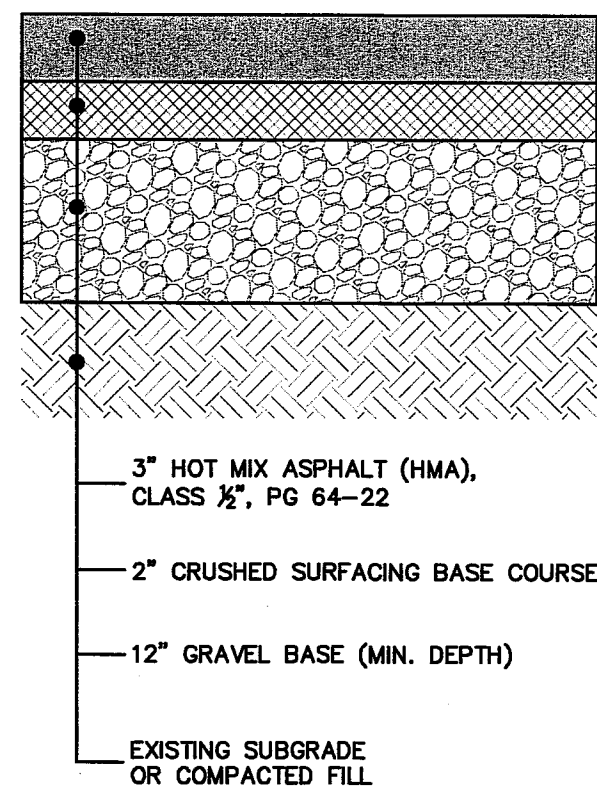
DETAILS

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C11
SCALE:	H: N/A V: N/A		

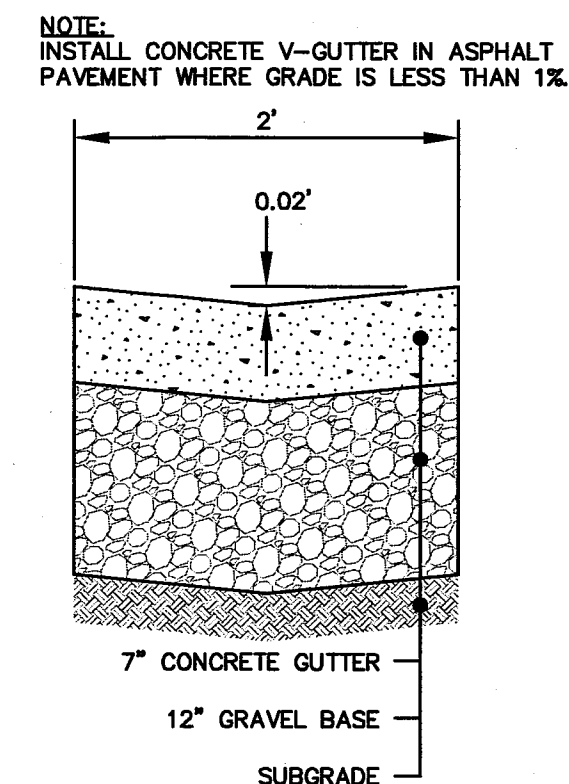


A DRIVEWAY ACCESS
nts

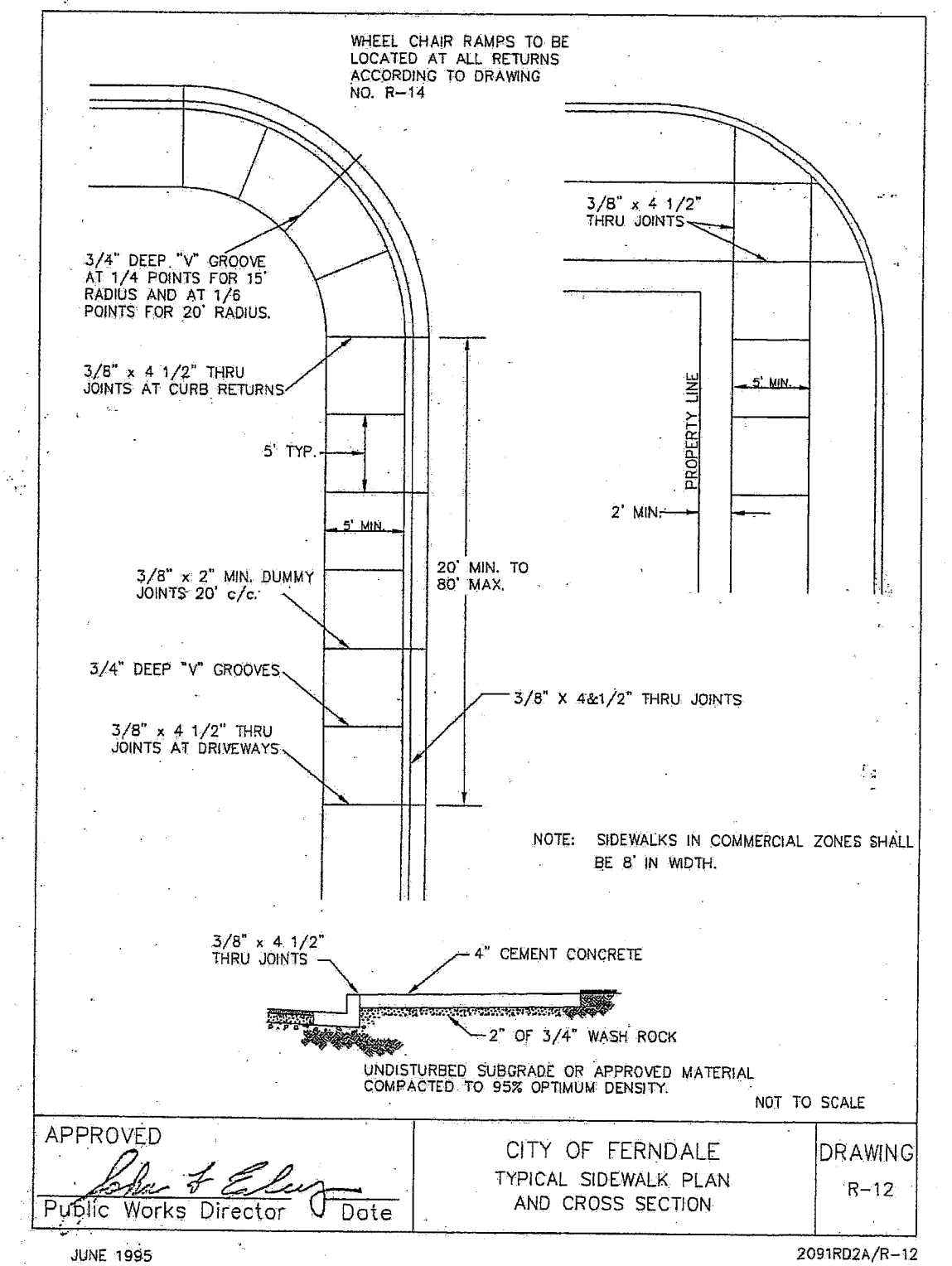
- NOTES:
1. ALL DEPTHS REPRESENT COMPACTED DEPTHS.
 2. REMOVE ALL TOPSOIL AND UNSUITABLE NATIVE SOIL FROM THE ROAD AND SLOPE PRISM.
 3. IN FILL SECTIONS EXTEND GRAVEL BASE TO UNYIELDING NATIVE SUBGRADE. PLACE GRAVEL BASE IN 12" MAX LIFTS AND COMPACT LIFT TO 95% MAX. DENSITY.



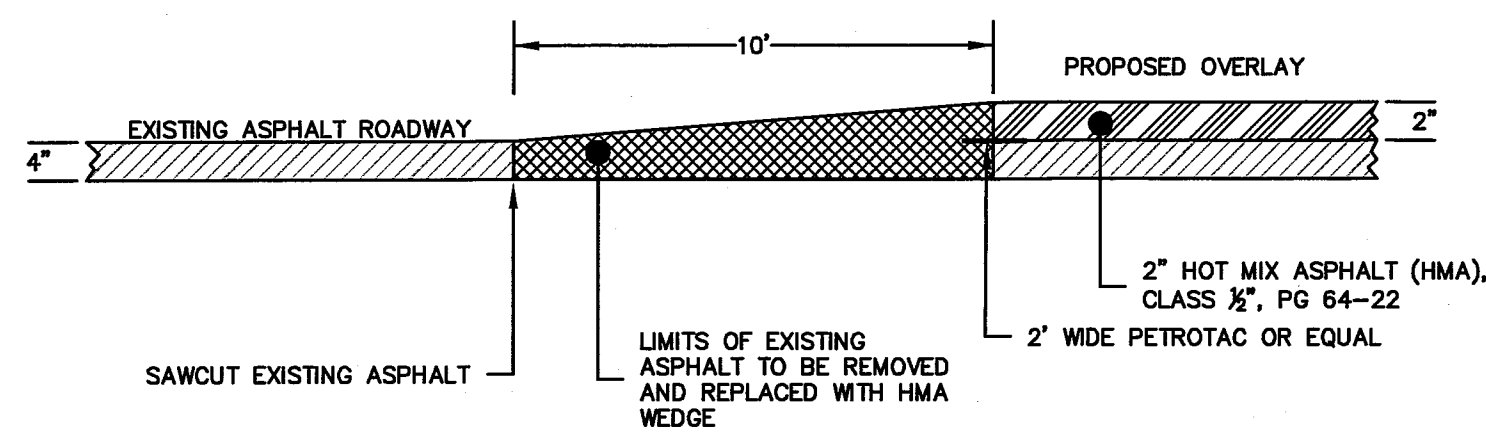
B ASPHALT PAVEMENT SECTION
nts



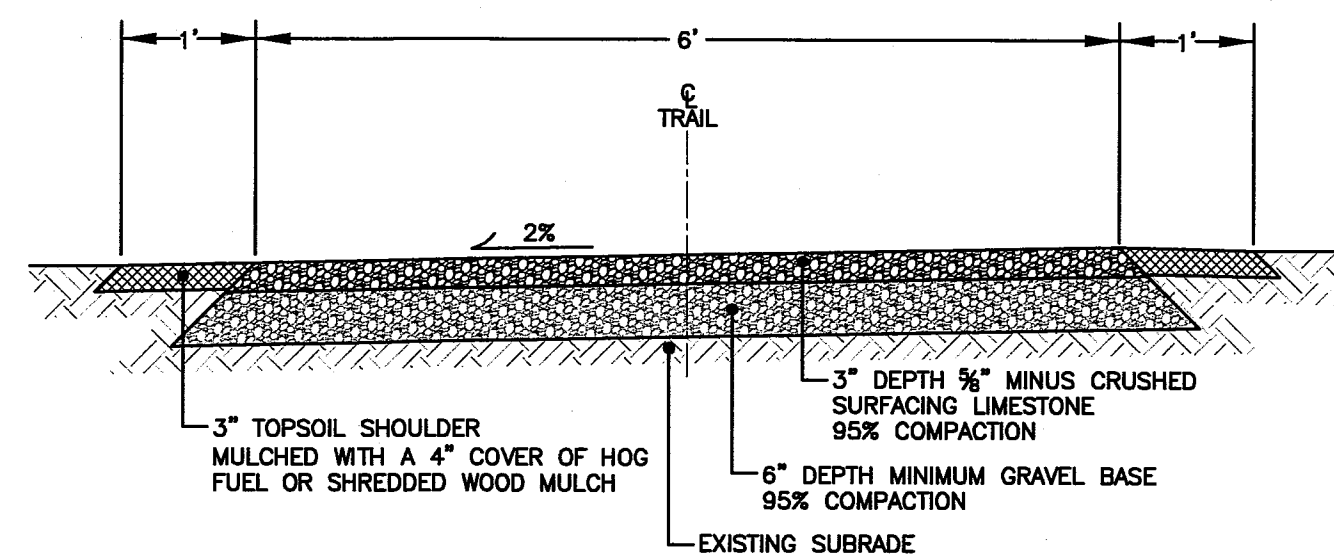
C CONCRETE V-GUTTER
nts



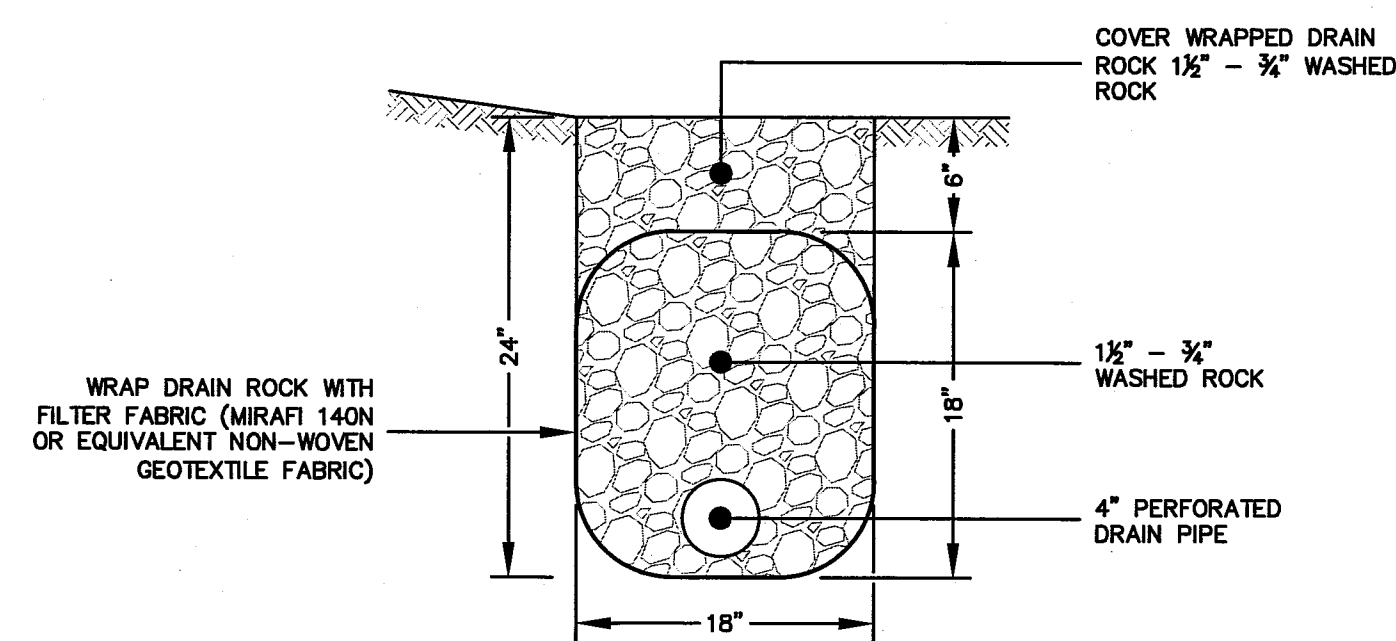
D TYPICAL SIDEWALK PLAN AND CROSS SECTION
nts



