

00542.001 11/16 SH

SITE DEVELOPMENT

FOR

PACIFIC TIRE, FERNDAL, WA 1421 WHITEHORN STREET SECTION 33, T. 39 N., R. 2 E., W.M.

CALL TWO
BUSINESS DAYS
BEFORE YOU DIG
"811"

LEGEND		
---	EXISTING RIGHT OF WAY LINE	
---	EXISTING RIGHT OF WAY LINE	
---	EXISTING ROAD CENTERLINE	
---	EXISTING PROPERTY LINE	
○	EXISTING PROPERTY CORNER	
SD	EXISTING STORM DRAIN	
○	EXISTING STORM MANHOLE	
□	EXISTING STORM CATCH BASIN	
SS	EXISTING SANITARY SEWER	
○	EXISTING SANITARY MANHOLE	
W	EXISTING WATERLINE	
⊕	EXISTING WATER VALVE	
⊕	EXISTING FIRE HYDRANT	
PCTG	EXISTING POWER, CABLE TELEPHONE, GAS LINE	
OHP	EXISTING OVERHEAD POWER	
T	EXISTING TELEPHONE	
G	EXISTING GAS LINE	
28	EXISTING GROUND CONTOUR LINE	
---	EXISTING EDGE OF ASPHALT	
---	EXISTING FENCELINE	
---	EXISTING WATER METER	
---	EXISTING ASPHALT	
---	EXISTING CONCRETE	
---	EXISTING GRAVEL	
---	EXISTING SWALE	
28.2	PROPOSED ASPH. SURFACE ELEV.	
28.2	PROPOSED TOP OF CONC. ELEV.	
28.2	PROPOSED ASPH. SURFACE ELEV.	
LANDSCAPE	PROPOSED LANDSCAPE AREA	
CO	PROPOSED CLEANOUT ASSEMBLY FOR STORM OR SANITARY SEWER	
SD	PROPOSED STORM DRAIN	
■	PROPOSED STORM CATCH BASIN	
SS	PROPOSED SANITARY SEWER	
---	PROPOSED BIOFILTRATION SWALE	
PCTG	PROPOSED POWER, CABLE TELEPHONE, GAS LINE	
W	PROPOSED WATERLINE	
⊕	PROPOSED WATER VALVE	
⊕	PROPOSED FIRE HYDRANT	
⊕	PROPOSED WATER METER	
ECC	EXTRUDED CEMENT CONCR. CURB	
C/G	PROPOSED CURB & GUTTER	
T.A.E.	THICKENED ASPHALT EDGE	
---	PROPOSED CONCRETE	
---	PROPOSED ASPHALT	
---	PROPOSED CRUSHED ROCK	
---	PROPOSED MAILBOX (MB)	
YH	FROST FREE YARD HYDRANT WITH ATMOSPHERIC VACUUM BREAKER	

PROJECT CONTACTS:

OWNER

PACIFIC TIRE CO. INC.
501 JACKS LANE
MOUNT VERNON, WA 98273
PHONE: (360)428-8612
MOB: (360)661-0509
CONTACT: CHARLES MONTGOMERY
EMAIL: charles@pactire.com

CIVIL ENGINEER

RAVNIK & ASSOCIATES, INC.
1633 LINDAMOOD LANE
P.O. BOX 361
BURLINGTON, WA 98233
PHONE: (360)707-2048
FAX: (360)707-2216
CONTACT: JOHN RAVNIK
EMAIL: jrvnik@ravnik.net

SURVEYOR

CHRISTIE & CHRISTIE LAND SURVEYING INC.
222 GRAND AVE., SUITE D
BELLINGHAM, WA 98225
PHONE: (360)671-8855
FAX: (360)671-8823
CONTACT: BRIAN CHRISTIE
MOB: (360)201-1492
EMAIL: christiesq@hotmail.com

UTILITY LOCATE

"811"

FERNDAL POST MASTER

5703 4TH AVE
FERNDAL, WA 98284
PHONE: (360)308-3127
CONTACT: DIANA SCHULER

CITY OF FERNDAL PLANNING

2095 MAIN STREET
FERNDAL, WA 98248
PHONE: (360)685-2368
CONTACT: HAYLIE MILLER
ASSISTANT PLANNER
EMAIL: HaylieMiller@cityofferndal.org

CITY OF FERNDAL PUBLIC WORKS

P.O. BOX 936
2095 MAIN STREET
FERNDAL, WA 98248
PHONE: (360)685-2365
FAX: (360)384-5189
CONTACT: ART LONGSTRETH
PUBLIC WORKS ENGINEER SERVICE PROVIDER
EMAIL: ArtLongstreth@cityofferndal.org

WHATCOM COUNTY FIRE DISTRICT #7

P.O. BOX 1599
FERNDAL, WA 98248
PHONE: (360)384-0303
CONTACT: GARY RUSSELL
FIRE CHIEF
EMAIL: grussell@wcd7.org

REFUSE SERVICE:

SANITARY SERVICE COMPANY
21 BELLWETHER WAY, SUITE 404
BELLINGHAM, WA 98224
PHONE: (360)734-3490
CONTACT: RODD PEMBLE
EMAIL: rodd@ssc-inc.com

BASIS OF BEARING:

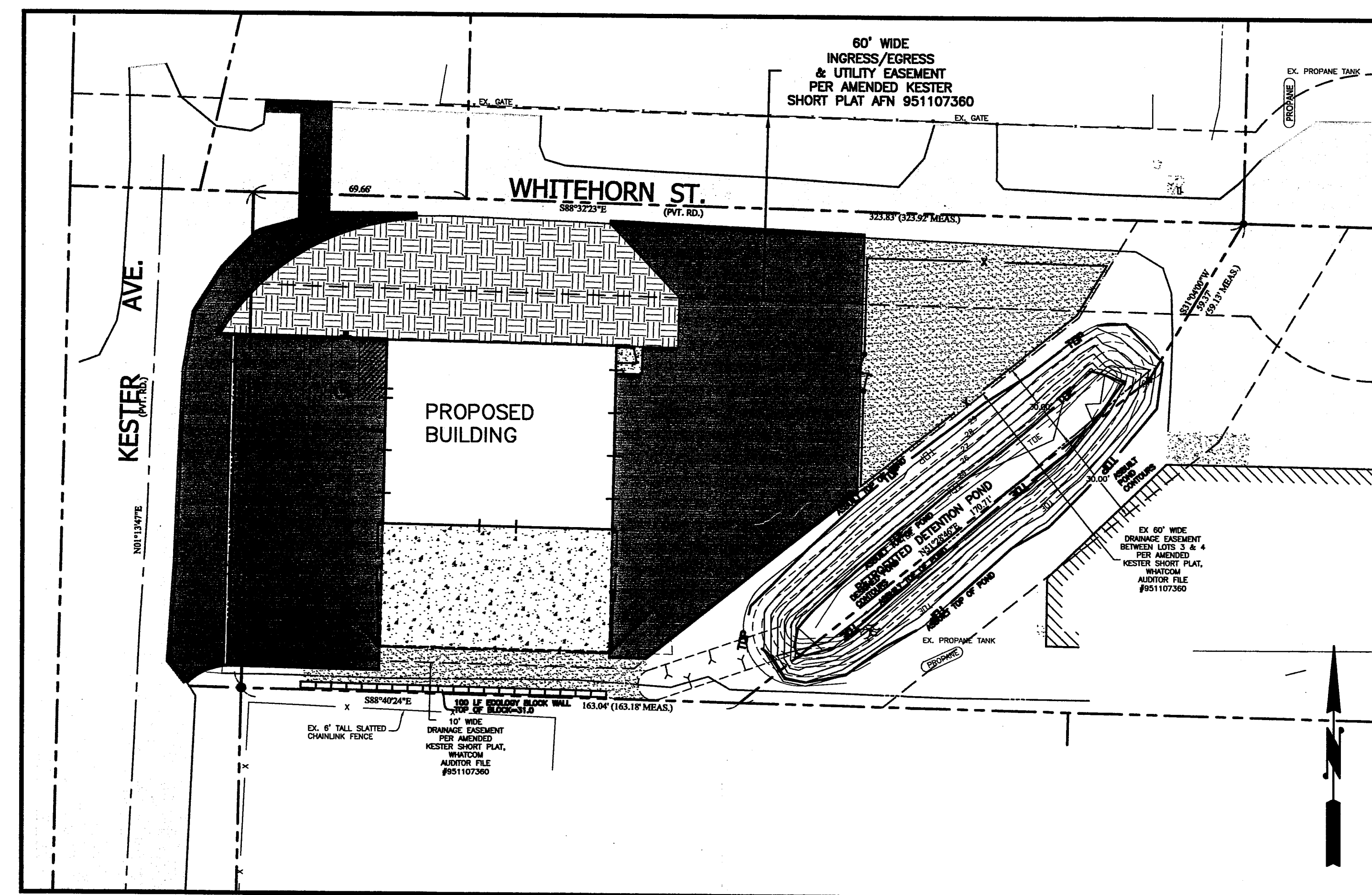
THE TOPOGRAPHIC SURVEY AND BOUNDARY CALCULATIONS HEREON HAVE BEEN PERFORMED BY CHRISTIE & CHRISTIE LAND SURVEYORS. THE HORIZONTAL BASIS OF BEARING IS NAD 83/91 CITY OF FERNDAL. THE UNDERLYING AMENDED KESTER SHORT PLAT WAS NOT PREPARED CONSISTENT WITH THE CITY'S HORIZONTAL DATUM. TO CONVERT THE NAD 83/91 DATUM HEREIN TO THE SHORT PLAT DATUM, ROTATE THE BEARING INFORMATION HEREON 1°47'37" COUNTER-CLOCKWISE.

HORIZONTAL TIES TO CITY OF FERNDAL MONUMENT NETWORK:

FROM SOUTHEAST CORNER LOT 4, S62°44'23"E, 2570.99' TO C.O.F. MON. I.D. "FERN15". FROM NORTHEAST CORNER LOT 4, S57°49'12"E, 2506.25' TO C.O.F. MON. I.D. "FERN15".

ELEVATION DATUM

NGVD 29; CITY OF FERNDAL. HELD TO MONUMENT I.D. NO. 15, EL. 89.31'. ELEVATION CARRIED TO SUBJECT SITE VIA GPS.



SHEET SCHEDULE

SHEET 1 OF 10	COVER
SHEET 2 OF 10	EXISTING CONDITIONS & EROSION CONTROL PLAN
SHEET 3 OF 10	SITE PLAN
SHEET 4 OF 10	DIMENSIONS, SIGNAGE, FENCING, CONDUIT & STRIPING PLAN
SHEET 5 OF 10	DETAILS
SHEET 6 OF 10	DETAILS
SHEET 7 OF 10	DETAILS
SHEET 8 OF 10	DETAILS
SHEET 9 OF 10	SPECIFICATIONS
SHEET 10 OF 10	SPECIFICATIONS

SCALE: 1" = 30'

ZONING: MANUFACTURING (M)
SITE ADDRESS: 1421 WHITEHORN STREET, FERNDAL WA
PROPERTY ID: 89803
GEOGRAPHIC ID: 3902333500320000
GROSS PROPERTY AREA = 41,066 SQ.FT. (0.94 AC)
PROPERTY NOT ENCUMBERED BY EASEMENTS = 24,398 SQ.FT. (0.56 AC)
PROPERTY USE = TIRE WAREHOUSE
BUILDING AREA (4,500 SQ.FT.) + COVERED AREA (3,000 SQ.FT.) = 7,500 SQ.FT.
PARKING REQUIRED: 2.5 STALLS FOR EACH EMPLOYEE, MINIMUM 4 SPACES
PARKING PROVIDED: 2 STALLS + 1 HANDICAP STALL
2 SERVICE TRUCKS PARK IN BUILDING OR UNDER COVERED AREA.
TOTAL IMPERVIOUS AREA: 17,333 SQ.FT. (0.39 AC)
TOTAL PERVIOUS AREA: 15,833 SQ.FT. (0.36 AC)
BUILDING SETBACK LINES:
15' FROM STREET R.O.W.
0' REAR YARD
0' SIDE YARD

APPROVED

JAN 21 2016

BY

CITY OF FERNDAL

DATE

SURVEY INFORMATION

NOTE: EXISTING STRUCTURES, UTILITIES, AND SURFACE CONDITIONS SHOWN ON THESE PLANS REPRESENT SURVEY INFORMATION LOCATED IN JUNE 2014, FROM A TOPOGRAPHIC SURVEY PERFORMED BY CHRISTIE & CHRISTIE LAND SURVEYING INC. AND FROM UTILITY INFORMATION PROVIDED BY UTILITY COMPANIES. A UTILITY LOCATE SERVICE WAS NOT CALLED PRIOR TO SURVEYING OF THE PROPERTY, BUT MUST BE CALLED PRIOR TO CONSTRUCTION.