E PLANING DETAIL
nts

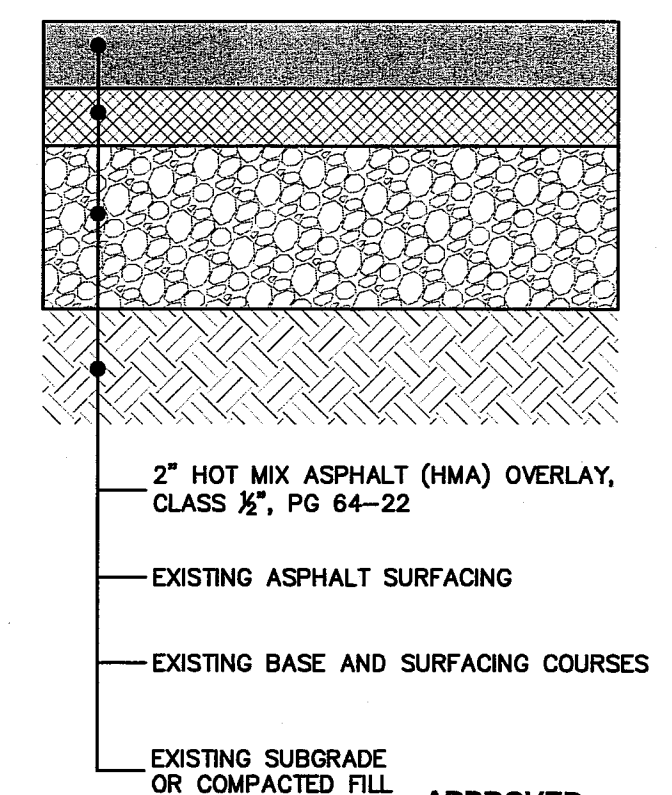


F TRAIL SECTION
nts



G CUTOFF DRAIN
nts

- NOTES:
1. ALL DEPTHS REPRESENT COMPACTED DEPTHS.
 2. TRANSITION TO EXISTING PAVEMENT AT BEGINNING AND END OF OVERLAY



H MALLOY & THORNTON ROAD OVERLAY
nts

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No. Date REVISION By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



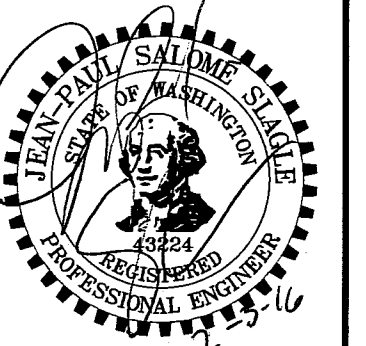
220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401
FREELAND & ASSOCIATES

CLIENT:
JOHN FRIBERG
6425 WEST 20TH AVENUE
FERNDAL, WA 98248
PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERNDAL, WA 98248

SHEET CONTENTS:

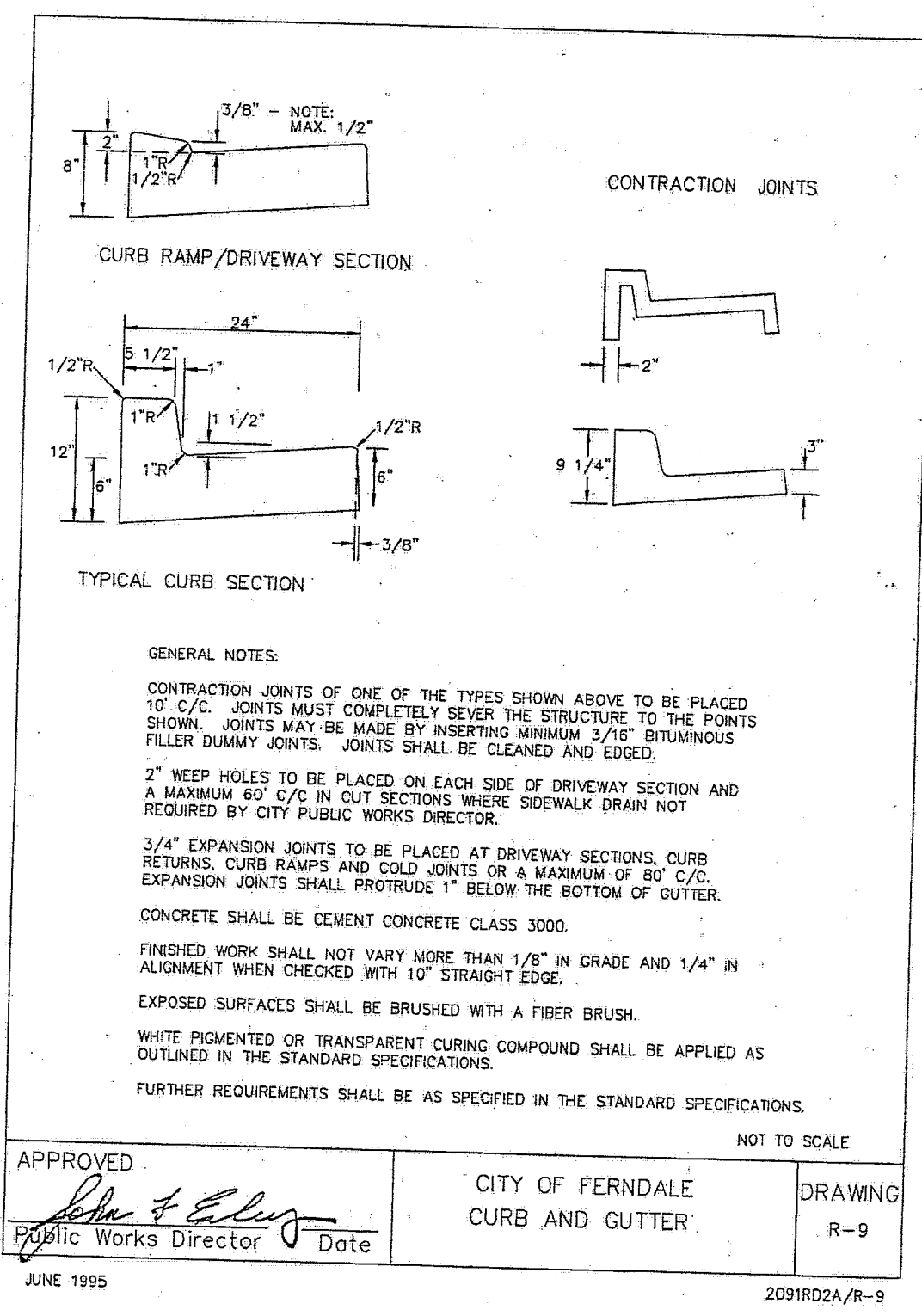
DETAILS

DWG #: 13022SP8.DWG
JOB #: 13022
SCALE: H: N/A V: N/A
DATE: 1-27-2016
SHEET: **C12**

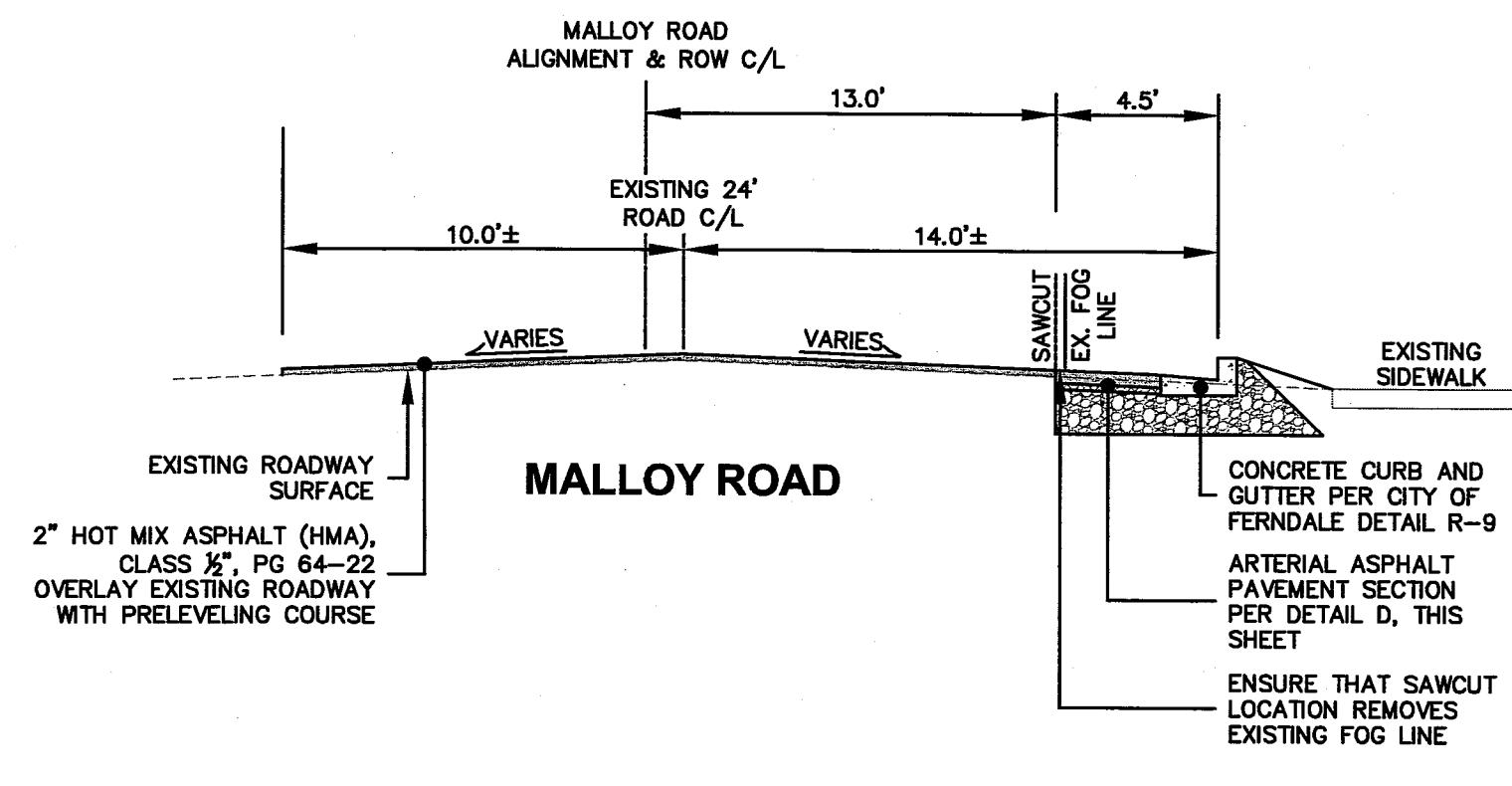


00594.082 2/19/16 stf

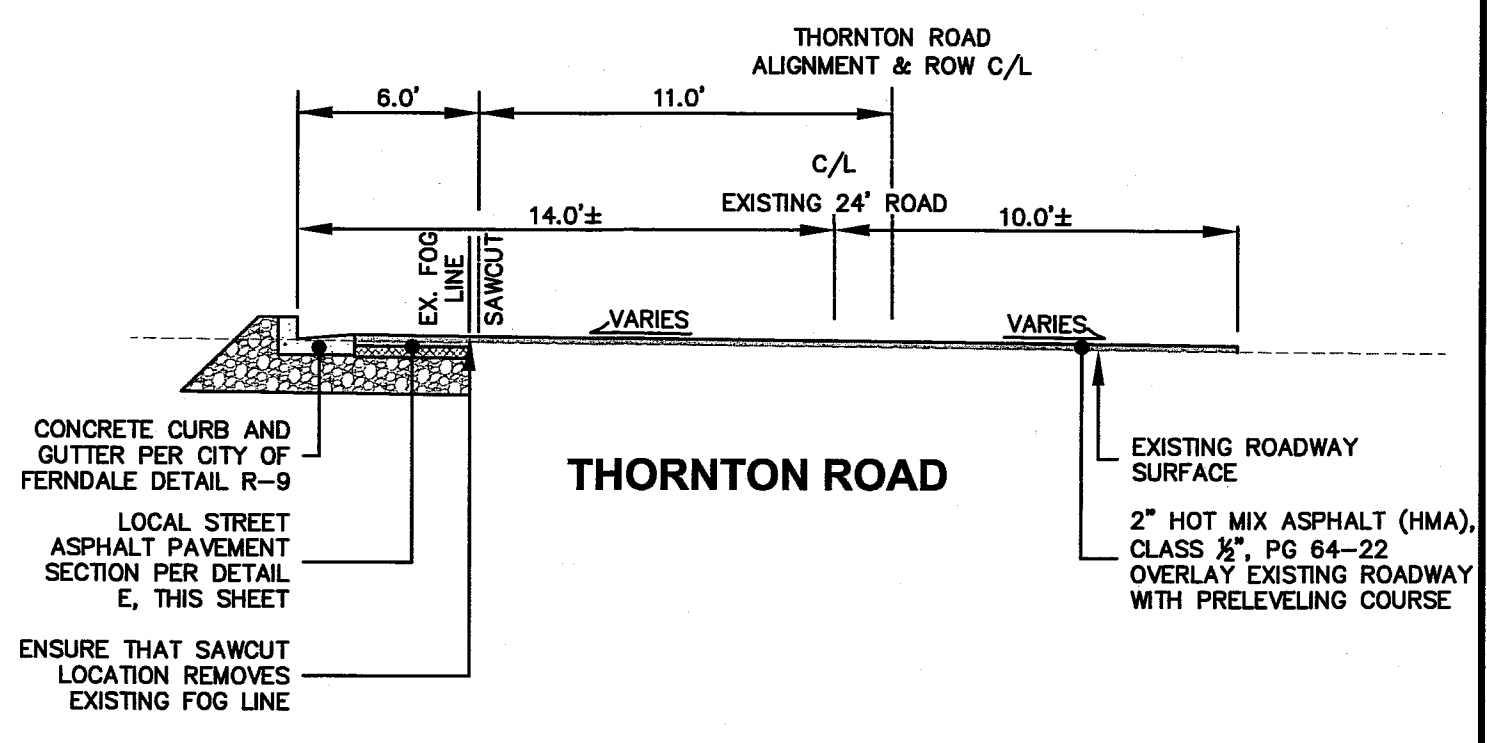
00594.013 2/19/16 SH



A CONCRETE CURB AND GUTTER

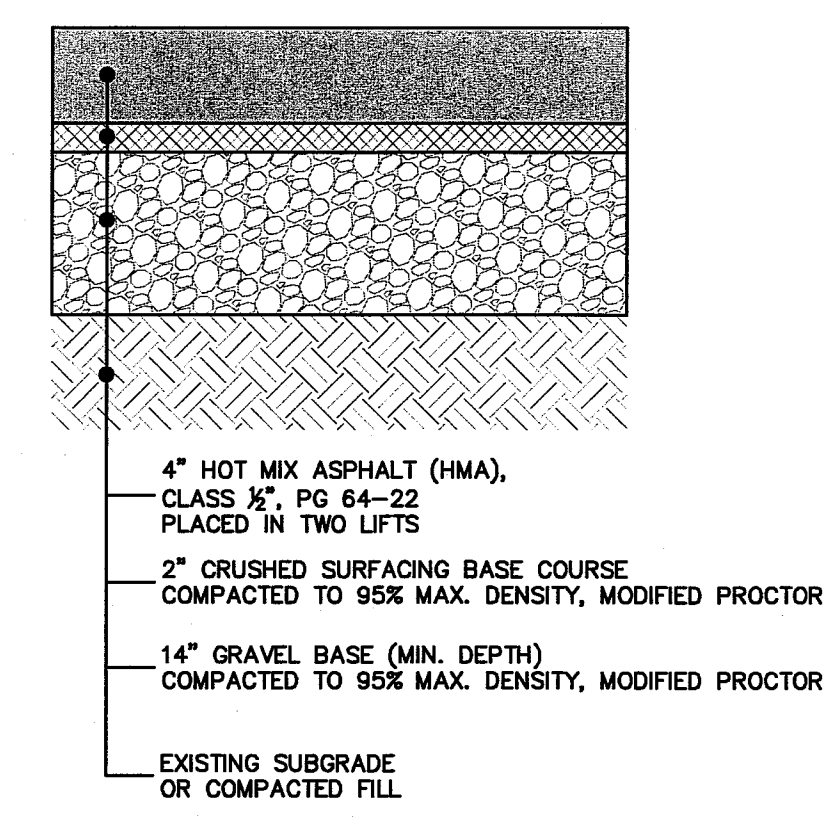


B MALLOY ROAD OVERLAY SECTION



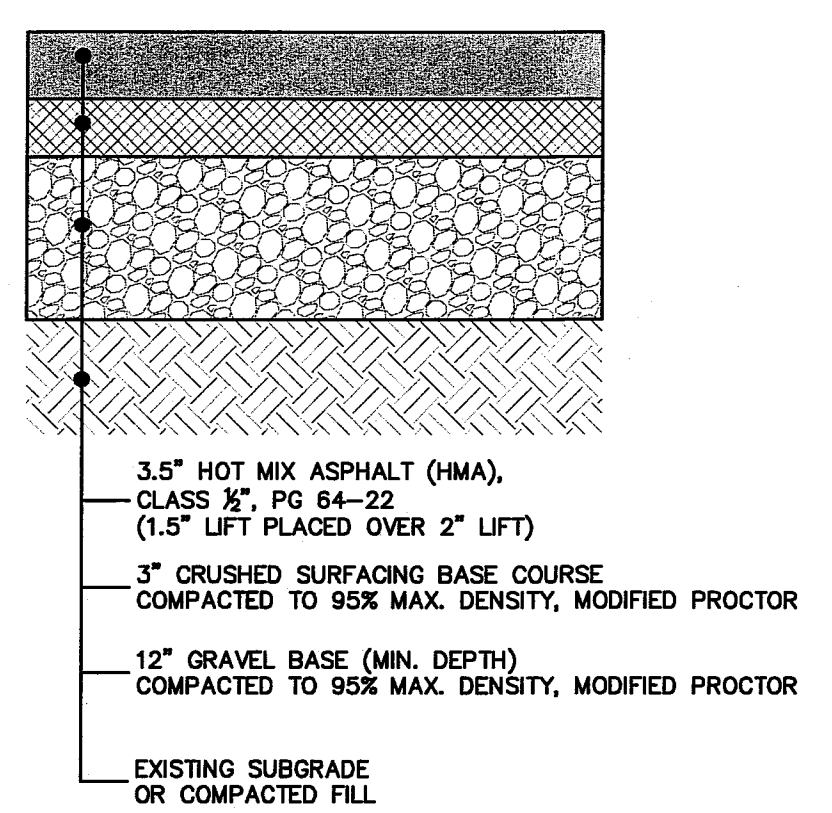
C THORNTON ROAD OVERLAY SECTION

- NOTES:**
- ALL DEPTHS REPRESENT COMPACTED DEPTHS.
 - REMOVE ALL TOPSOIL AND UNSUITABLE NATIVE SOIL FROM THE ROAD AND SLOPE PRISM.
 - IN FILL SECTIONS EXTEND GRAVEL BASE TO UNYIELDING NATIVE SUBGRADE. PLACE GRAVEL BASE IN 12" MAX LIFTS AND COMPACT LIFT TO 95% MAX. DENSITY.
 - ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE PROVISIONS OF THE APPLICABLE SECTIONS OF THE APWA "STANDARD SPECIFICATIONS" AND SHALL CONFORM TO THE REQUIREMENTS OF THE CITY ENGINEER.

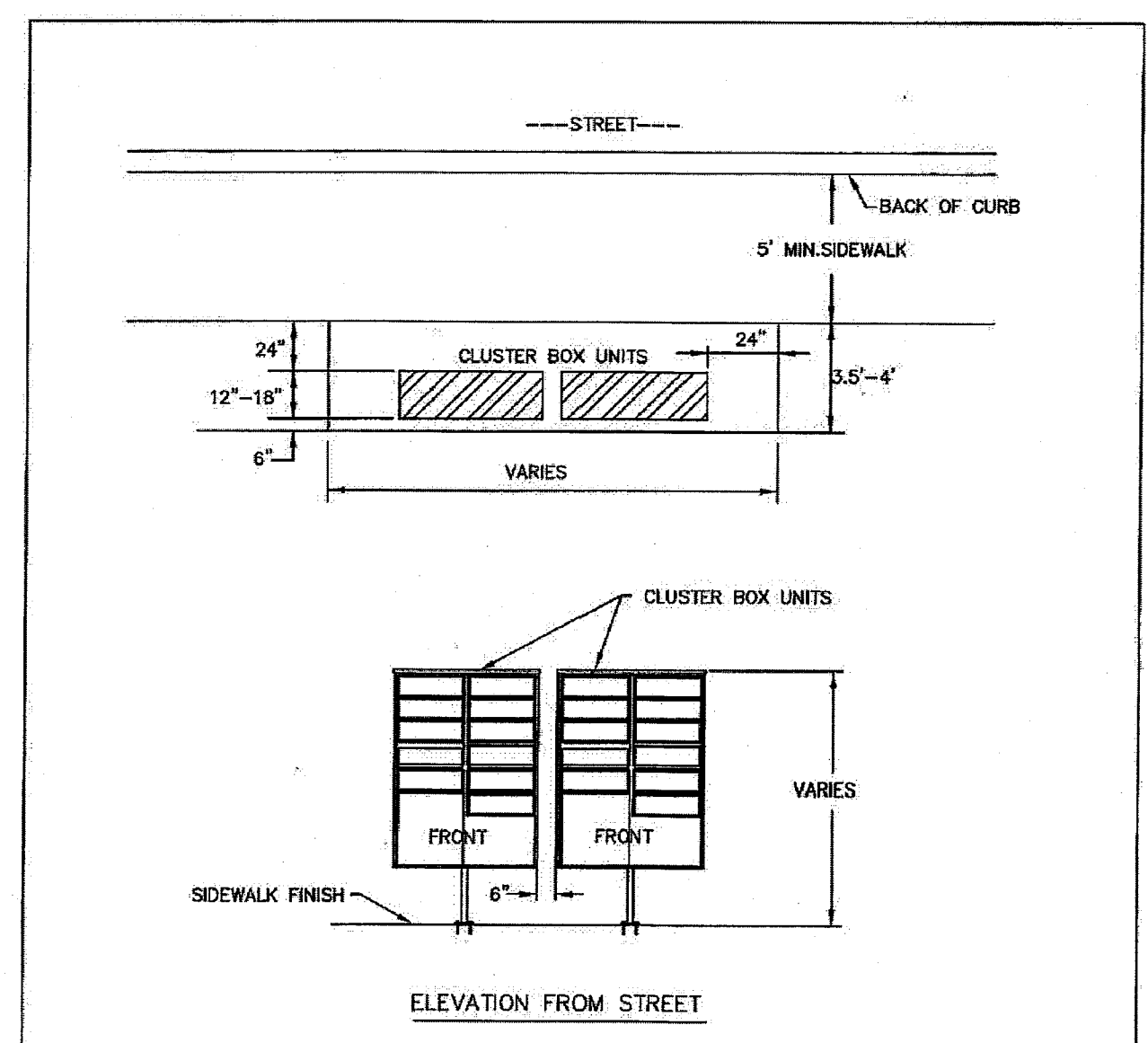


D ARTERIAL ASPHALT PAVEMENT SECTION

- NOTES:**
- ALL DEPTHS REPRESENT COMPACTED DEPTHS.
 - REMOVE ALL TOPSOIL AND UNSUITABLE NATIVE SOIL FROM THE ROAD AND SLOPE PRISM.
 - IN FILL SECTIONS EXTEND GRAVEL BASE TO UNYIELDING NATIVE SUBGRADE. PLACE GRAVEL BASE IN 12" MAX LIFTS AND COMPACT LIFT TO 95% MAX. DENSITY.
 - ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE PROVISIONS OF THE APPLICABLE SECTIONS OF THE APWA "STANDARD SPECIFICATIONS" AND SHALL CONFORM TO THE REQUIREMENTS OF THE CITY ENGINEER.

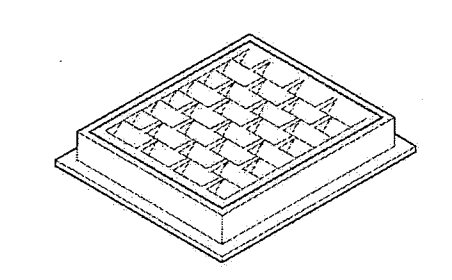


E LOCAL ST. ASPHALT PAVEMENT SECTION

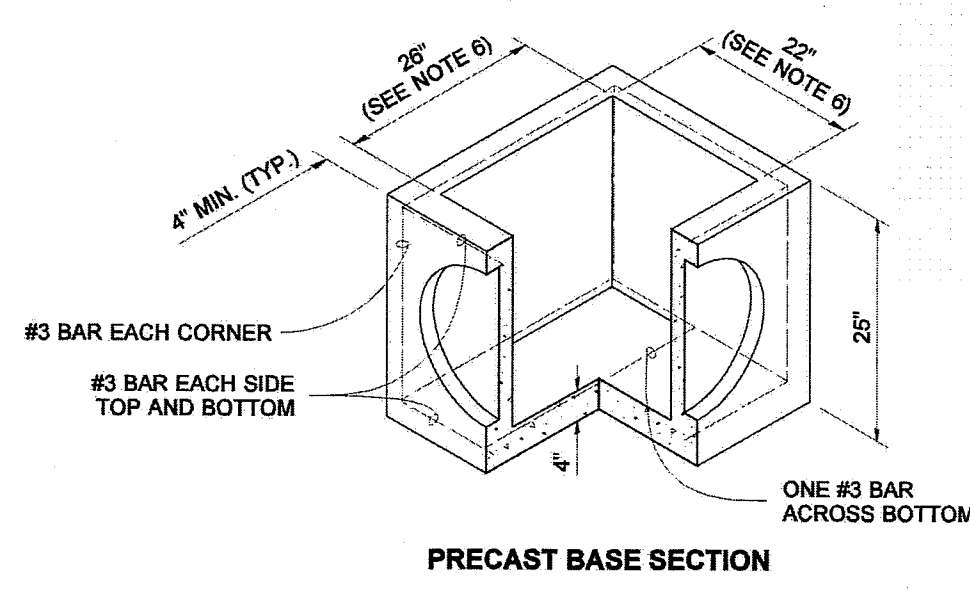
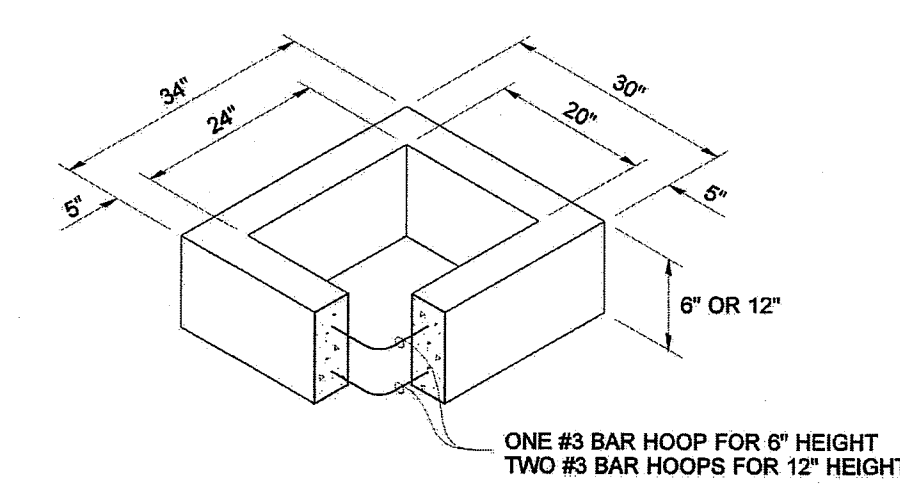


F MAILBOX STANDARD

DRAWN BY: MARK SUWA



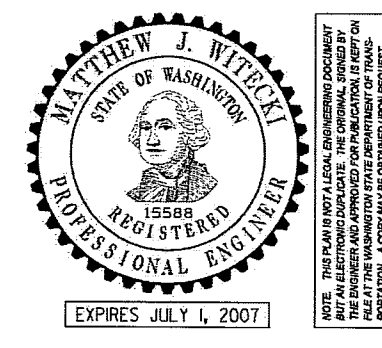
FRAME AND VANED GRATE



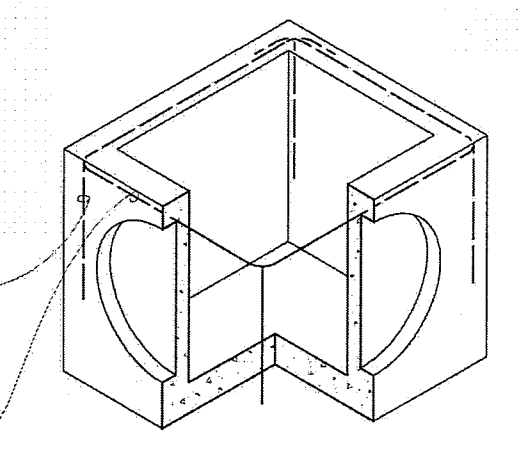
PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

- NOTES:**
- As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
 - The knockout diameter shall not be greater than 18". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
 - The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
 - The frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
 - The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
 - The opening shall be measured at the top of the precast base section.
 - All pickup holes shall be grouted full after the inlet has been placed.