REV. NO.	REVISION	DATE	BY	APPROVED

Ravnik & Associates, Inc.
CIVIL ENGINEERING & LAND-USE PLANNING
1633 LINDAMOOD LANE/P.O. BOX 361
BURLINGTON, WA 98233
PH: (360) 707-2048 FAX: (360) 707-2216

SHEET DESCRIPTION:

COVER SHEET

SCALE: AS SHOWN
DRAWN BY: D. REMSEN
CHECKED BY: J. RAVNIK
DATE: 01.12.16

PLAN STATUS: RECORD DRAWINGS

SHEET TITLE:
**SITE DEVELOPMENT
FOR
PACIFIC TIRE
1421 WHITEHORN STREET
SECTION 33, T. 39 N., R. 2 E., W.M.**

DRAWING NO.
14017SIT.ASB.dwg
JOB NO.
14017
SHEET NO.
1 OF 10

LEGAL DESCRIPTION:

(PER WHATCOM LAND TITLE CO., INC - W-119920)

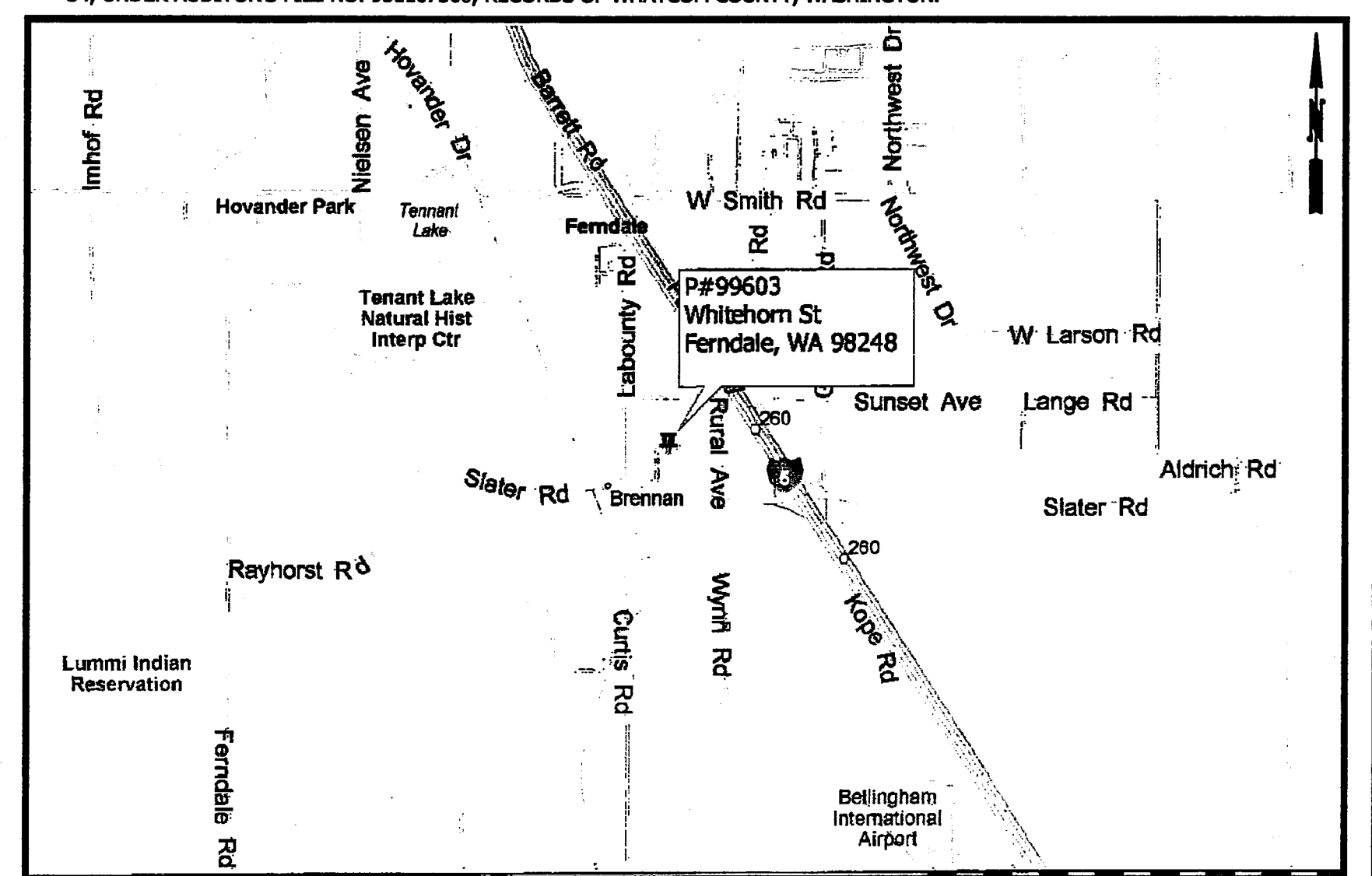
PARCEL A:

LOT 4, AS DELINEATED ON AMENDED KESTER SHORT PLAT, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 33 OF SHORT PLATS, PAGES 33 AND 34, UNDER AUDITOR'S FILE NO. 951107360, RECORDS OF WHATCOM COUNTY, WASHINGTON.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

PARCEL B:

AN EASEMENT FOR INGRESS, EGRESS AND UTILITIES, AS DELINEATED ON AMENDED KESTER SHORT PLAT, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 33 OF SHORT PLATS, PAGES 33 AND 34, UNDER AUDITOR'S FILE NO. 951107360, RECORDS OF WHATCOM COUNTY, WASHINGTON.



VICINITY MAP

SCALE: NO SCALE

AS THE ENGINEER OF RECORD, I HEREBY CERTIFY BASED ON (1) INFORMATION PROVIDED TO ME FROM SITE INSPECTIONS PERFORMED BY THE CITY OF FERNDAL, (2) INFORMATION PROVIDED TO ME BY SITE INSPECTIONS PERFORMED BY THE OWNER'S RETAINED GEOTECHNICAL INSPECTION COMPANY, (3) MY PERSONAL INSPECTIONS OF THE SITE CONSTRUCTION, AND (4) MY COMMUNICATIONS WITH THE SITE CONTRACTORS, THAT THE WORK COMPLETED AT 1421 WHITEHORN STREET FOR PACIFIC TIRE HAS BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND APPROVED MODIFICATIONS MADE DURING THE CONSTRUCTION PERIOD. THE PLANS REFERENCED WERE PROVIDED AND SEALED BY JOHN P. RAVNIK, P.E. ON JULY 1, 2015 AND APPROVED BY THE CITY OF FERNDAL ON JULY 6, 2015.

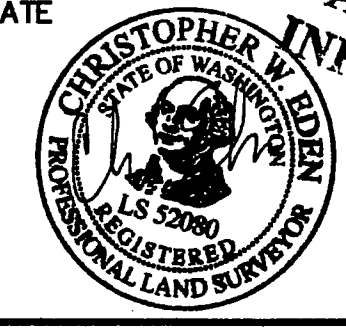
John P. Ravnik
ENGINEER
11/15/16
DATE



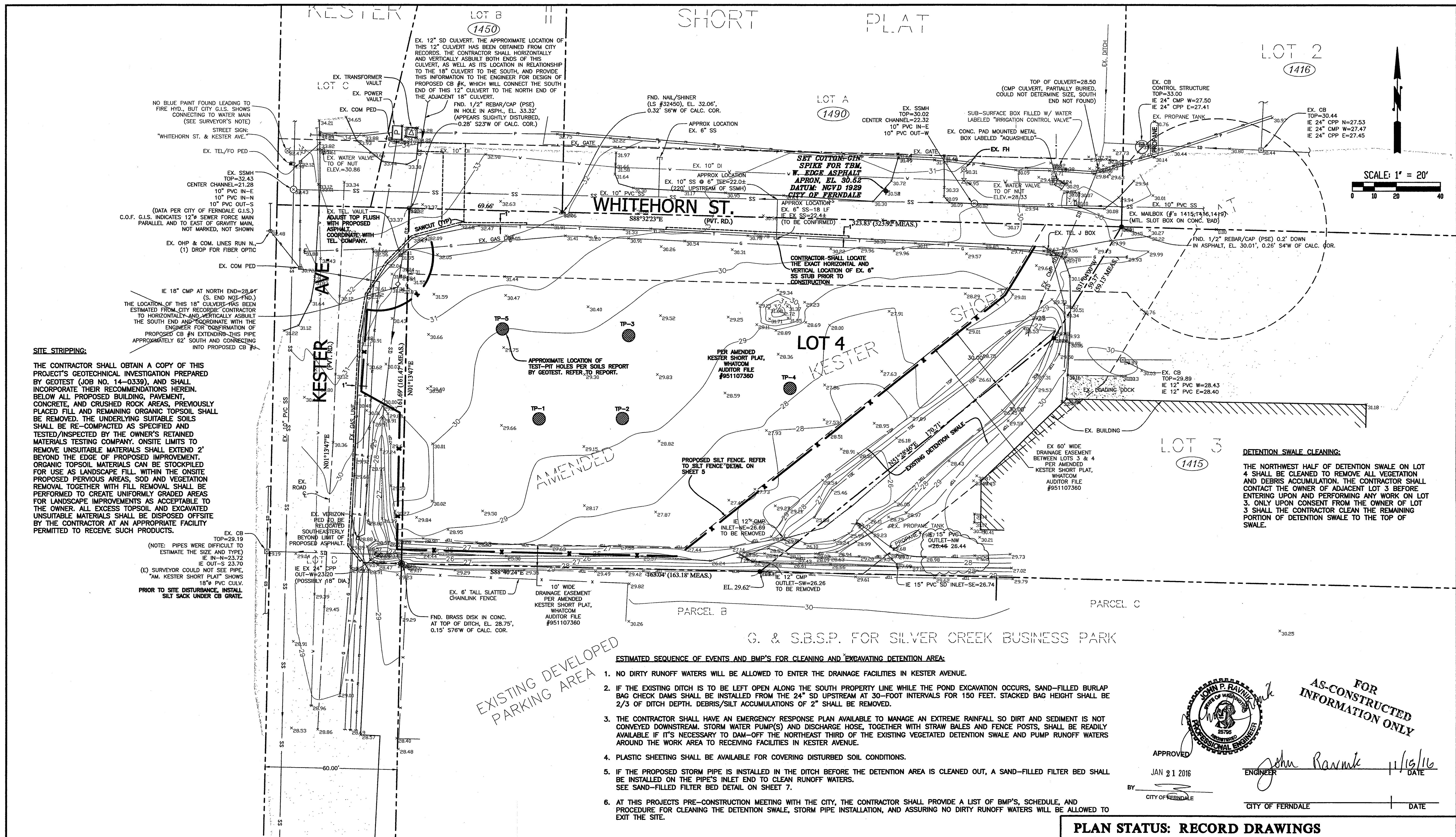
SURVEYOR'S CERTIFICATION:

"I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS, AND AS-BUILT COMMENTS REFLECTING MATERIALS ACTUALLY USED DURING CONSTRUCTION ACCURATELY REFLECT EXISTING FIELD CONDITIONS AS DETERMINED BY ME OR UNDER MY DIRECT SUPERVISION."

Christopher W. Eden
SURVEYOR
11/19/16
DATE



FOR
AS-CONSTRUCTED
INFORMATION ONLY



REV. NO.	REVISION	DATE	BY	APPROVED

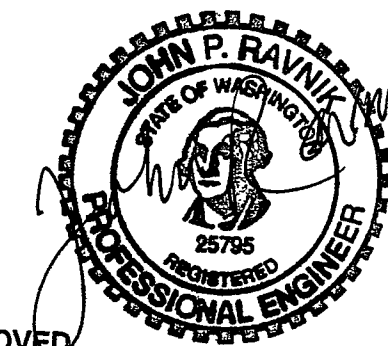
Ravnik & Associates, Inc.
CIVIL ENGINEERING & LAND-USE PLANNING
1633 LINDAMOOD LANE/P.O. BOX 361
BURLINGTON, WA 98233
PH: (360) 707-2048 FAX: (360) 707-2216

SHEET DESCRIPTION:
**EXISTING CONDITIONS
&
EROSION CONTROL PLAN**

SCALE: 1"=20'
DRAWN BY: D. REMSEN
CHECKED BY: J. RAVNIK
DATE: 01.12.16

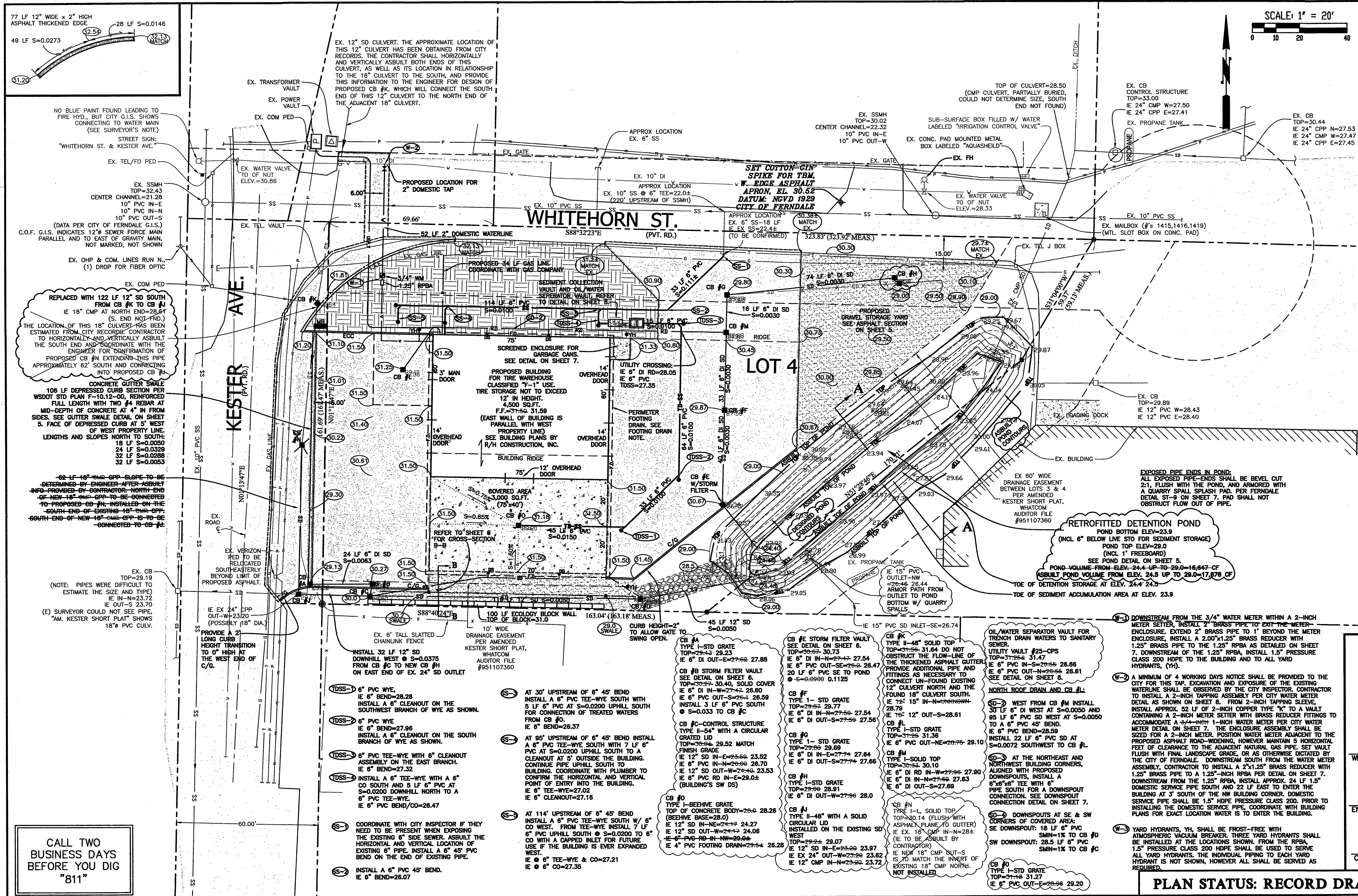
PLAN STATUS: RECORD DRAWINGS	
SHEET TITLE: SITE DEVELOPMENT FOR PACIFIC TIRE 1421 WHITEHORN STREET SECTION 33, T. 39 N., R. 2 E., W.M.	DRAWING NO. 14017SIT.ASB.dwg JOB NO. 14017 SHEET NO. 2 OF 10

- ESTIMATED SEQUENCE OF EVENTS AND BMP'S FOR CLEANING AND EXCAVATING DETENTION AREA:**
1. NO DIRTY RUNOFF WATERS WILL BE ALLOWED TO ENTER THE DRAINAGE FACILITIES IN KESTER AVENUE.
 2. IF THE EXISTING DITCH IS TO BE LEFT OPEN ALONG THE SOUTH PROPERTY LINE WHILE THE POND EXCAVATION OCCURS, SAND-FILLED BURLAP BAG CHECK DAMS SHALL BE INSTALLED FROM THE 24" SD UPSTREAM AT 30-FOOT INTERVALS FOR 150 FEET. STACKED BAG HEIGHT SHALL BE 2/3 OF DITCH DEPTH. DEBRIS/SILT ACCUMULATIONS OF 2" SHALL BE REMOVED.
 3. THE CONTRACTOR SHALL HAVE AN EMERGENCY RESPONSE PLAN AVAILABLE TO MANAGE AN EXTREME RAINFALL SO DIRT AND SEDIMENT IS NOT CONVEYED DOWNSTREAM. STORM WATER PUMP(S) AND DISCHARGE HOSE, TOGETHER WITH STRAW BALES AND FENCE POSTS, SHALL BE READILY AVAILABLE IF IT'S NECESSARY TO DAM-OFF THE NORTHEAST THIRD OF THE EXISTING VEGETATED DETENTION SWALE AND PUMP RUNOFF WATERS AROUND THE WORK AREA TO RECEIVING FACILITIES IN KESTER AVENUE.
 4. PLASTIC SHEETING SHALL BE AVAILABLE FOR COVERING DISTURBED SOIL CONDITIONS.
 5. IF THE PROPOSED STORM PIPE IS INSTALLED IN THE DITCH BEFORE THE DETENTION AREA IS CLEANED OUT, A SAND-FILLED FILTER BED SHALL BE INSTALLED ON THE PIPE'S INLET END TO CLEAN RUNOFF WATERS. SEE SAND-FILLED FILTER BED DETAIL ON SHEET 7.
 6. AT THIS PROJECTS PRE-CONSTRUCTION MEETING WITH THE CITY, THE CONTRACTOR SHALL PROVIDE A LIST OF BMP'S, SCHEDULE, AND PROCEDURE FOR CLEANING THE DETENTION SWALE, STORM PIPE INSTALLATION, AND ASSURING NO DIRTY RUNOFF WATERS WILL BE ALLOWED TO EXIT THE SITE.



APPROVED
JAN 21 2016
BY: [Signature]
CITY OF FERDALE

FOR AS-CONSTRUCTED INFORMATION ONLY
[Signature]
ENGINEER
CITY OF FERDALE
DATE: 1/19/16



REV. NO.	REVISION	DATE	BY	APPROVED

Ravnik & Associates, Inc.
CIVIL ENGINEERING & LAND-USE PLANNING
1633 LINDAMOOD LANE/P.O. BOX 361
BURLINGTON, WA 98233
PH: (360) 707-2048 FAX: (360) 707-2216

SHEET DESCRIPTION:

SITE PLAN

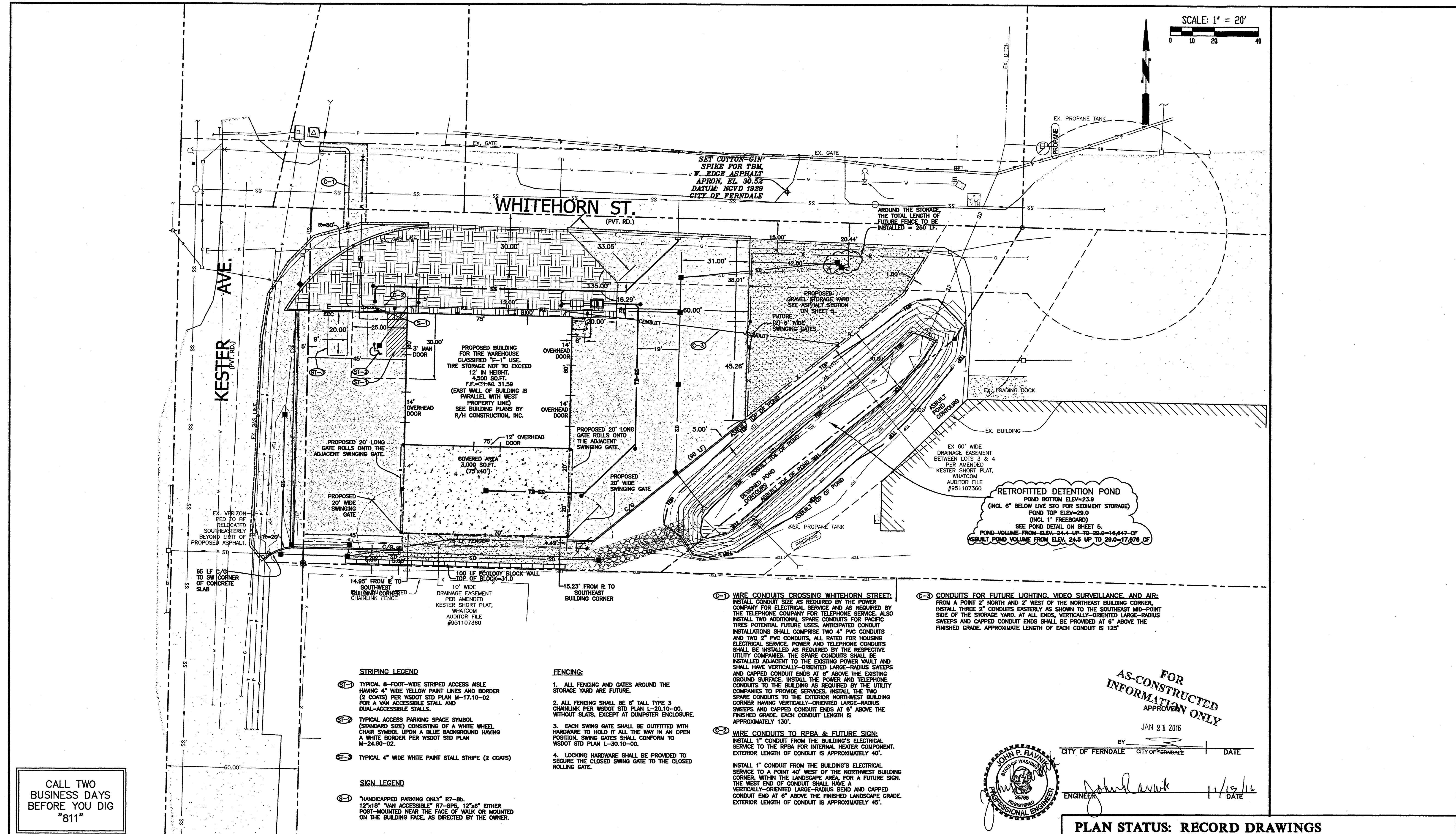
PLAN STATUS: RECORD DRAWINGS

SHEET TITLE: **SITE DEVELOPMENT FOR PACIFIC TIRE**
1421 WHITEHORN STREET
SECTION 33, T. 39 N., R. 2 E., W.M.