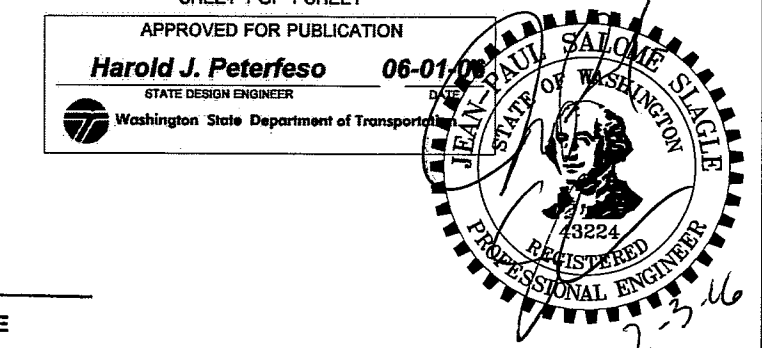


CONCRETE INLET
STANDARD PLAN B-25.60-00



G CONCRETE INLET
WSDOT STD. PLAN B-25.60-00

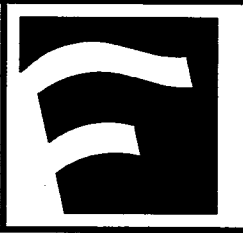
FEB 12 2016
BY: _____
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY: JPS
DRAWN BY: EJP
CHECKED BY: HAF



220 West Champion Street, Suite 200 t. 360.650.1408
Bellingham, WA 98225 f. 360.650.1401

FREELAND & ASSOCIATES

CLIENT: **JOHN FRIBERG**
6425 WEST 20TH AVENUE
FERDALE, WA 98248

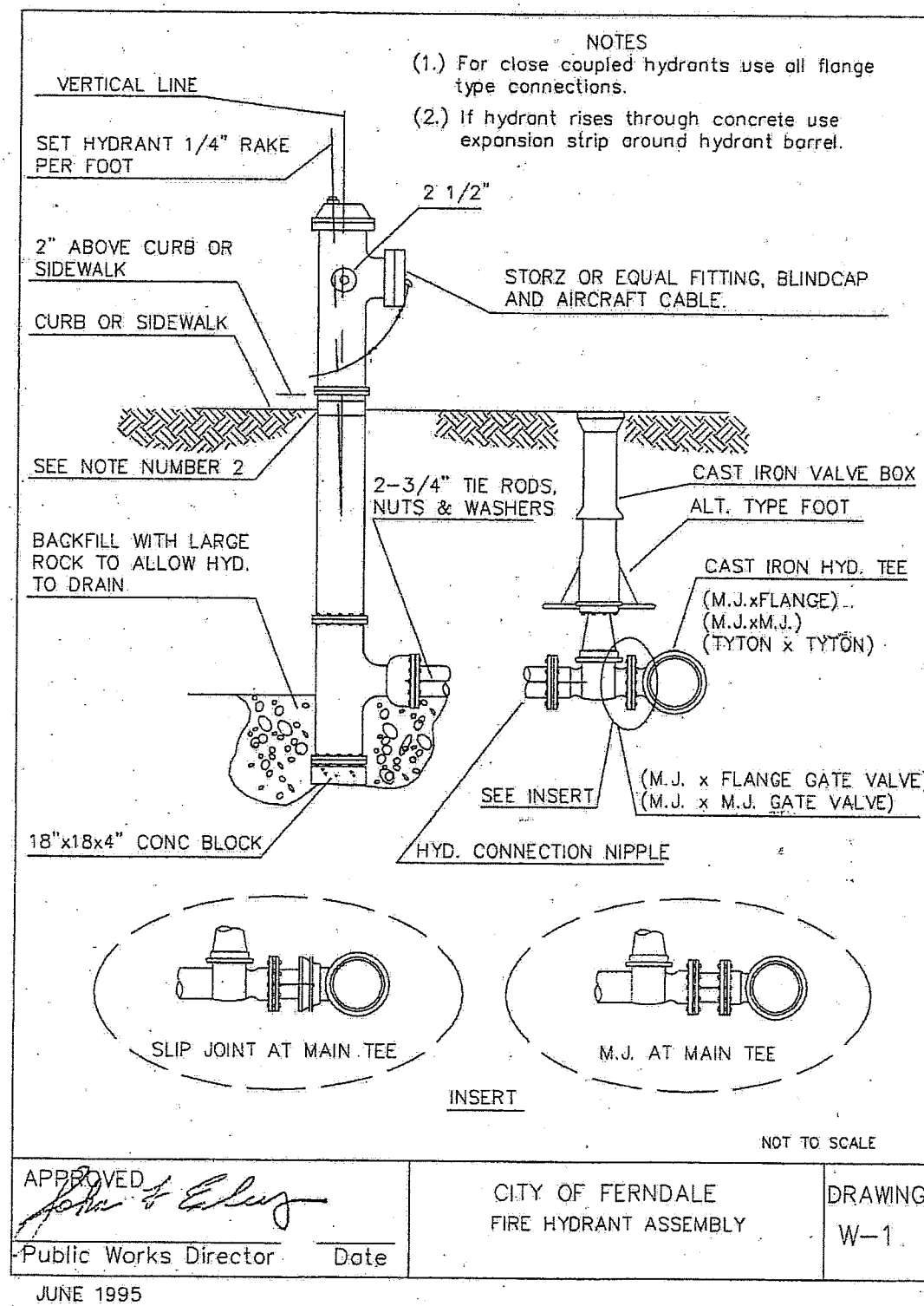
PROJECT LOCATION: THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:

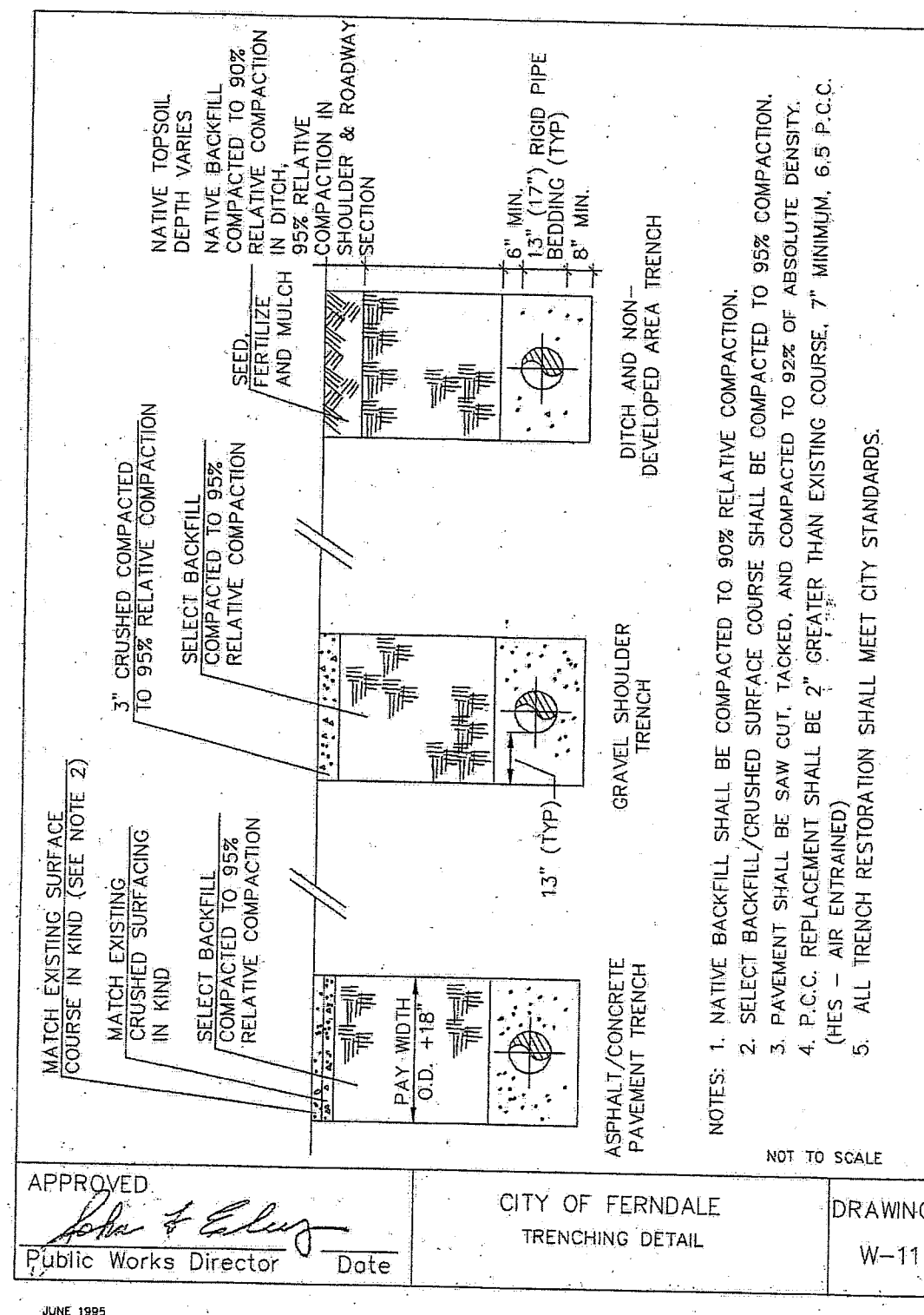
DETAILS

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C13
SCALE:	H: N/A V: N/A		

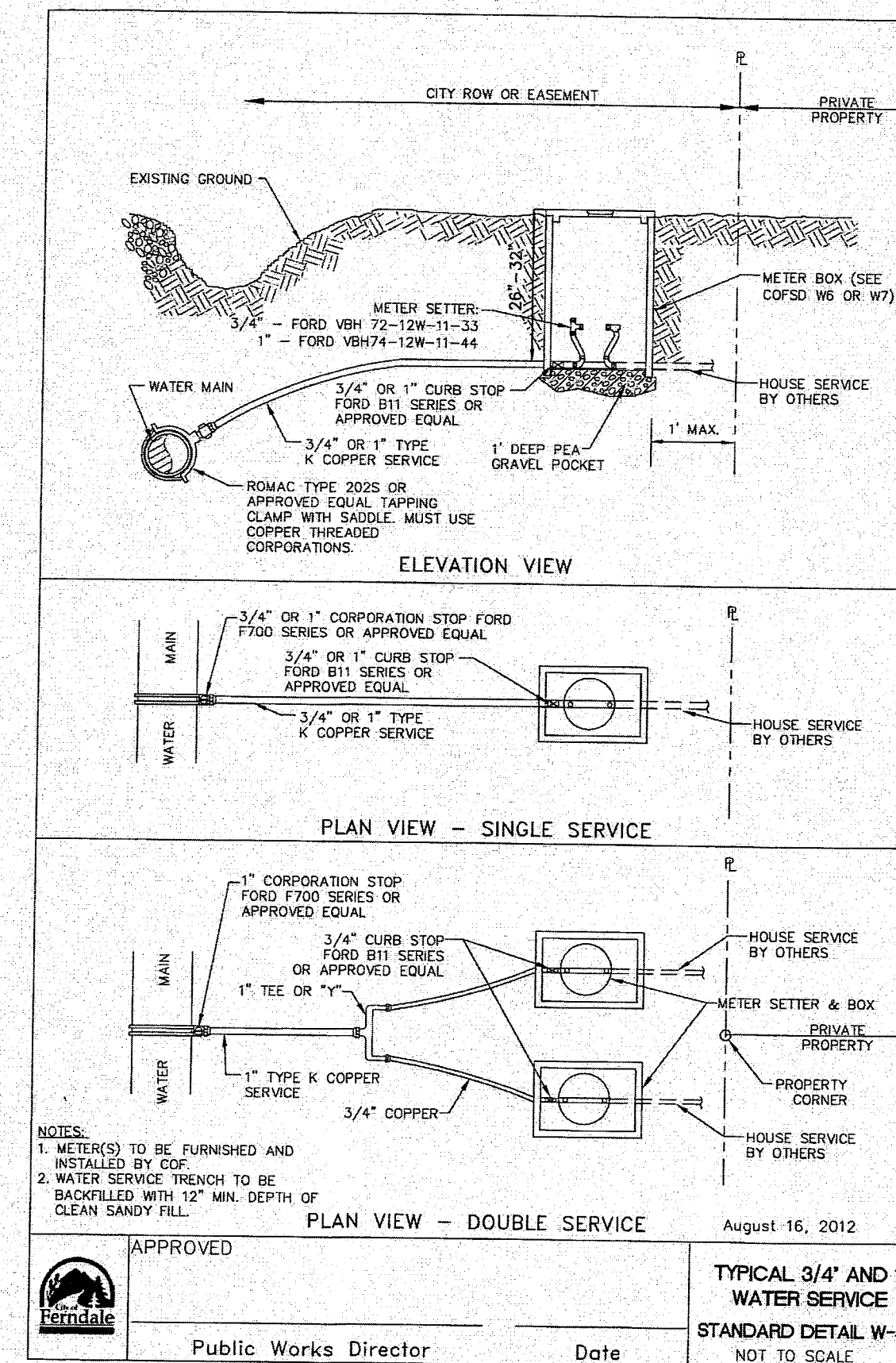
00544.014 2/19/16 SH



A FIRE HYDRANT ASSEMBLY

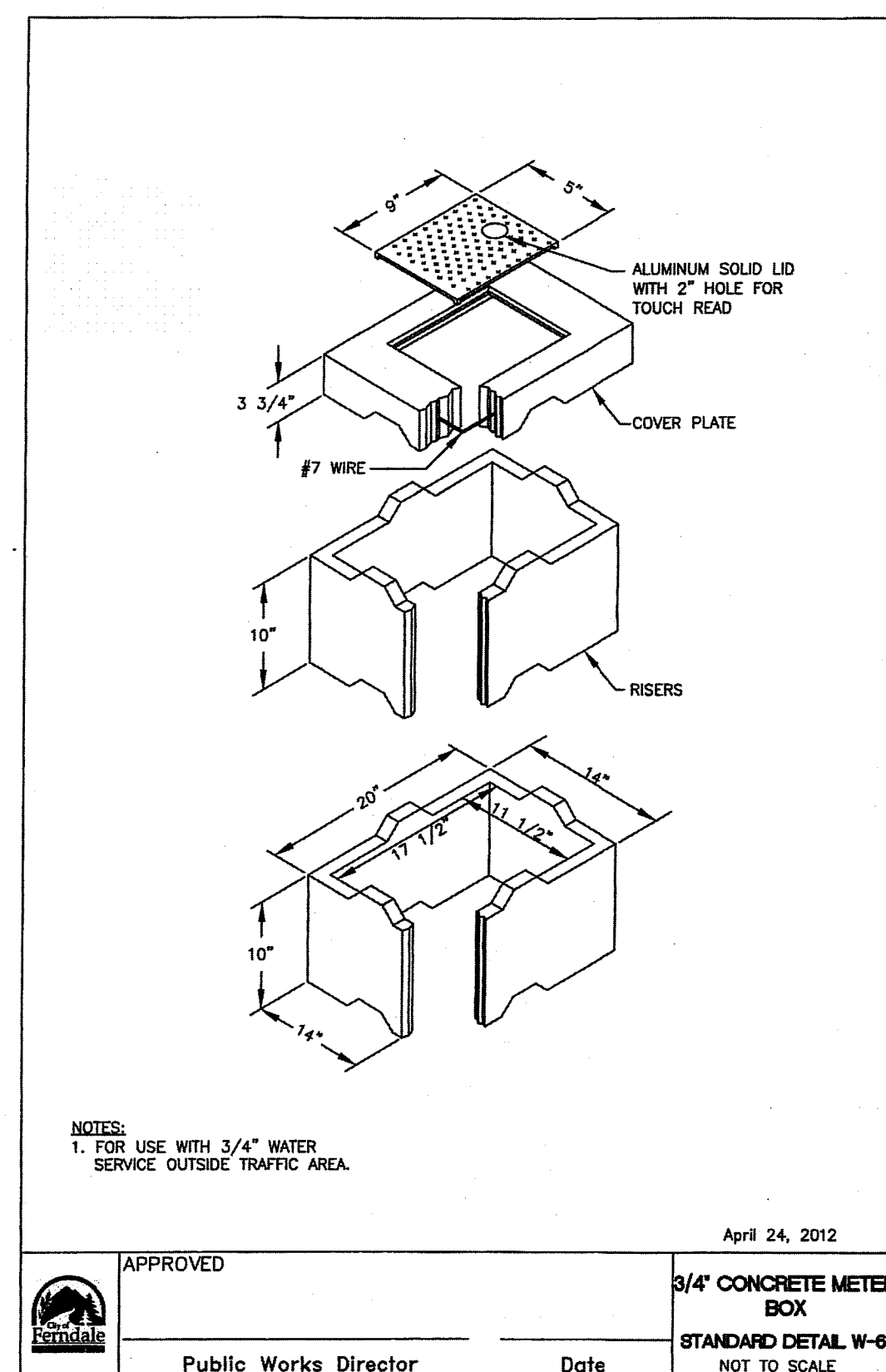


B TRENCHING DETAIL

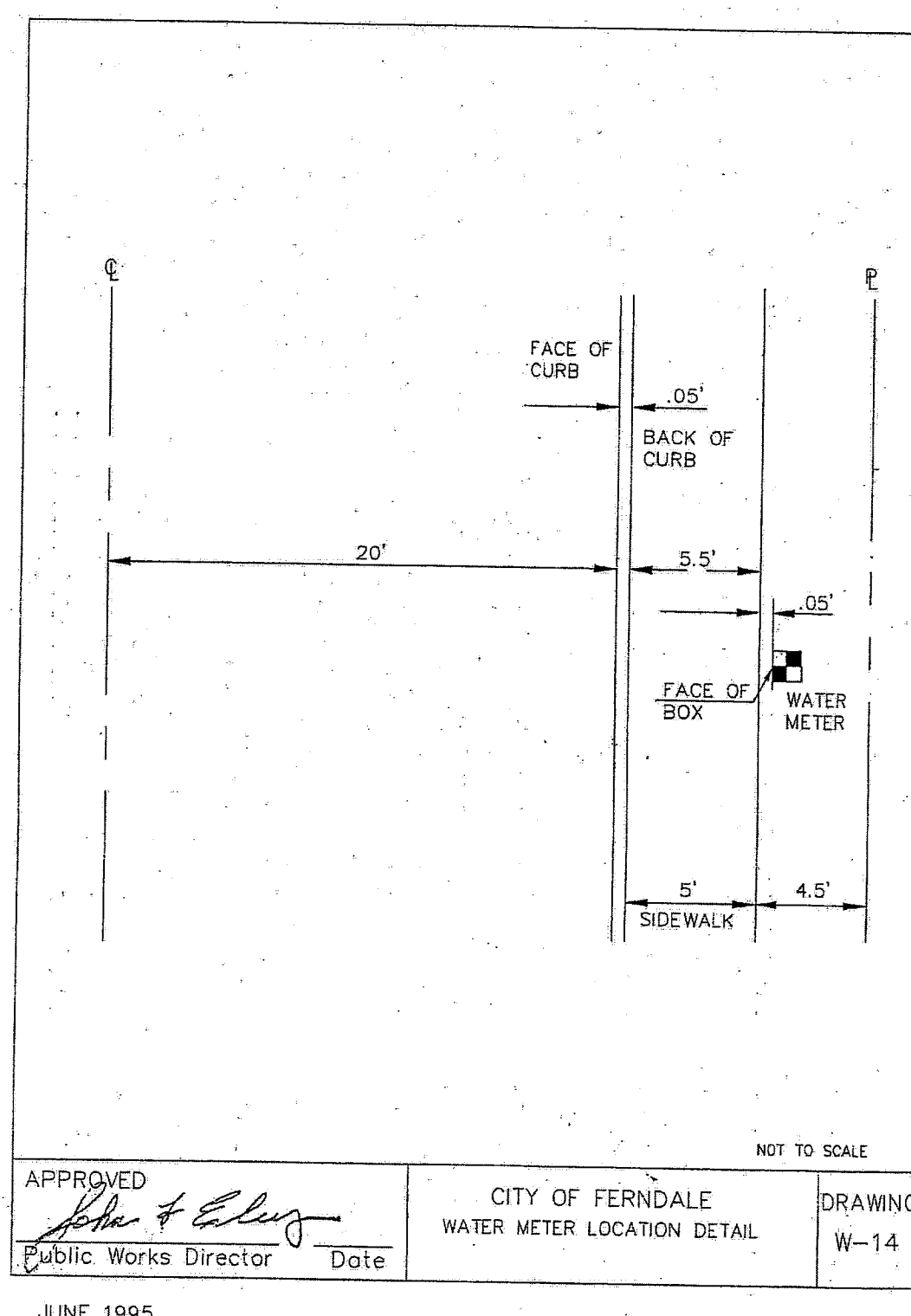


C 3/4" OR 1" WATER SERVICE

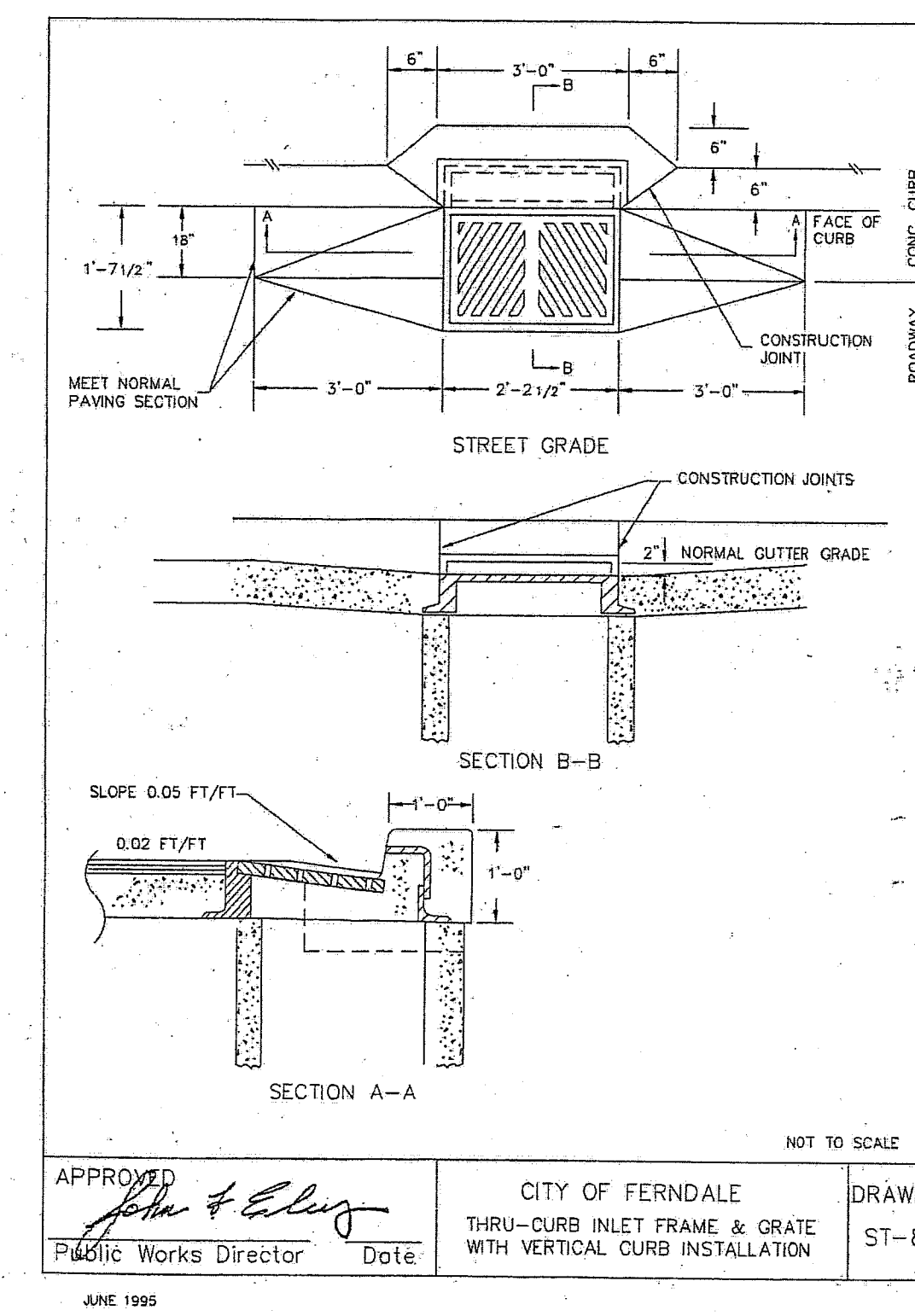
WATER SERVICE LOCATION TABLE			
LOT NO.	ALIGNMENT	STA. & OFFSET • MAIN	STA. & OFFSET • METER
1	MALLOY ROAD	2+90.78', 12.25' R	2+93', 29' R (AB)
1	MALLOY ROAD	2+90.78', 12.25' R	2+89', 29' R (AB)
3	MALLOY ROAD	1+94.78', 12.25' R	1+97', 29' R (AB)
4	MALLOY ROAD	1+94.78', 12.25' R	1+93', 29' R (AB)
5	MALLOY ROAD	1+29.67', 11.33' R	1+30', 29' R (AB)
6	THORNTON ROAD	10+89.75', 24.14' L	10+79', 29' L (AB)
7	THORNTON ROAD	12+05.93', 23.79' L	12+04', 29' L (AB)
8	THORNTON ROAD	12+05.93', 23.79' L	12+08', 29' L (AB)
9	THORNTON ROAD	13+01.93', 23.51' L	13+00', 29' L (AB)
10	THORNTON ROAD	13+01.93', 23.51' L	13+10', 29' L (AB)



D METER BOX OUTSIDE SIDEWALK



E WATER METER LOCATION



F THRU-CURB FRAME & GRATE

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF

220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

FREELAND & ASSOCIATES

CLIENT:
JOHN FRIBERG
6425 WEST 20TH AVENUE
FERDALE, WA 98248

PROJECT LOCATION:
THORNTON ROAD & MALLOY ROAD
FERDALE, WA 98248

SHEET CONTENTS:

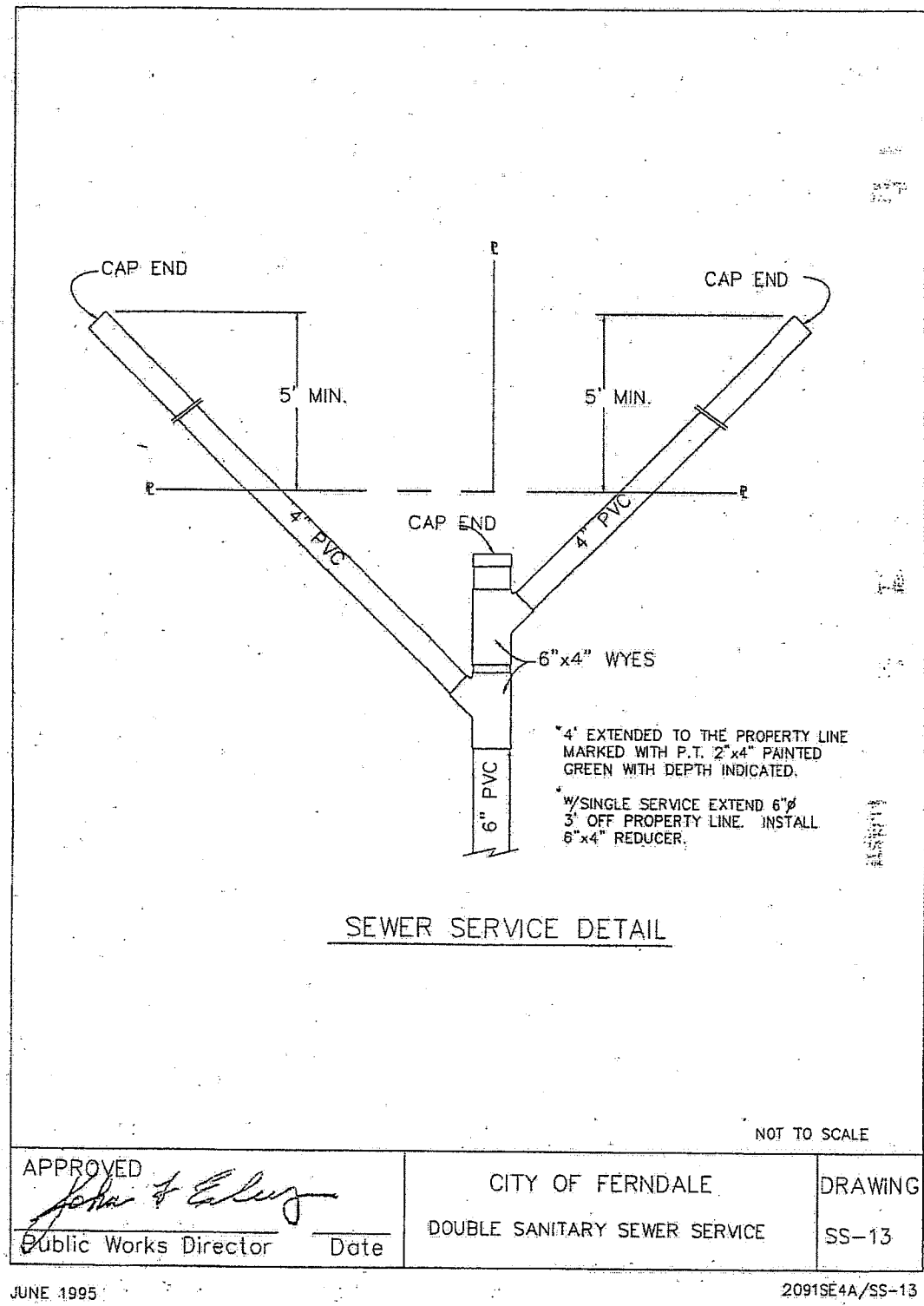
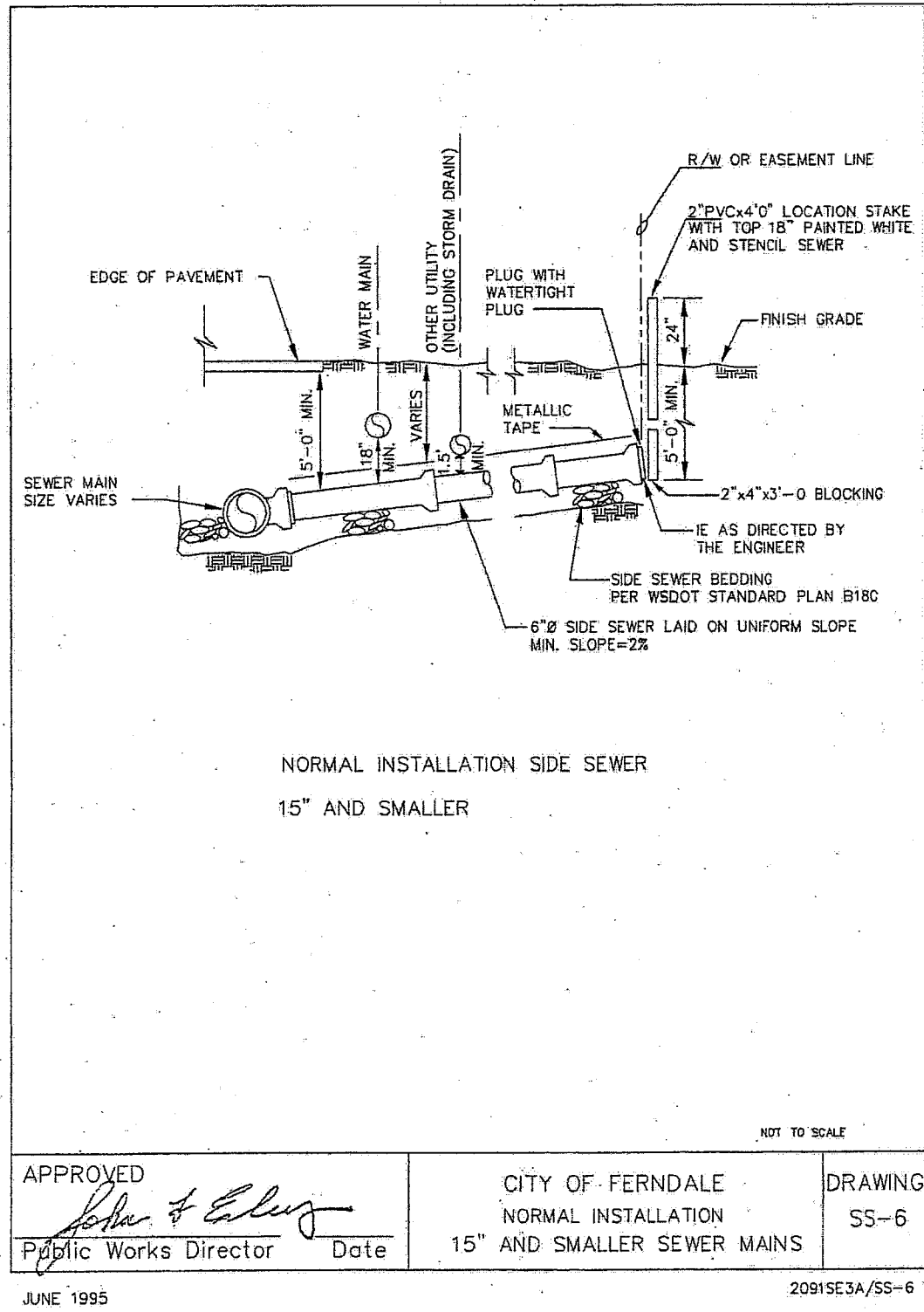
DETAILS

APPROVED
FEB 12 2016
BY
CITY OF FERDALE

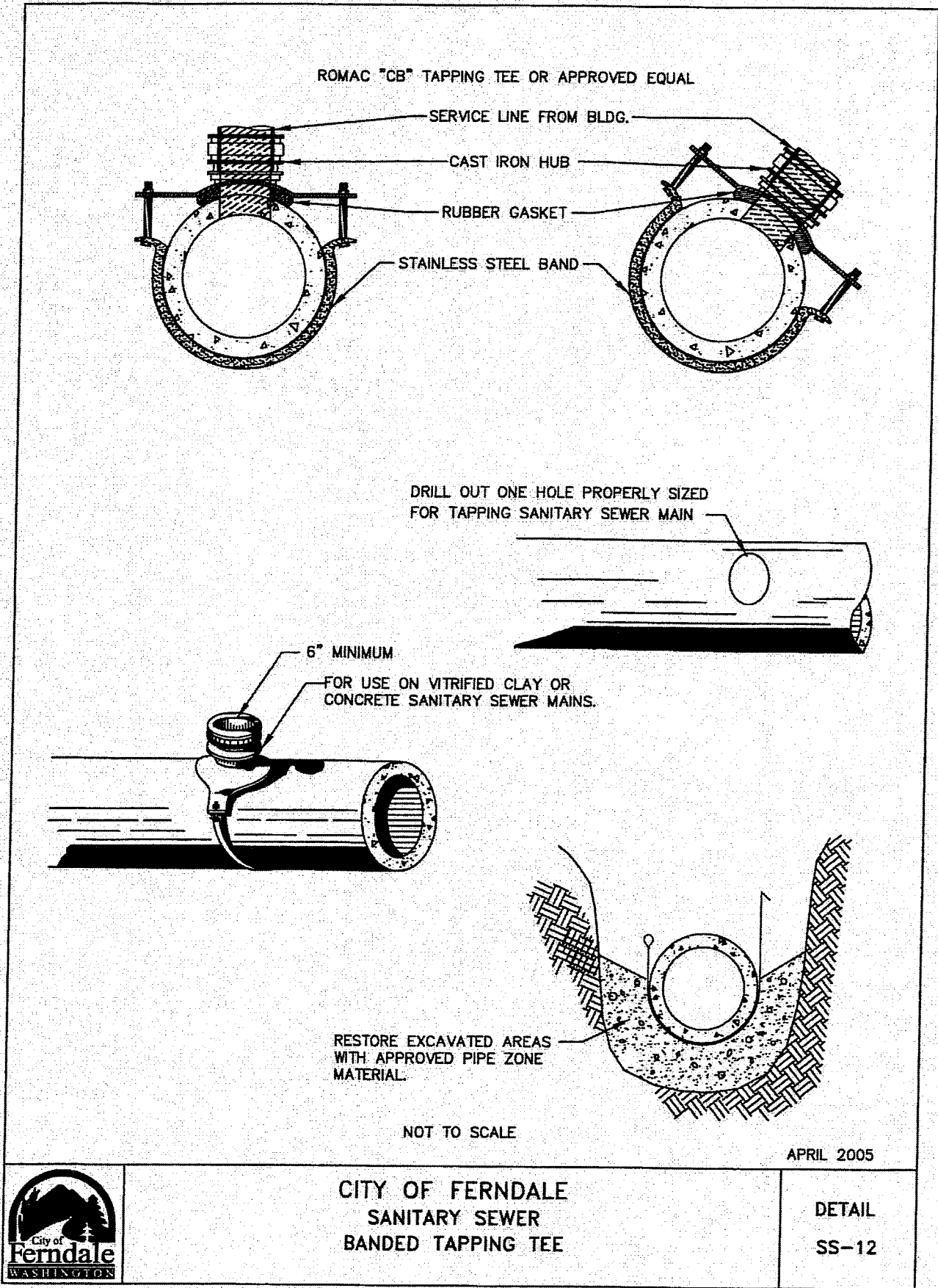


DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C14
SCALE:	H: N/A V: N/A		

AS 91612 510.14500

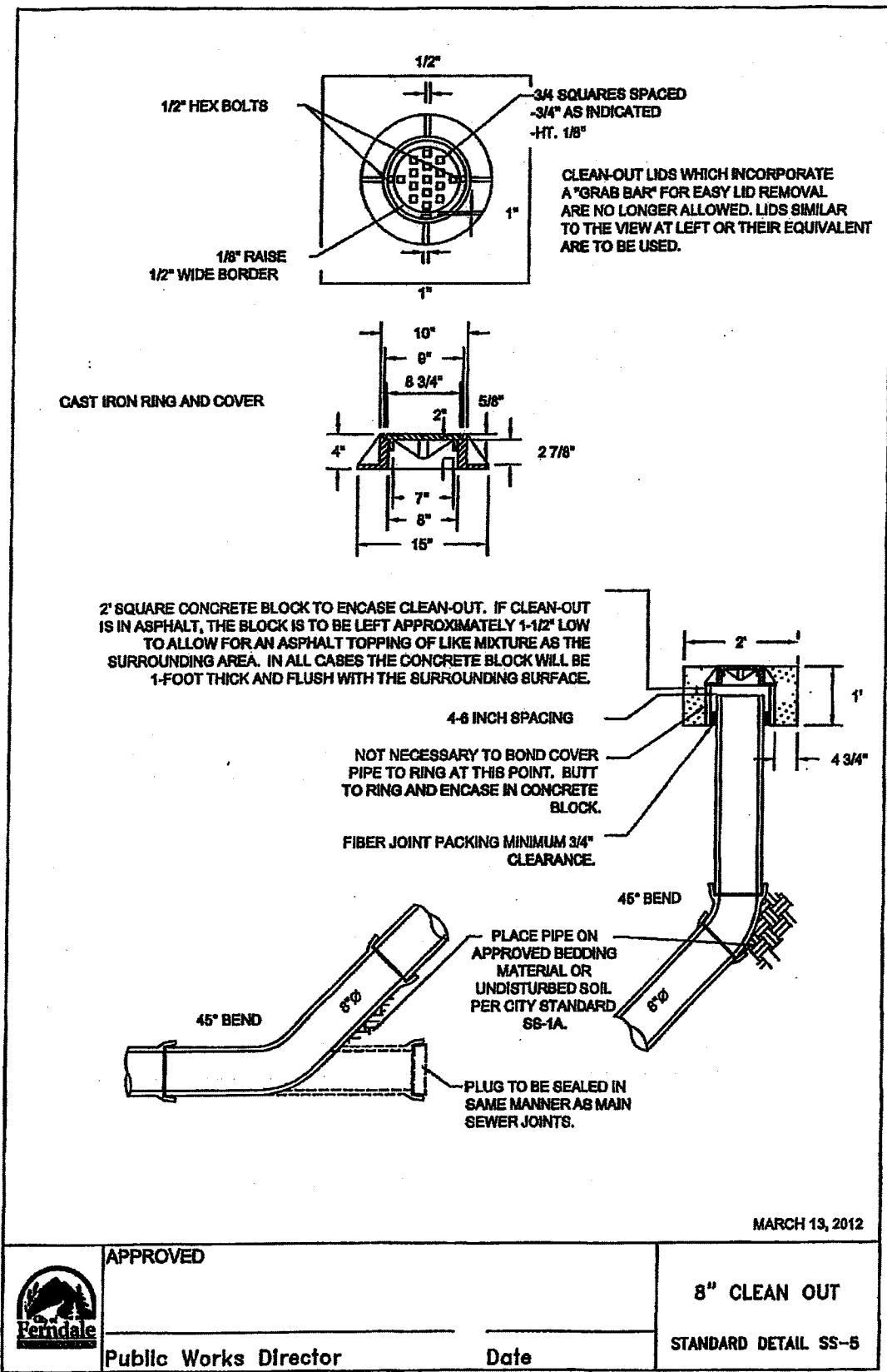


SEWER SERVICE LOCATION TABLE				
LOT NO.	ALIGNMENT	STA. & OFFSET @ MAIN	STA. & OFFSET @ STUB	
1	MALLOY ROAD	3+36.68', 4.16' L	3+37', 35' R (AB)	
2	MALLOY ROAD	2+42.67', 4.13' L	2+48', 35' R (AB)	
3	MALLOY ROAD		2+38', 35' R (AB)	
4	MALLOY ROAD	1+46.67', 4.06' L	1+52', 35' R (AB)	
5	MALLOY ROAD		1+42', 35' R (AB)	
6	THORNTON ROAD	11+14.95', 8.30' L	11+15', 30' L (AB)	
7	THORNTON ROAD	11+72.89', 9.28' L	11+73', 30' L (AB)	
8	THORNTON ROAD	11+86.69', 0.69' L	12+15', 35' L (AB)	
9	THORNTON ROAD	11+86.80', 7.03' R	12+22', 35' L (AB)	
10	THORNTON ROAD	11+86.80', 7.03' R	12+22', 35' L (AB)	