SCALE: 1"=20'
DRAWN BY: D. REMSEN
CHECKED BY: J. RAVNIK
DATE: 01.12.16

DRAWING NO.
14017SITE.ASB.dwg
JOB NO.
14017
SHEET NO.
3 OF 10

00542-004 1/21/16 SH



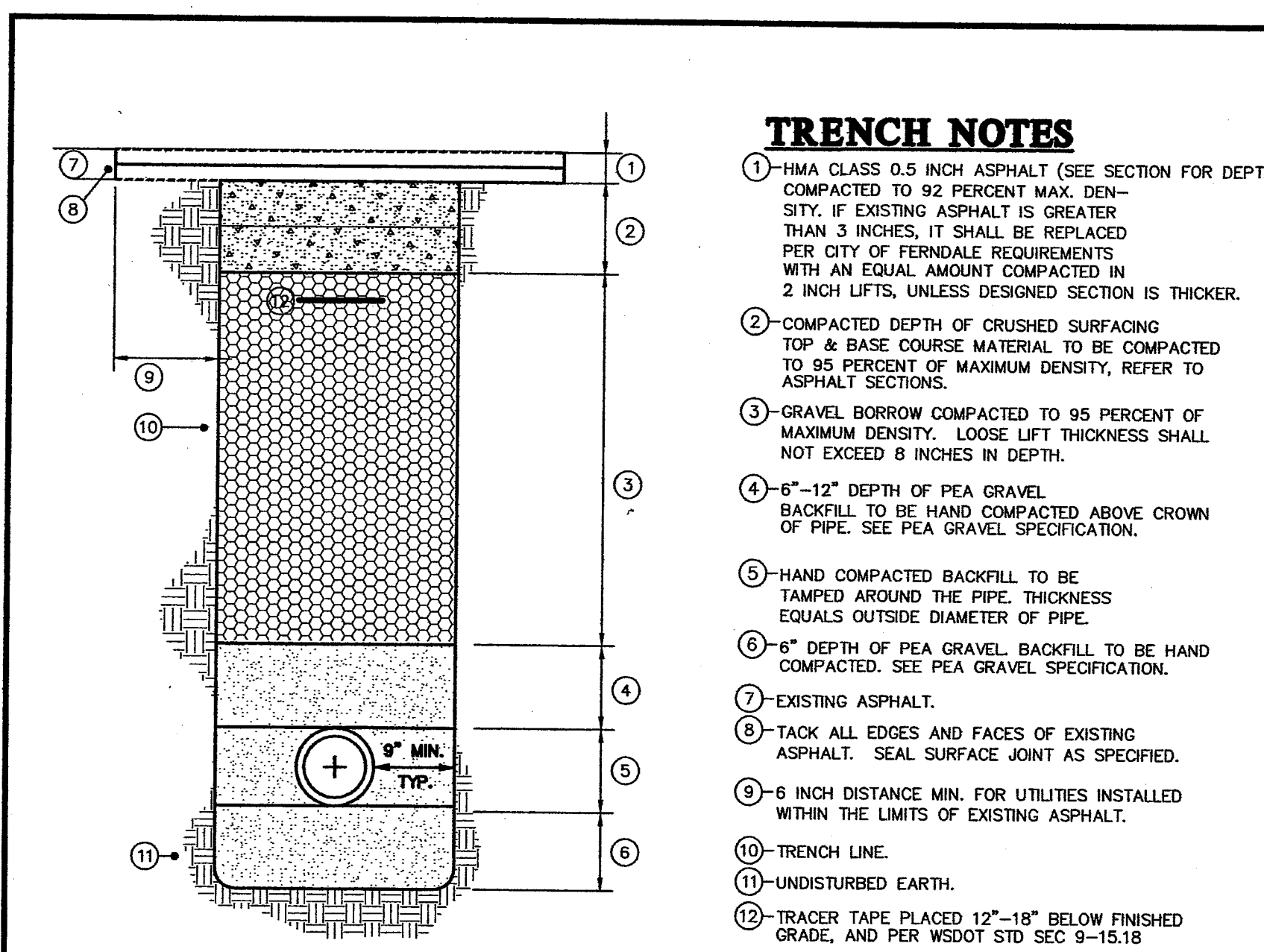
REV. NO.	REVISION	DATE	BY	APPROVED

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SHEET DESCRIPTION:

DIMENSIONS, SIGNAGE, FENCING, CONDUIT & STRIPING PLAN

SCALE: 1"=20'	PLAN STATUS: RECORD DRAWINGS	DRAWING NO. 14017SITE.ASB.dwg
DRAWN BY: D. REMSEN		JOB NO. 14017
CHECKED BY: J. RAVNIK		SHEET NO. 4 OF 10
DATE: 01.12.16		
SHEET TITLE: SITE DEVELOPMENT FOR PACIFIC TIRE 1421 WHITEHORN STREET SECTION 33, T. 39 N., R. 2 E., W.M.		



TRENCH NOTES

- 1-HMA CLASS 0.5 INCH ASPHALT (SEE SECTION FOR DEPTH) COMPACTED TO 92 PERCENT MAX. DENSITY. IF EXISTING ASPHALT IS GREATER THAN 3 INCHES, IT SHALL BE REPLACED PER CITY OF FERNDALE REQUIREMENTS WITH AN EQUAL AMOUNT COMPACTED IN 2 INCH LIFTS, UNLESS DESIGNED SECTION IS THICKER.
- 2-COMPACTED DEPTH OF CRUSHED SURFACING TOP & BASE COURSE MATERIAL TO BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY, REFER TO ASPHALT SECTIONS.
- 3-GRAVEL BORROW COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY. LOOSE LIFT THICKNESS SHALL NOT EXCEED 8 INCHES IN DEPTH.
- 4-6"-12" DEPTH OF PEA GRAVEL BACKFILL TO BE HAND COMPACTED ABOVE CROWN OF PIPE. SEE PEA GRAVEL SPECIFICATION.
- 5-HAND COMPACTED BACKFILL TO BE TAMPED AROUND THE PIPE. THICKNESS EQUALS OUTSIDE DIAMETER OF PIPE.
- 6-6" DEPTH OF PEA GRAVEL BACKFILL TO BE HAND COMPACTED. SEE PEA GRAVEL SPECIFICATION.
- 7-EXISTING ASPHALT.
- 8-TACK ALL EDGES AND FACES OF EXISTING ASPHALT. SEAL SURFACE JOINT AS SPECIFIED.
- 9-6 INCH DISTANCE MIN. FOR UTILITIES INSTALLED WITHIN THE LIMITS OF EXISTING ASPHALT.
- 10-TRENCH LINE.
- 11-UNDISTURBED EARTH.
- 12-TRACER TAPE PLACED 12"-18" BELOW FINISHED GRADE, AND PER WSDOT STD SEC 9-15.18

GENERAL NOTES:

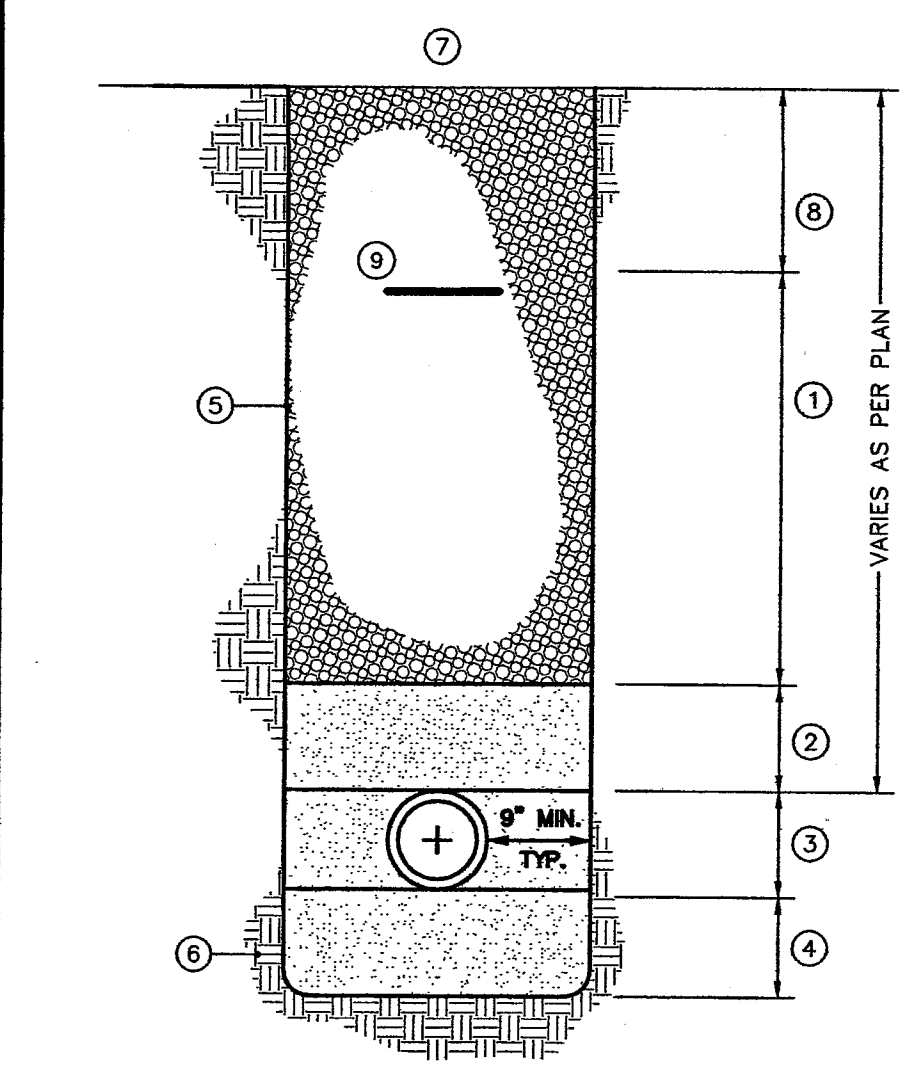
- NOTE-1 - THIS UTILITY TRENCH DETAIL IS FOR RIGID OR FLEXIBLE PIPE INSTALLATIONS.
- NOTE-2 - GRAVEL BORROW SHALL BE USED AS TRENCH BACKFILL IN ALL AREAS TO FIVE FEET BEYOND ASPHALT, SHOULDERS, AND HEAVY CONSTRUCTION TRAFFIC AREAS.
- NOTE-3 - ANY SPECIAL CONDITIONS MUST FIRST BE APPROVED BY THE ENGINEER.
- NOTE-4 - NO NATIVE SOIL BACKFILL IS ALLOWED WITHIN ANY UTILITY TRENCHES IN EXISTING OR PROPOSED PUBLIC RIGHT OF WAYS. GRAVEL BACKFILL MUST BE USED IN THESE AREAS.

PEA GRAVEL 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 D442:

U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING, BY WT.
3/4"	100
3/8"	95-100
#10	0-10
#200	0-3

UTILITY TRENCH DETAIL WITHIN THE PAVING AREAS

NO SCALE



TRENCH NOTES

- 1 - BACK FILL SHALL BE NATIVE MATERIAL COMPACTED IN 12 INCH LIFTS, IN CASES WHERE THE MATERIAL IS TOO WET OR UNSUITABLE, 2.50 INCH MINUS BANK RUN GRAVEL SHALL BE USED.
- 2 - 6"-12" PEA GRAVEL TO BE HAND COMPACTED ABOVE CROWN OF PIPE. SEE PEA GRAVEL SPECIFICATION.
- 3 - HAND COMPACTED BACKFILL TO BE TAMPED AROUND THE PIPE. THICKNESS EQUALS OUTSIDE DIAMETER OF PIPE.
- 4 - 6 INCHES OF PEA GRAVEL TO BE HAND COMPACTED. SEE PEA GRAVEL SPECIFICATION.
- 5 - TRENCH LINE.
- 6 - UNDISTURBED EARTH.
- 7 - RESTORATION SHALL BE IN ACCORDANCE WITH GENERAL NOTE-1.
- 8 - 1"-0" OF CLEAN NATIVE SOIL NOT CONTAINING SOD, ROCKS, STICKS, OR DEBRIS LARGER THAN 3" IN ANY DIMENSION.
- 9 - TRACER TAPE PLACED 12"-18" BELOW FINISHED GRADE, AND PER WSDOT STD SEC 9-15.18

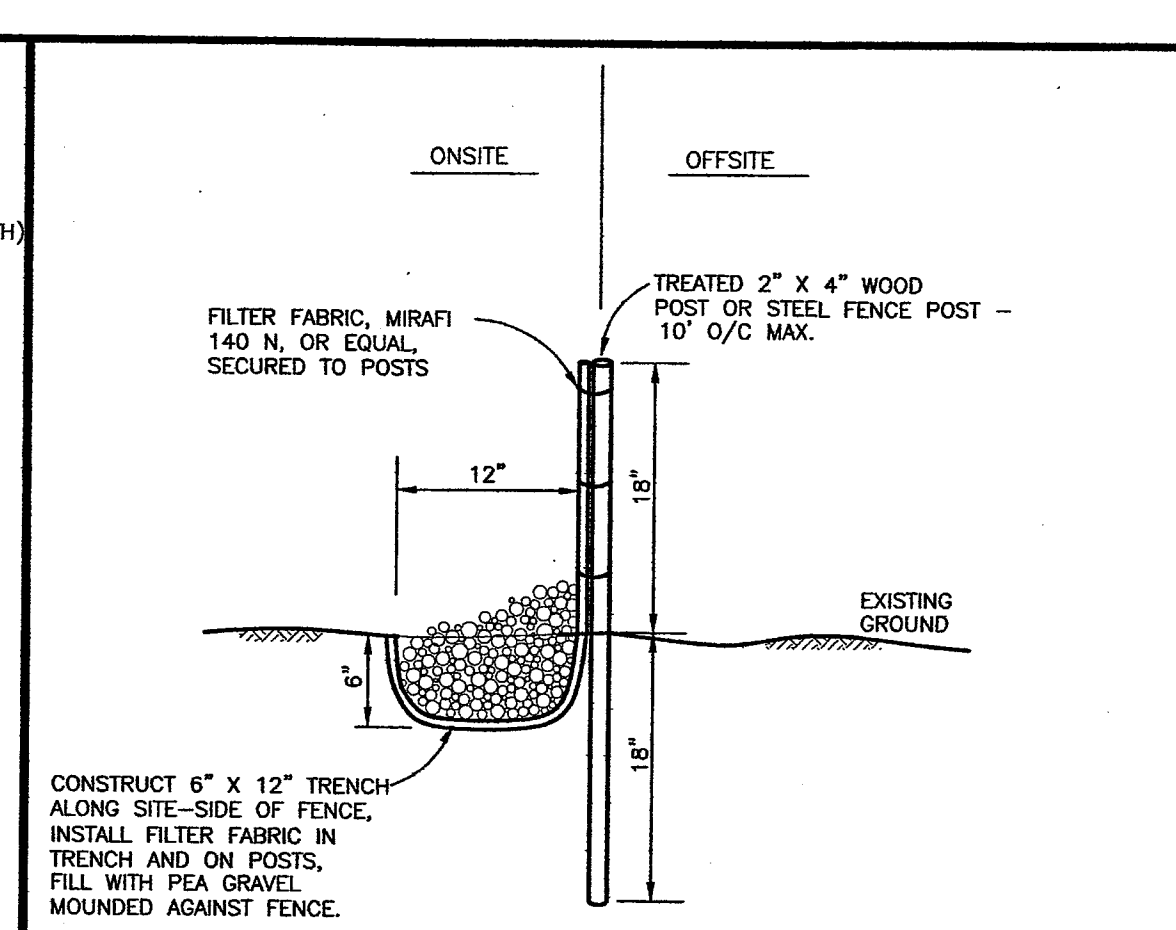
GENERAL NOTES:

- NOTE-1 -RESTORATION SHALL CONSIST OF REMOVING ALL OBJECTS GREATER THAN 1 INCH IN DIAMETER AND BLENDING THE TOP OF THE TRENCH WITH THE SURROUNDING GRADE.
- NOTE-2 -NATIVE MATERIAL TRENCH BACKFILL MAY ONLY BE USED BEYOND FIVE FEET FROM ASPHALT, SHOULDERS, AND HEAVY CONSTRUCTION TRAFFIC AREAS.
- NOTE-3 - NO NATIVE SOIL BACKFILL IS ALLOWED WITHIN ANY UTILITY TRENCHES IN EXISTING OR PROPOSED PUBLIC RIGHT OF WAYS. GRAVEL BACKFILL MUST BE USED IN THESE AREAS.

CALL TWO BUSINESS DAYS BEFORE YOU DIG "811"