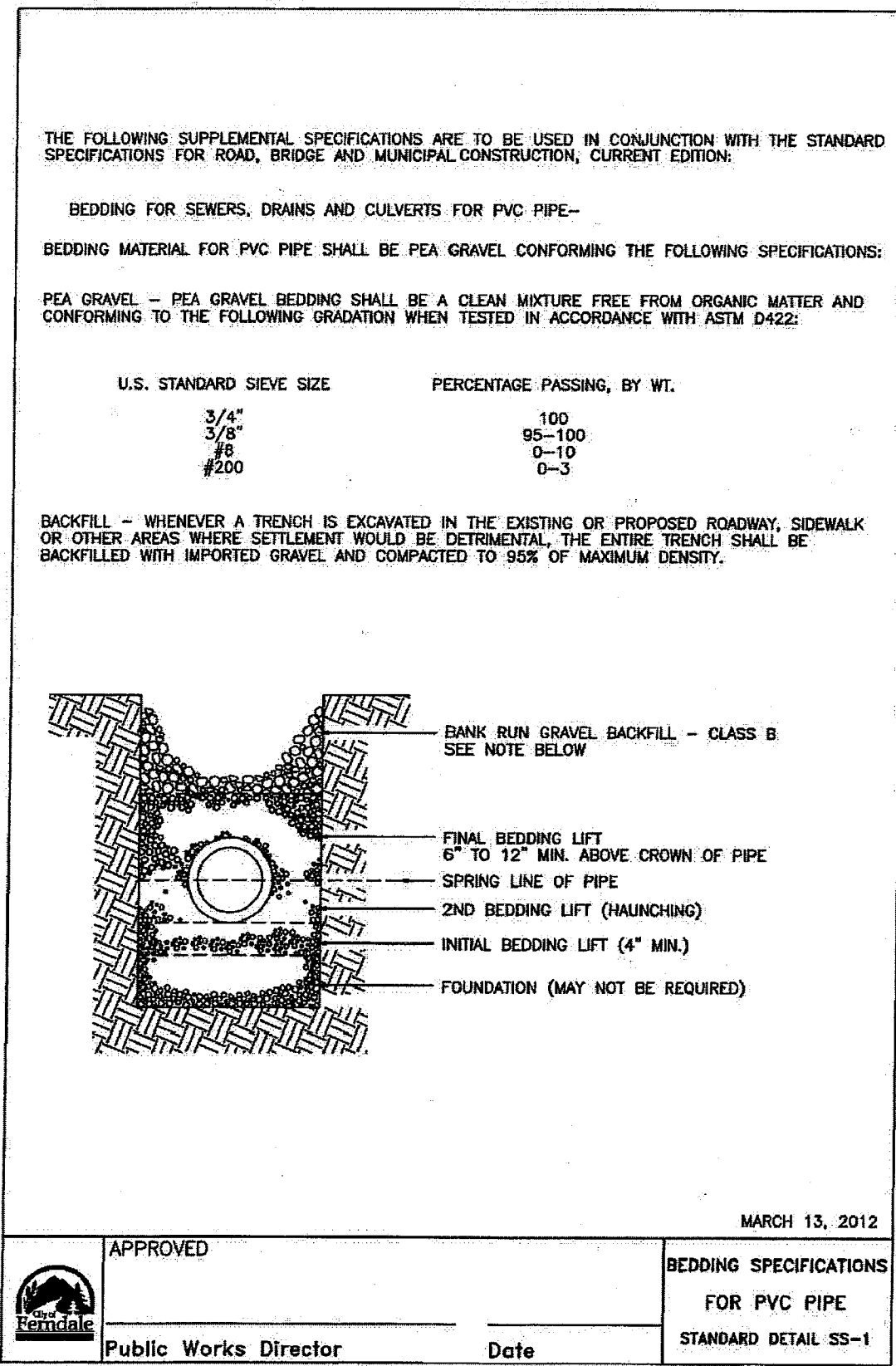


A SANITARY SEWER SERVICE

B SEWER SERVICE TAPPING



C SANITARY SEWER CLEAN OUT



D PIPE BEDDING FOR SANITARY SEWERS

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By
-----	------	----------	----

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

FREELAND & ASSOCIATES

CLIENT:

JOHN FRIBERG
6425 WEST 20TH AVENUE
FERNDAL, WA 98248

PROJECT LOCATION:

THORNTON ROAD & MALLOY ROAD
FERNDAL, WA 98248

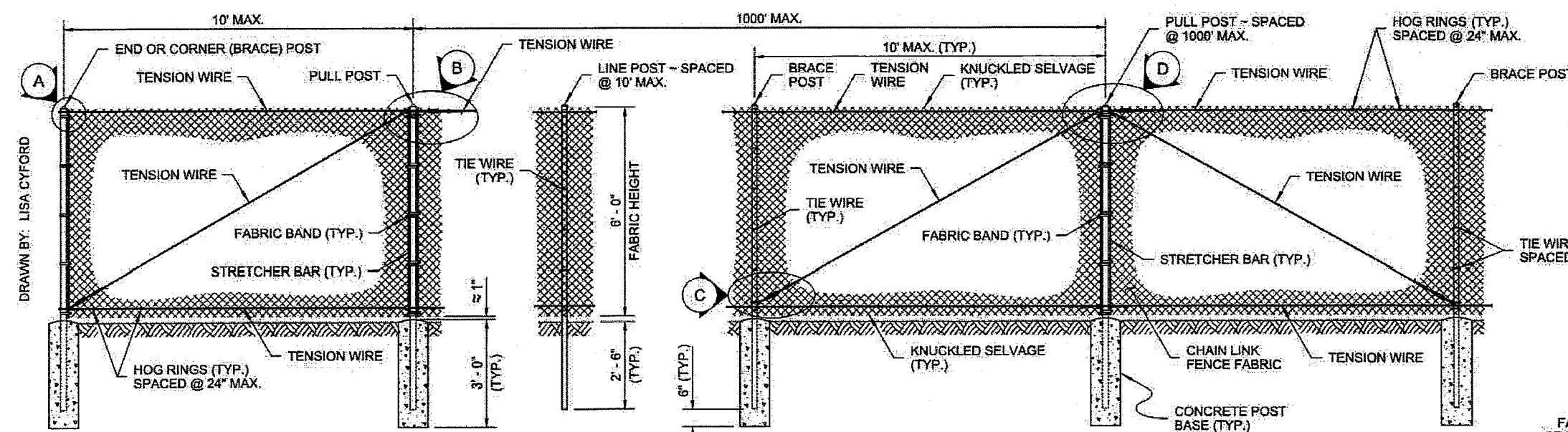
SHEET CONTENTS:

DETAILS

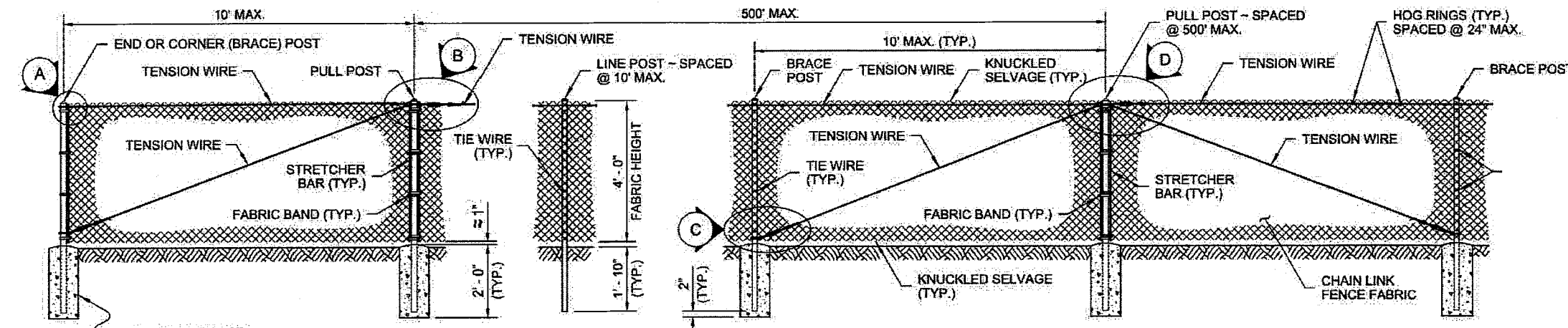
APPROVED
FEB 12 2016
BY
CITY OF FERNDAL



DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C15
SCALE:	H: N/A V: N/A		

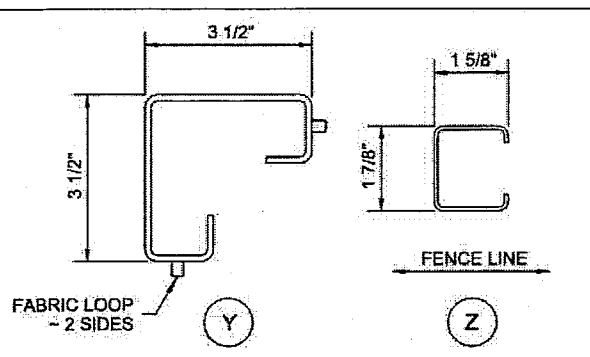


TYPE 3

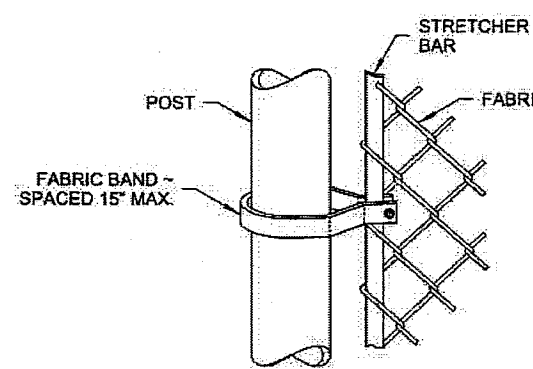


TYPE 4

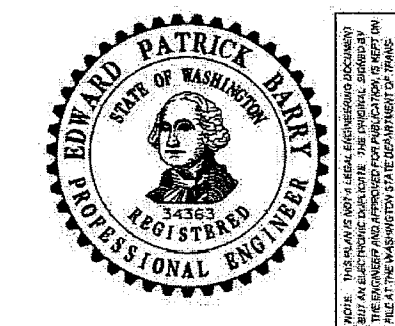
POST AND RAIL SPECIFICATIONS			
POST	PIPE	ROLL FORMED	
	NOM. SIZE (SCH. 40)	SECTION	WEIGHT (lb/ft)
END, CORNER, OR PULL POST	2 1/2" DIAM.	(Y)	5.10
LINE OR BRACE POST	2" DIAM.	(Z)	1.85



- NOTES
1. All concrete post bases shall be 10" minimum diameter.
 2. Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
 3. Details are illustrative and shall not limit hardware design or post selection of any particular fence type.



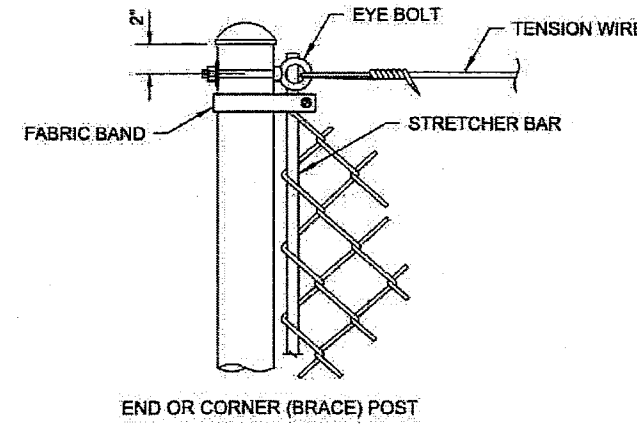
METHOD OF FASTENING STRETCHER BAR TO POST



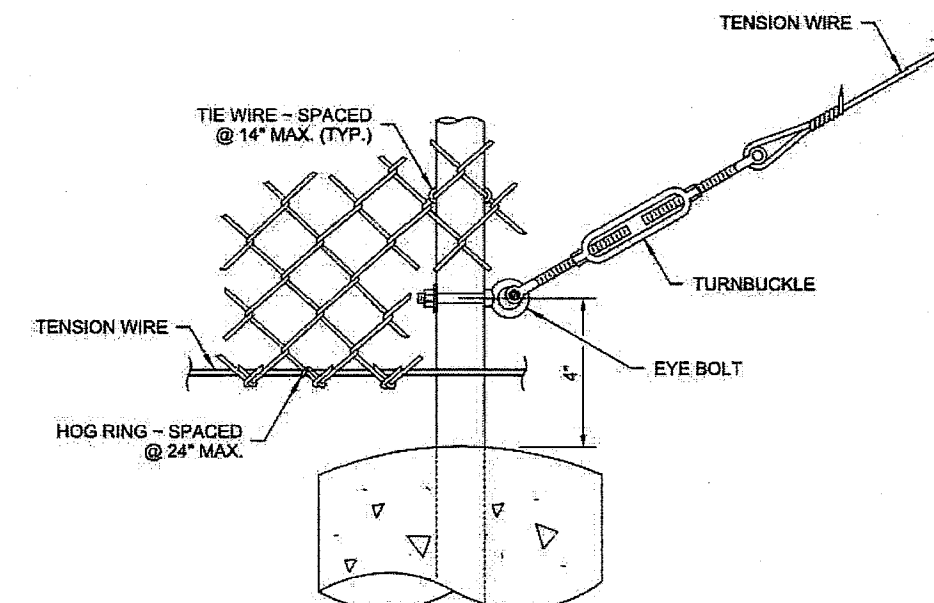
CHAIN LINK FENCE TYPES 3 AND 4
STANDARD PLAN L-20.10-02

SHEET 1 OF 2 SHEETS
APPROVED FOR PUBLICATION
Pasco Bakotich III 06/21/12
STATE DESIGN ENGINEER
Washington State Department of Transportation

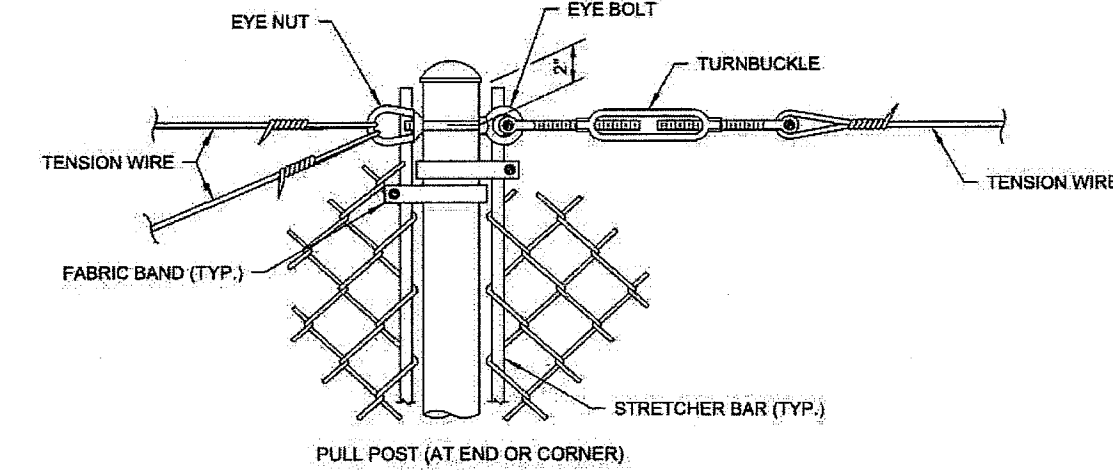
DRAWN BY: LISA CYFORD



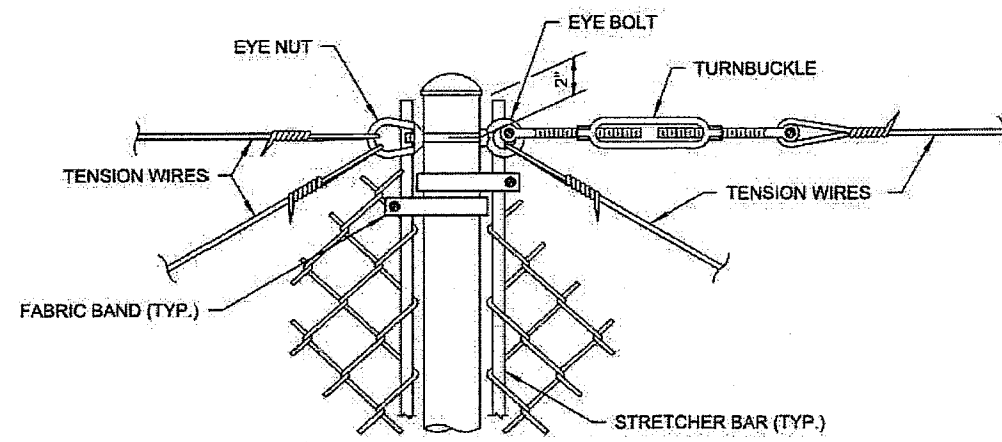
DETAIL (A)