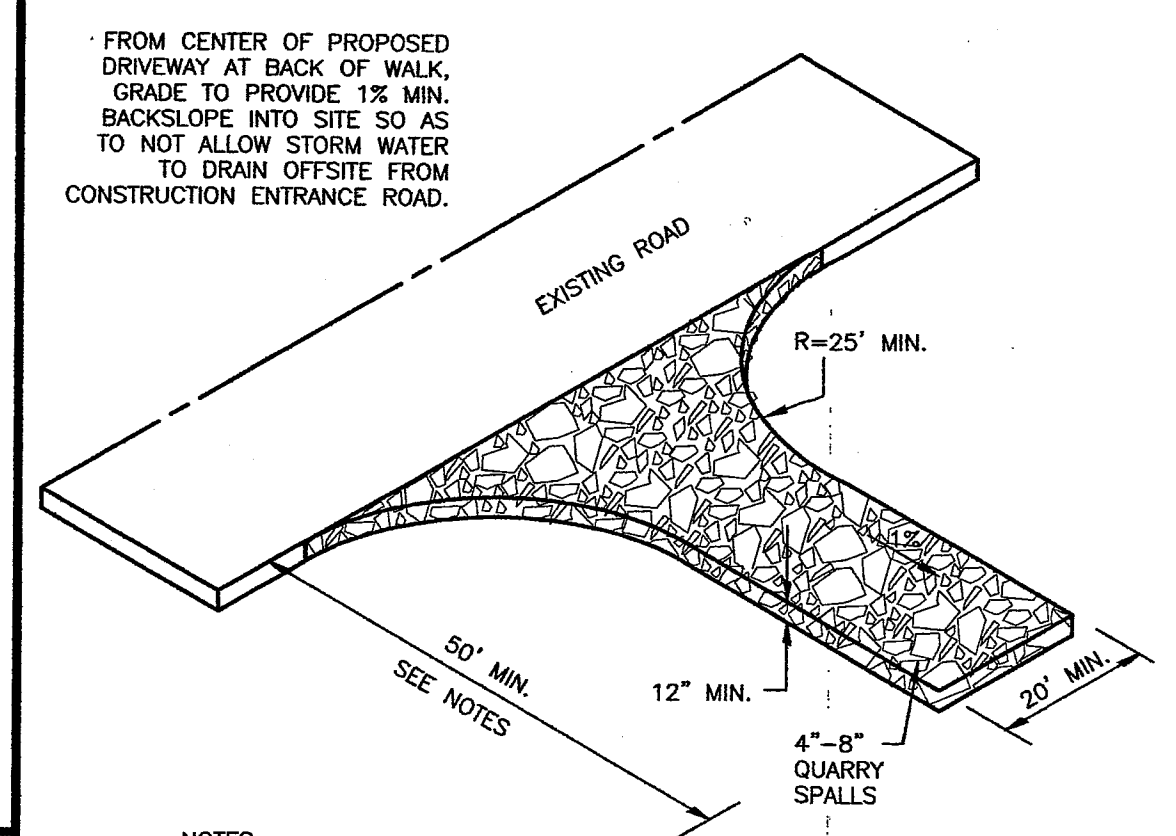
TYPICAL UTILITY TRENCH DETAIL BEYOND PAVING AREAS

NO SCALE



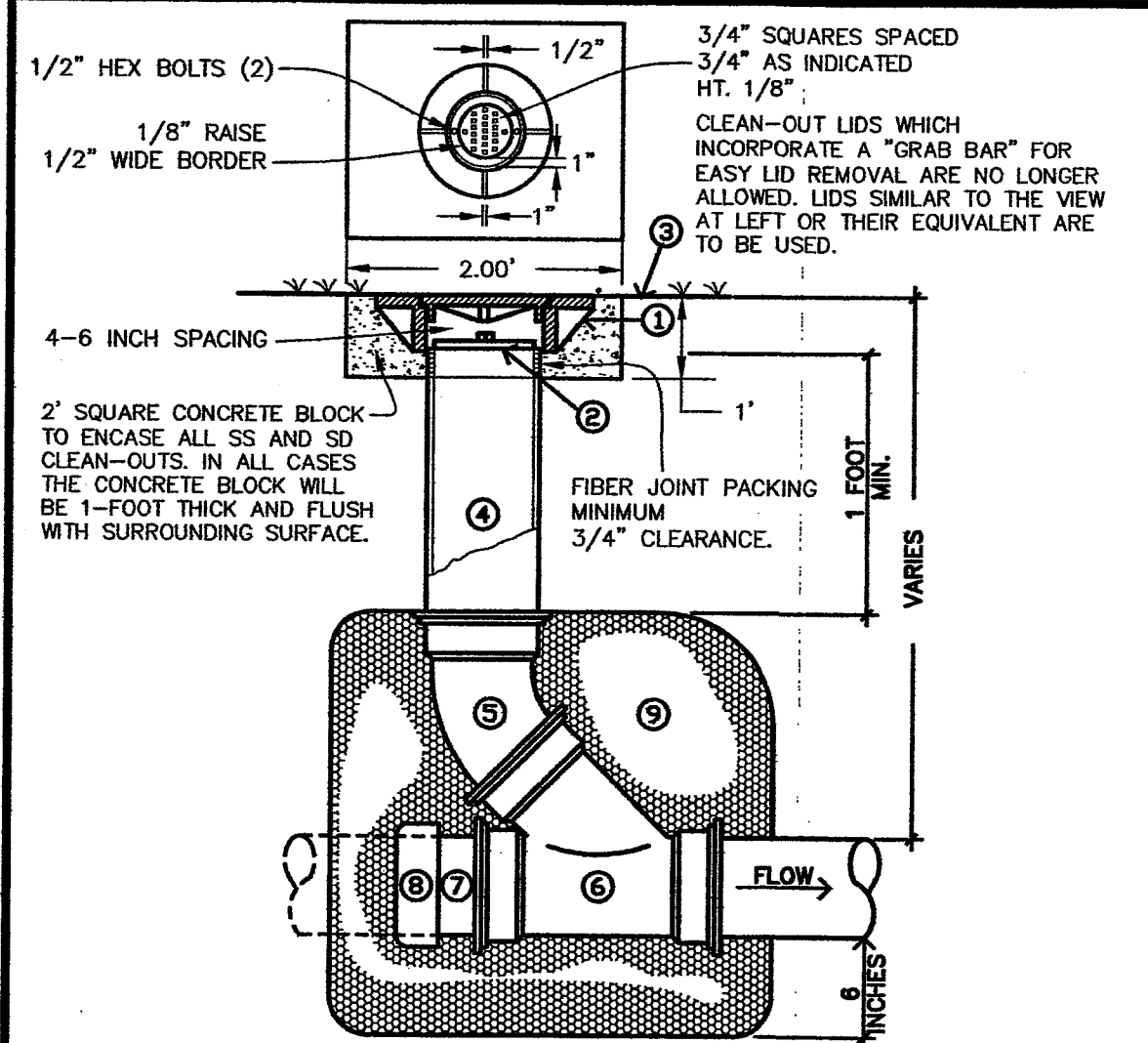
SILT FENCE DETAIL

NO SCALE



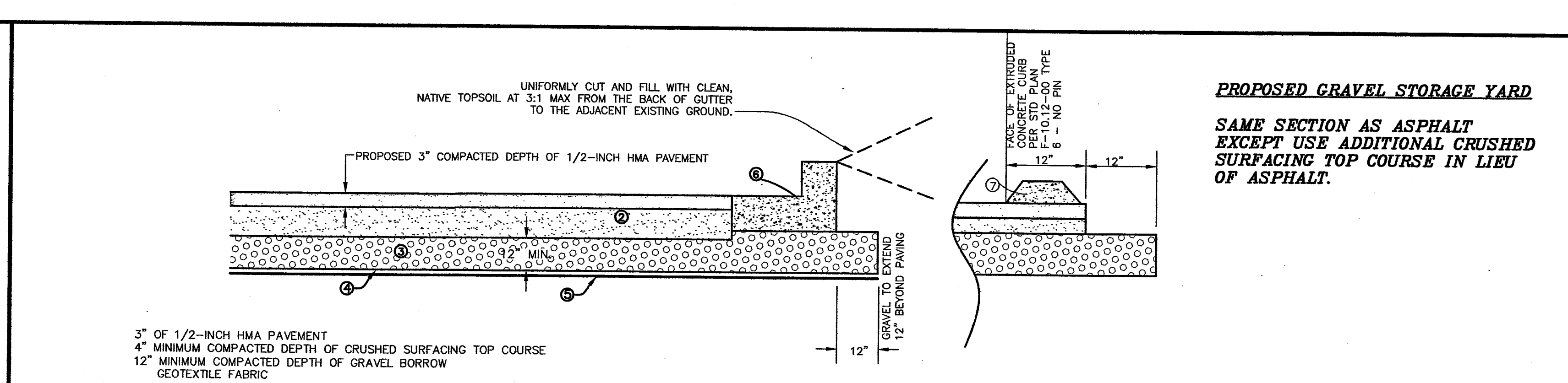
TEMPORARY CONSTRUCTION ENTRANCE DETAIL

NO SCALE



CLEANOUT ASSEMBLY DETAIL

NO SCALE



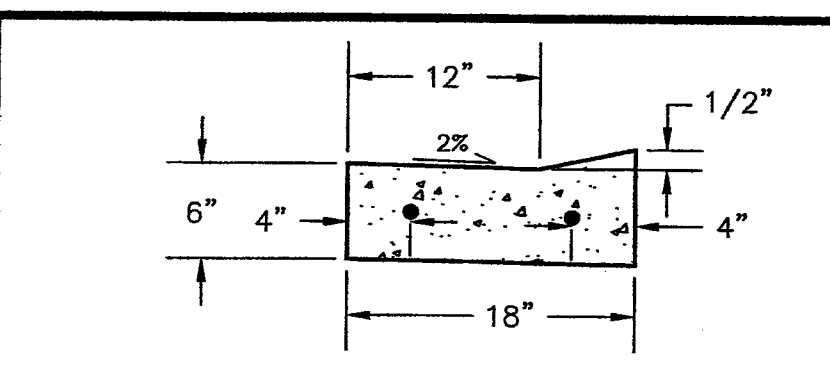
ASPHALT SECTION - ONSITE & OFFSITE

NO SCALE

- 1 ALL ASPHALT SHALL BE HMA 1/2-INCH HMA CONFORMING TO SECTION 5-04 OF THE 2014 STANDARD SPECIFICATIONS, COMPACTED TO A MINIMUM OF 92% RICE DENSITY. WHERE PROPOSED ASPHALT ABUTS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAWCUT FULL DEPTH AND TACK COATED IMMEDIATELY BEFORE PAVING. ALL SURFACE JOINTS SHALL BE SEALED WITH CSS 1 AND SAND, APPLIED WITH HEAT.
- 2 4" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE, BEING 100% FULL FRACTURE FACE AS MANUFACTURED AT A QUARRY, SHALL CONFORM TO SECTION 9-03.5(3) OF THE 2014 STANDARD SPECIFICATIONS, COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 TESTING. ALL CRUSHED SURFACING SHALL BE SPRAYED WITH SOIL RESIDUAL HERBICIDE A MAXIMUM OF 24 HOURS PRIOR TO PAVING, ACCORDING TO SECTION 5-04.3(5) OF THE 2014 STANDARD SPECIFICATIONS.
- 3 STRUCTURAL FILL, A MINIMUM OF 12 INCH COMPACTED DEPTH SHALL SUPPORT ALL CONCRETE, CRUSHED ROCK AND PAVEMENT AREAS. STRUCTURAL FILL SHALL CONFORM TO GRAVEL BORROW REQUIREMENTS, SECTION 9-03.14(1) OF THE 2014 STANDARD SPECIFICATIONS. THE PERCENTAGE PASSING THE #200 SIEVE SHALL NOT EXCEED 5% STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 TESTING AND THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY GEOTEST, INC.
- 4 THE EXCAVATED SUBGRADE SHALL BE FREE OF TOPSOIL, ORGANICS, AND OTHER DELETERIOUS MATERIAL, COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 TESTING, PREPARED CONFORMING TO SECTION 2-06.3(1) OF THE 2014 STANDARD SPECIFICATIONS. SOFT SUBGRADE AREAS SHALL BE OVER EXCAVATED AND BACKFILLED WITH MECHANICALLY COMPACTED GRAVEL BORROW, PRIOR TO PLACEMENT OF STRUCTURAL FILL MATERIAL. ANY SUBGRADE AREAS THAT CONTAIN CONCENTRATED ORGANIC MATERIALS, SUCH AS BUT NOT LIMITED TO REMNANTS FROM BURN PILES OR STUMP HOLES, SHALL BE OVER-EXCAVATED TO EXPOSE UNDISTURBED, NON-ORGANIC MATERIAL AND BACKFILLED WITH MECHANICALLY COMPACTED STRUCTURAL FILL. ALL SUBGRADES SHALL BE INSPECTED AND TESTED BY THE OWNER'S RETAINED SOILS ENGINEER PRIOR TO THE PLACEMENT OF FABRIC AND GRAVEL.
- 5 THE SUBGRADE SHALL BE OVERLAIN WITH GEOTEXTILE FABRIC. GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS: NON-WOVEN, ROT PROOF, APPARENT OPEN SIZE (AOS) #70 SIEVE, PERMEABILITY 0.5 SEC -1, PUNCTURE STRENGTH 90 LB., TENSILE ELONGATION 200%, TENSILE ELONGATION 200%, FABRIC SHALL BE STRETCHED AS TIGHT AS POSSIBLE BY HAND ON THE PREPARED SUBGRADE. PEGS, PINS, OR THE MANUFACTURER'S RECOMMENDED METHOD SHALL BE USED TO HOLD THE FABRIC IN PLACE WHILE THE GRAVEL MATERIAL IS PLACED. JOINTS SHALL BE OVERLAPPED A MINIMUM OF TWO FEET. DURING SITE OBSERVATIONS BY THE SOILS ENGINEER, THE OMISSION OF GEOTEXTILE FABRIC WILL BE CONSIDERED.
- 6 CAST IN PLACE CEMENT CONCRETE TRAFFIC CURB AND GUTTER SHALL BE CONSTRUCTED PER WSDOT STANDARD PLAN F-10.12-00 AT THE LOCATIONS IDENTIFIED ON THE CIVIL PLANS AS C/G.
- 7 EXTRUDED CONCRETE CURB, ECC SHALL BE INSTALLED AT THE DESIGNATED LOCATIONS AND CONFORM TO WSDOT STD PLAN F-10.42-00, TYPE 6, NO PIN. ECC SHALL FULLY BEAR ON UNDERLYING ASPHALT, USING A CONCRETE SLURRY OR EPOXY TO BOND TO ASPHALT. ALL CURBS SHALL BE IN STRAIGHT LINES AND PLACED ACCORDING TO THE RADII ON THE PLANS.

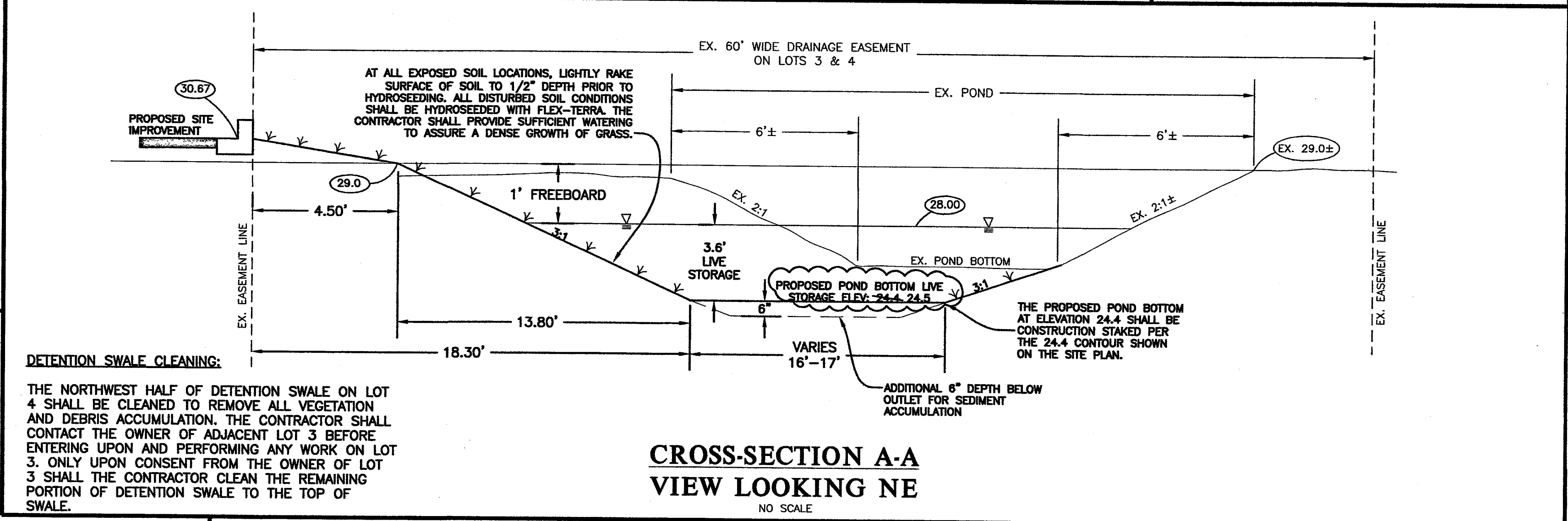
PROPOSED GRAVEL STORAGE YARD

SAME SECTION AS ASPHALT EXCEPT USE ADDITIONAL CRUSHED SURFACING TOP COURSE IN LIEU OF ASPHALT.



CONCRETE GUTTER SWALE

SCALE: NO SCALE



CROSS-SECTION A-A VIEW LOOKING NE

NO SCALE

DETENTION SWALE CLEANING:

THE NORTHWEST HALF OF DETENTION SWALE ON LOT 4 SHALL BE CLEANED TO REMOVE ALL VEGETATION AND DEBRIS ACCUMULATION. THE CONTRACTOR SHALL CONTACT THE OWNER OF ADJACENT LOT 3 BEFORE ENTERING UPON AND PERFORMING ANY WORK ON LOT 3. ONLY UPON CONSENT FROM THE OWNER OF LOT 3 SHALL THE CONTRACTOR CLEAN THE REMAINING PORTION OF DETENTION SWALE TO THE TOP OF SWALE.

- 1-CAST IRON FOOTLIGHT VALVE CASING COVER OR EQUAL
- 2-THREADED PVC PLUG
- 3-RESTORATION SHALL BE IN ACCORDANCE WITH TYPICAL TRENCH REPAIR DETAIL
- 4-PVC STAND PIPE
- 5-PVC 45 BEND
- 6-PVC 45 DEGREE WYE
- 7-SHORT PVC STUB
- 8-PVC CAP OR PIPE AS DICTATED BY PLANS
- 9-PEA GRAVEL

ALL JOINTS SHALL BE GASKETED. PVC PIPE SHALL CONFORM TO ASTM D3034 SDR 35.



FOR AS-CONSTRUCTED INFORMATION ONLY

ENGINEER: John P. Ravnik
APPROVED: 1/13/16
DATE: JAN 21 2016
CITY OF FERNDALE
CITY OF FERNDALE

PLAN STATUS: RECORD DRAWINGS

SHEET TITLE: SITE DEVELOPMENT FOR PACIFIC TIRE
1421 WHITEHORN STREET
SECTION 33, T. 39 N., R. 2 E., W.M.

SCALE: AS SHOWN
DRAWN BY: D. REMSEN
CHECKED BY: J. RAVNIK
DATE: 01.12.16

DRAWING NO. 14017DET.ASB.dwg
JOB NO. 14017
SHEET NO. 5 OF 10

REV. NO.	REVISION	DATE	BY	APPROVED

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BURLINGTON, WA 98233
PH: (360) 707-2048 FAX: (360) 707-2216

SHEET DESCRIPTION:

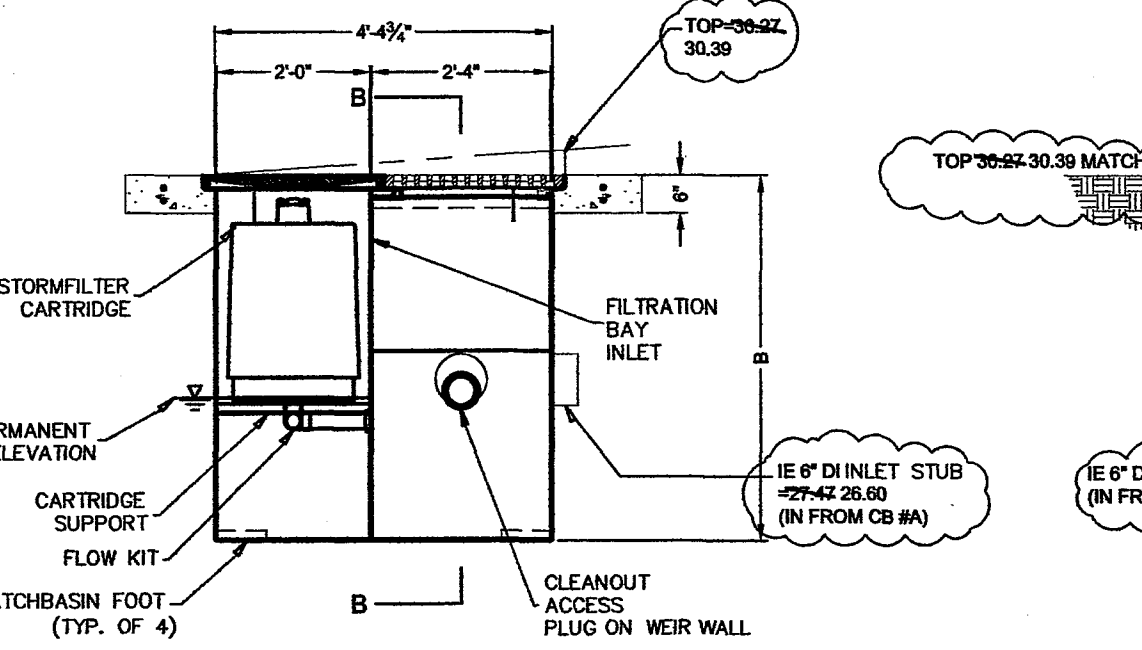
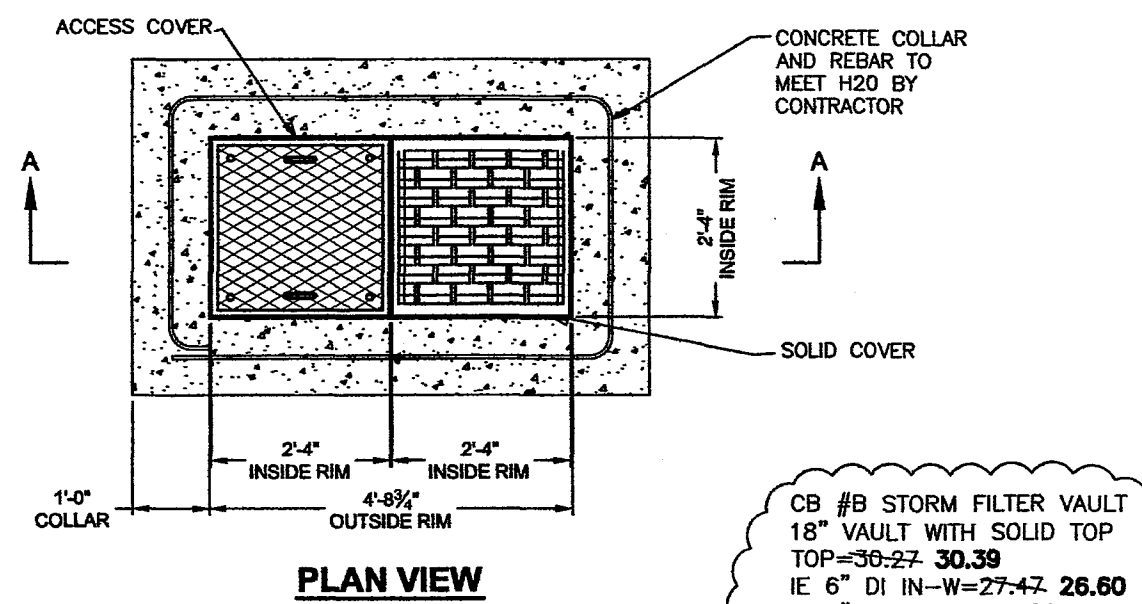
DETAILS

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 (ft)	3.06'		2.3'		3.3'	
SPECIFIC FLOW RATE (gpm/ft ²)	2 gpm/ft ²	1 gpm/ft ²	2 gpm/ft ²	1 gpm/ft ²	2 gpm/ft ²	1 gpm/ft ²
CARTRIDGE FLOW RATE (gpm)	22.5	11.25	15	7.5	15	7.5
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"	

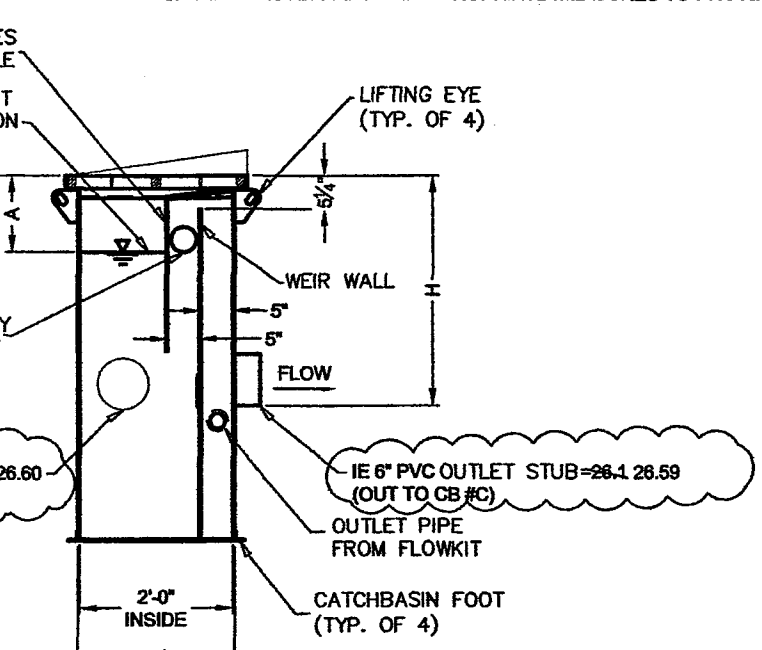
- GENERAL NOTES**
1. CONTACT TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STORMFILTER CATCHBASIN STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR COATCH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contacties.com
 3. STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 4. INLET SHOULD NOT BE LOWER THAN OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY SUB-CONTRACTOR.
 5. STORMFILTER CATCHBASIN EQUIPPED WITH 4" INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUBS IS 8" INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15" INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE BY MEANS OF A FLANGE OR PLUGGING BY CONTRACTOR.
 6. STEEL STRUCTURE TO BE MANUFACTURED OF 1/4" INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO M306 LOAD RATING. TO MEET H250 LOAD RATING ON STRUCTURE, A CONCRETE COLLAR IS REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH QUANTITY (2) #4 REINFORCING BARS TO BE PROVIDED. CONCRETE COLLAR SHALL BE 12" INCHES THICK.
 7. FILTER CARTRIDGES SHALL BE MEDIA-FILL, PASSIVE, SIPHON ACTIVATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7.9 INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 37 SECONDS.
 8. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).
- INSTALLATION NOTES**
1. FOR SUB-BASE, BACKFILL DEPTH, AND ANTI-FLOATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY PROVIDER.
 2. CONTRACTOR TO PROVIDE APPROPRIATE MEASURES TO SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
 3. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION SLUFFING.



SECTION A-A **CB #B (WEST WQ BASIN)**

STORMFILTER STANDARD DETAIL WITH H-20 LOAD RATING

NO SCALE



SECTION B-B

1-CARTRIDGE CATCHBASIN "B" STORMFILTER DATA

STRUCTURE ID		CB#B
WATER QUALITY FLOW RATE (cfs)		0.01666cfs
PEAK FLOW RATE (<1 cfs)		0.11556cfs
RETURN PERIOD OF PEAK FLOW		100YR
CARTRIDGE FLOW RATE (115 OR 7.5 gpm)		7.5GPM
MEDIA TYPE (CSF, PERLITE, ZPG)		ZPG
RIM ELEVATION	30.27	30.39
PIPE DATA:	I.E.	DIAMETER
INLET SUB	27.47	26.60 6"
OUTLET SUB	26.1	26.59 6"