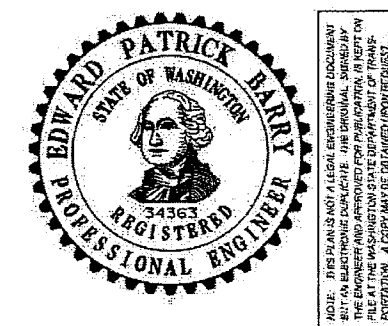
DETAIL (C)



DETAIL (B)



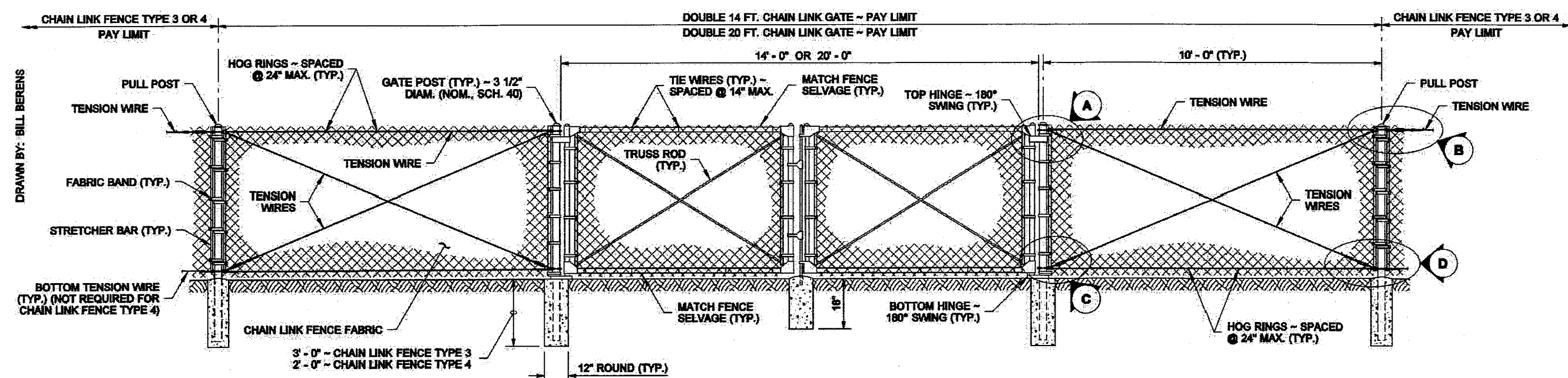
DETAIL (D)



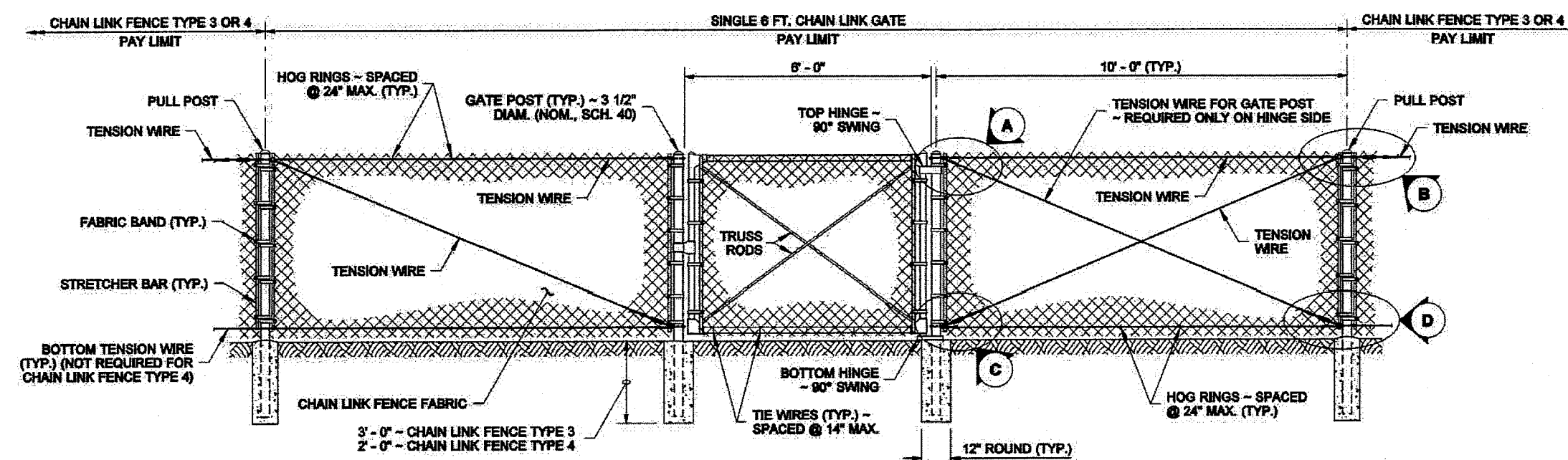
CHAIN LINK FENCE TYPES 3 AND 4
STANDARD PLAN L-20.10-02

SHEET 2 OF 2 SHEETS
APPROVED FOR PUBLICATION
Pasco Bakotich III 06/21/12
STATE DESIGN ENGINEER
Washington State Department of Transportation

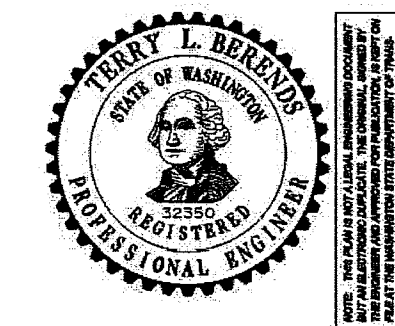
CHAIN LINK FENCE TYPE 3 AND 4
WSDOT STD. PLAN L-20.10-02



DOUBLE GATE



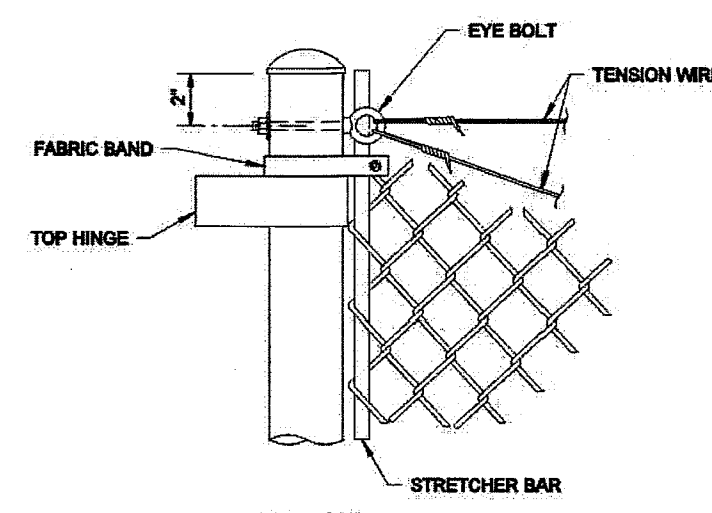
SINGLE GATE



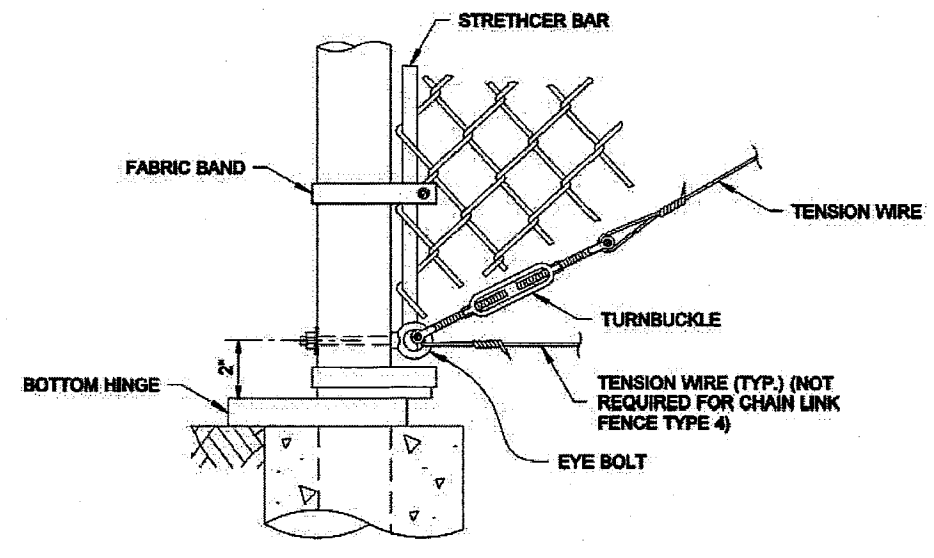
CHAIN LINK GATE
STANDARD PLAN L-30.10-01

SHEET 1 OF 2 SHEETS
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-18-11
STATE DESIGN ENGINEER
Washington State Department of Transportation

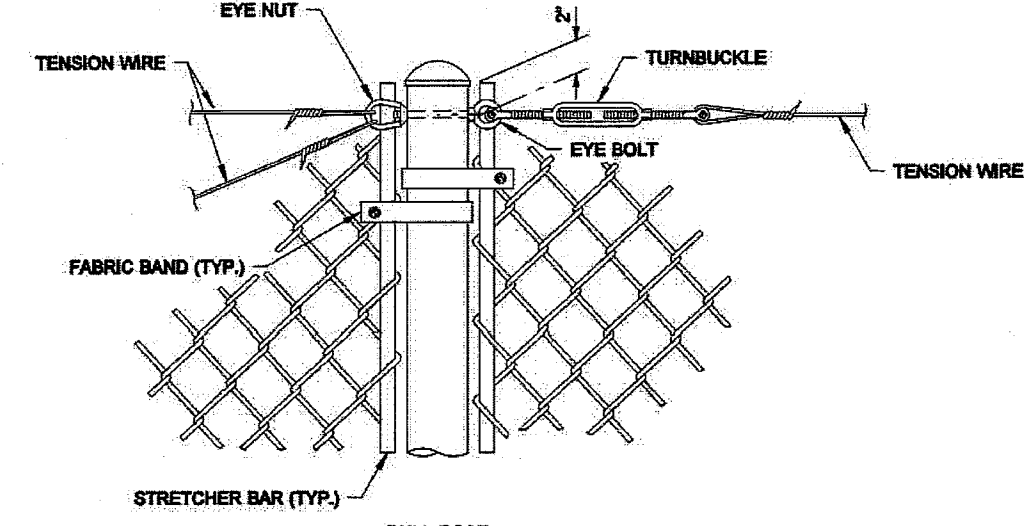
DRAWN BY: BILL BERENS



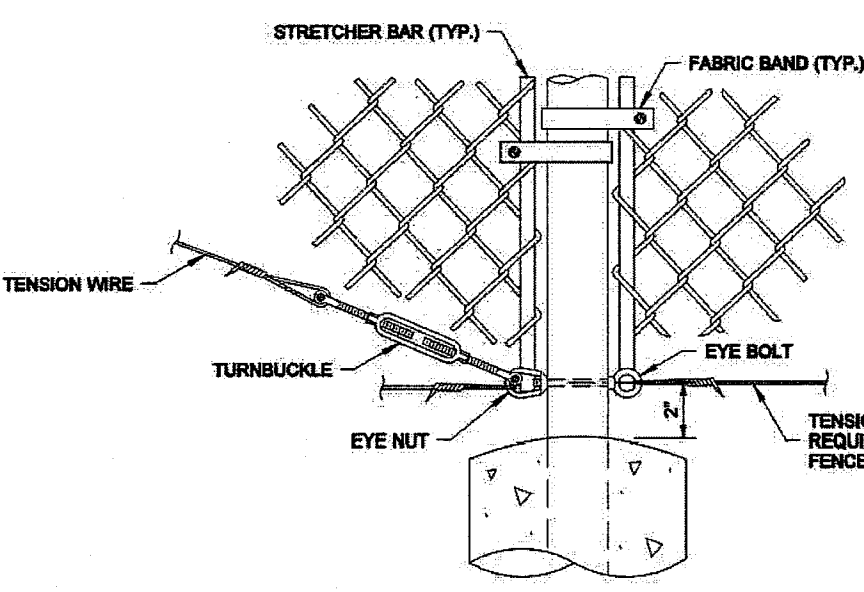
DETAIL (A)



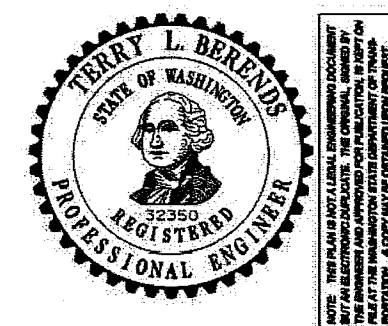
DETAIL (C)



DETAIL (B)



DETAIL (D)

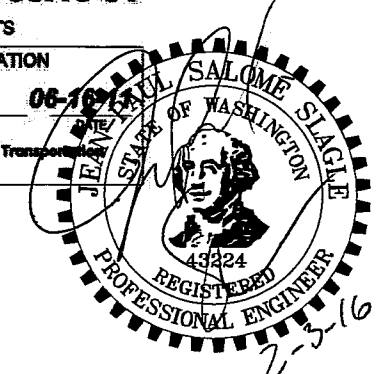


CHAIN LINK GATE
STANDARD PLAN L-30.10-01

SHEET 2 OF 2 SHEETS
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-18-11
STATE DESIGN ENGINEER
Washington State Department of Transportation

CHAIN LINK GATE
WSDOT STD. PLAN L-30.10-01

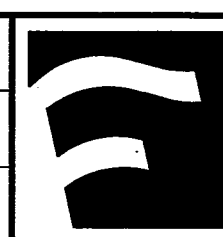
APPROVED
FEB 12 2016
BY: [Signature]
CITY OF FERDALE



CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

No.	Date	REVISION	By
-----	------	----------	----

DESIGNED BY:
JPS
DRAWN BY:
EJP
CHECKED BY:
HAF



220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401
FREELAND & ASSOCIATES

CLIENT: **JOHN FRIBERG**
6425 WEST 20TH AVENUE
FERDALE, WA 98248
PROJECT LOCATION: **THORNTON ROAD & MALLOY ROAD**
FERDALE, WA 98248

SHEET CONTENTS:

DETAILS

DWG #:	13022SP8.DWG	DATE:	1-27-2016
JOB #:	13022	SHEET:	C16
SCALE:	H: N/A V: N/A		