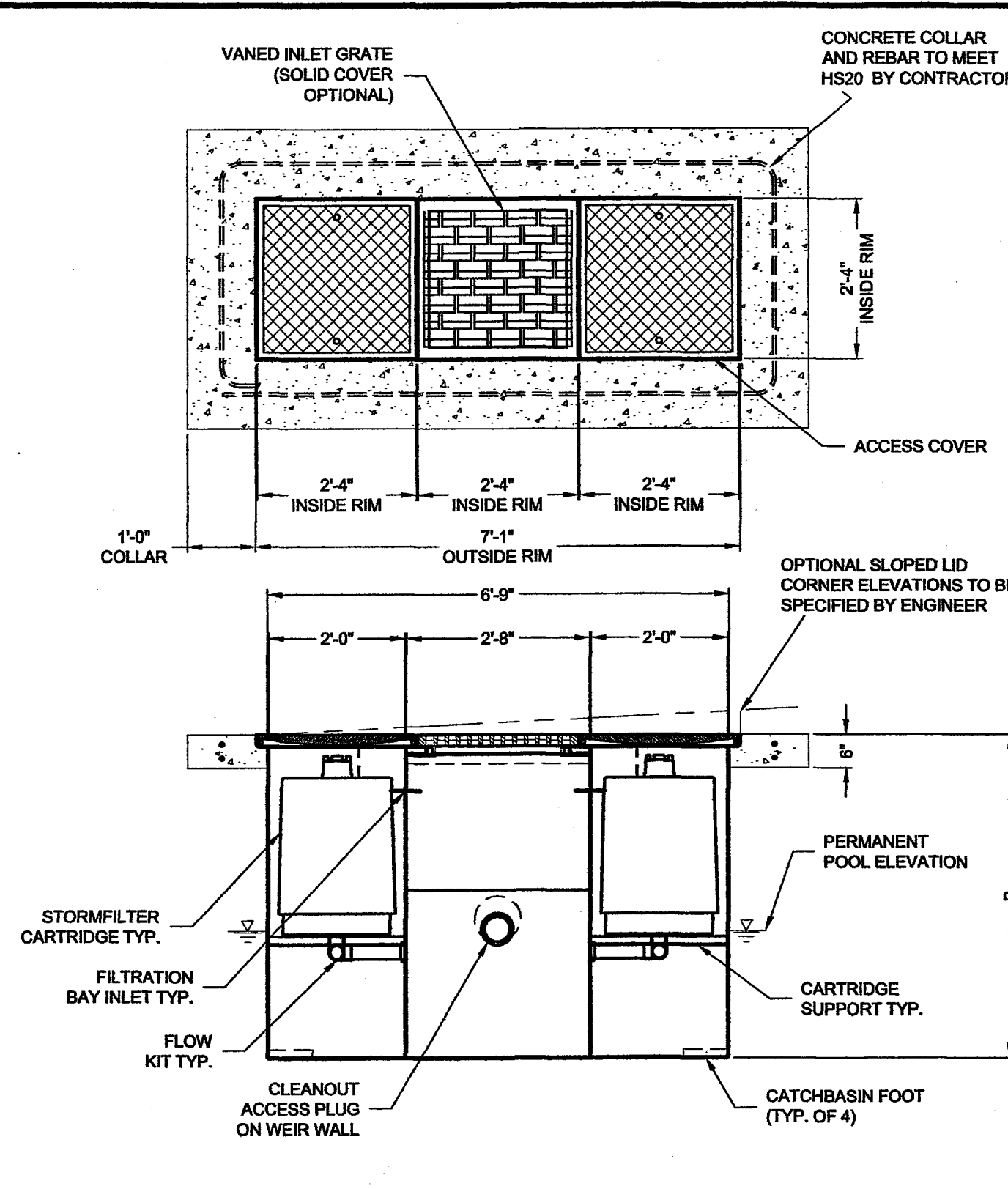
CONFIGURATION

OUTLET

OUTLET

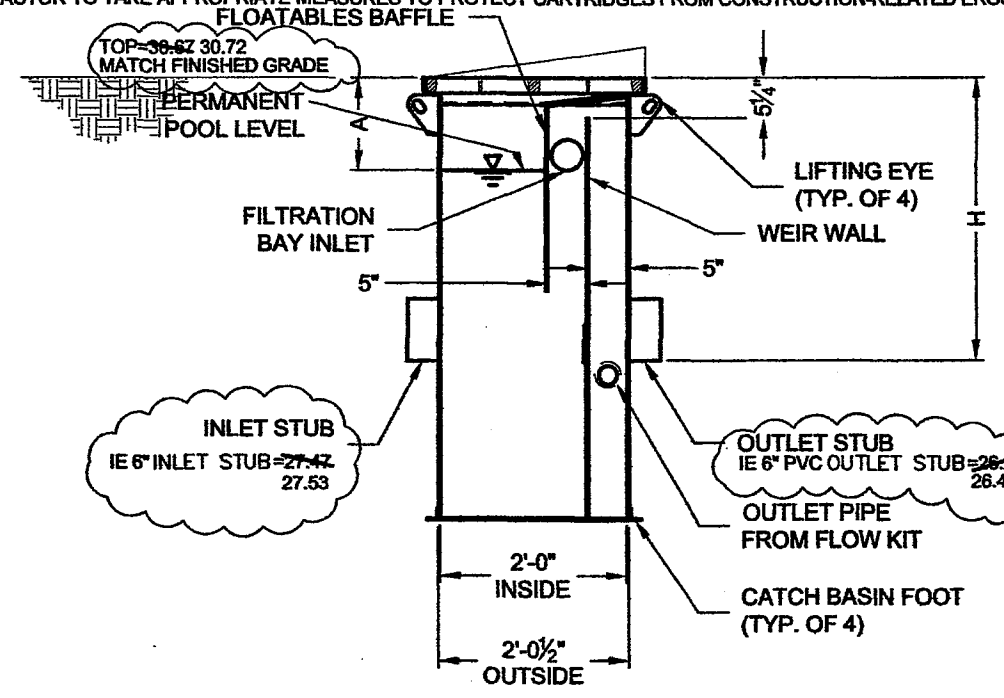
INLET

SLOPED LID	YES
SOLID COVER	YES
NOTES/SPECIAL REQUIREMENTS:	

**CB #E (EAST WQ BASIN)**

STORMFILTER STANDARD DETAIL WITH H-20 LOAD RATING

NO SCALE



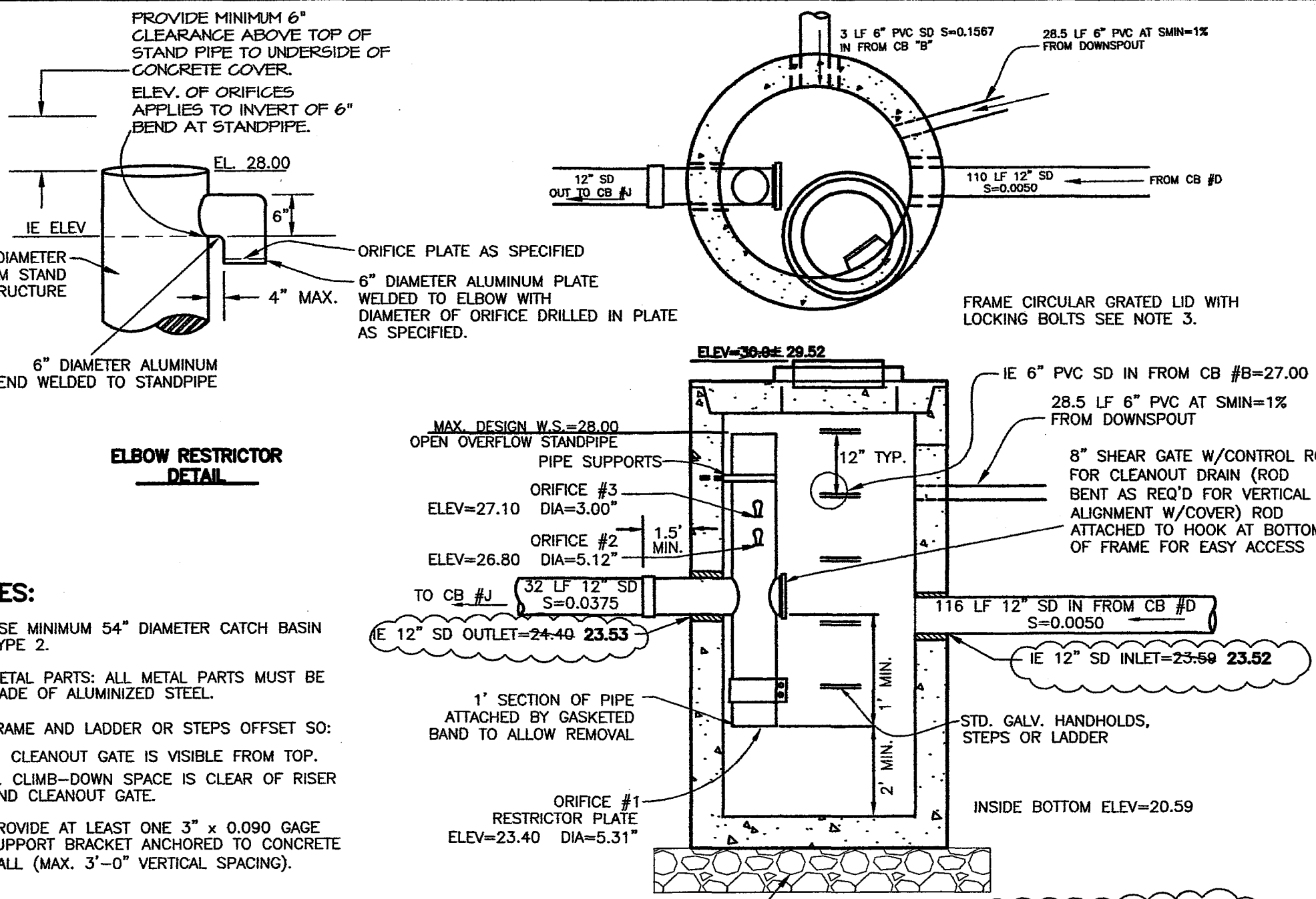
2-CARTRIDGE DEEP CATCHBASIN STORMFILTER DATA	
STRUCTURE ID	CB#
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
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89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

WATER QUALITY FLOW RATE (cfs)	0.0265 CFS	
PEAK FLOW RATE (1.8 cfs)	0.1449 CFS	
RETURN PERIOD OF PEAK FLOW (yrs)	100 YR	
CARTRIDGE FLOW RATE (gpm)	7.5 GPM	
MEDIA TYPE (CSF, PERLITE, ZPG, GAC, PHS)	ZPG	
RIM ELEVATION	36.82'	30.72'
PIPE DATA:		
INLET STUB	27.47'	DIAMETER 27.53'
OUTLET STUB	26.2'	DIAMETER 6"
CONFIGURATIONS	OUTLET	

The diagram illustrates three basic 2x2 multiplexer configurations:

- 2-to-1 Multiplexer:** Two inputs (INLET) on the left merge into one output (OUTLET) on the right.
- 1-to-2 Demultiplexer:** One input (INLET) on the left splits into two outputs (OUTLET) on the right.
- 2-to-2 Demultiplexer:** Two inputs (INLET) on the left split into two outputs (OUTLET) on the right.

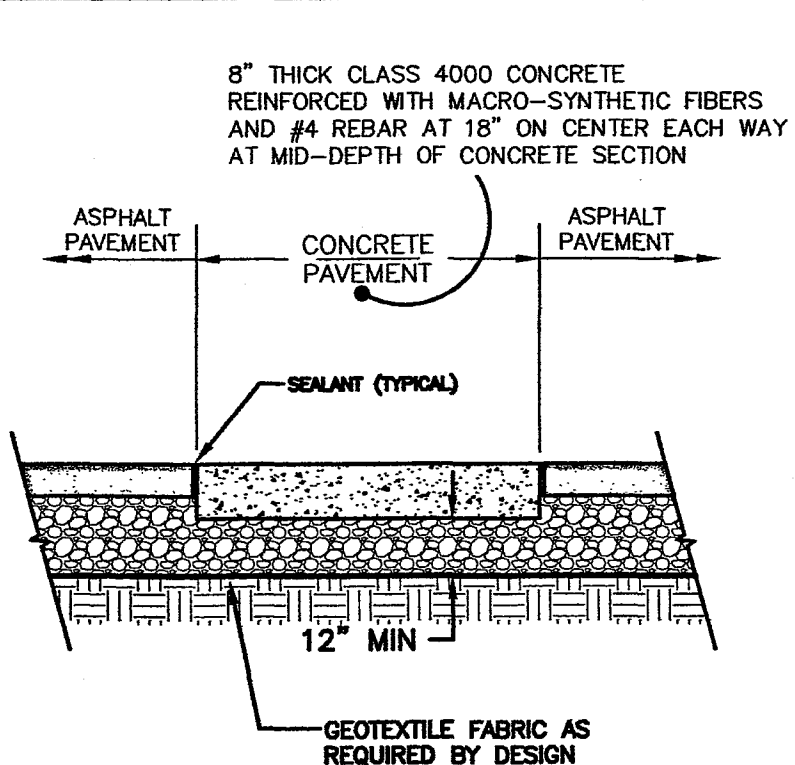
SLOPED LID	LID
SOLID COVER	COVER
NOTES/SPECIAL REQUIREMENTS:	



CB #C-CONTROL STRUCTURE

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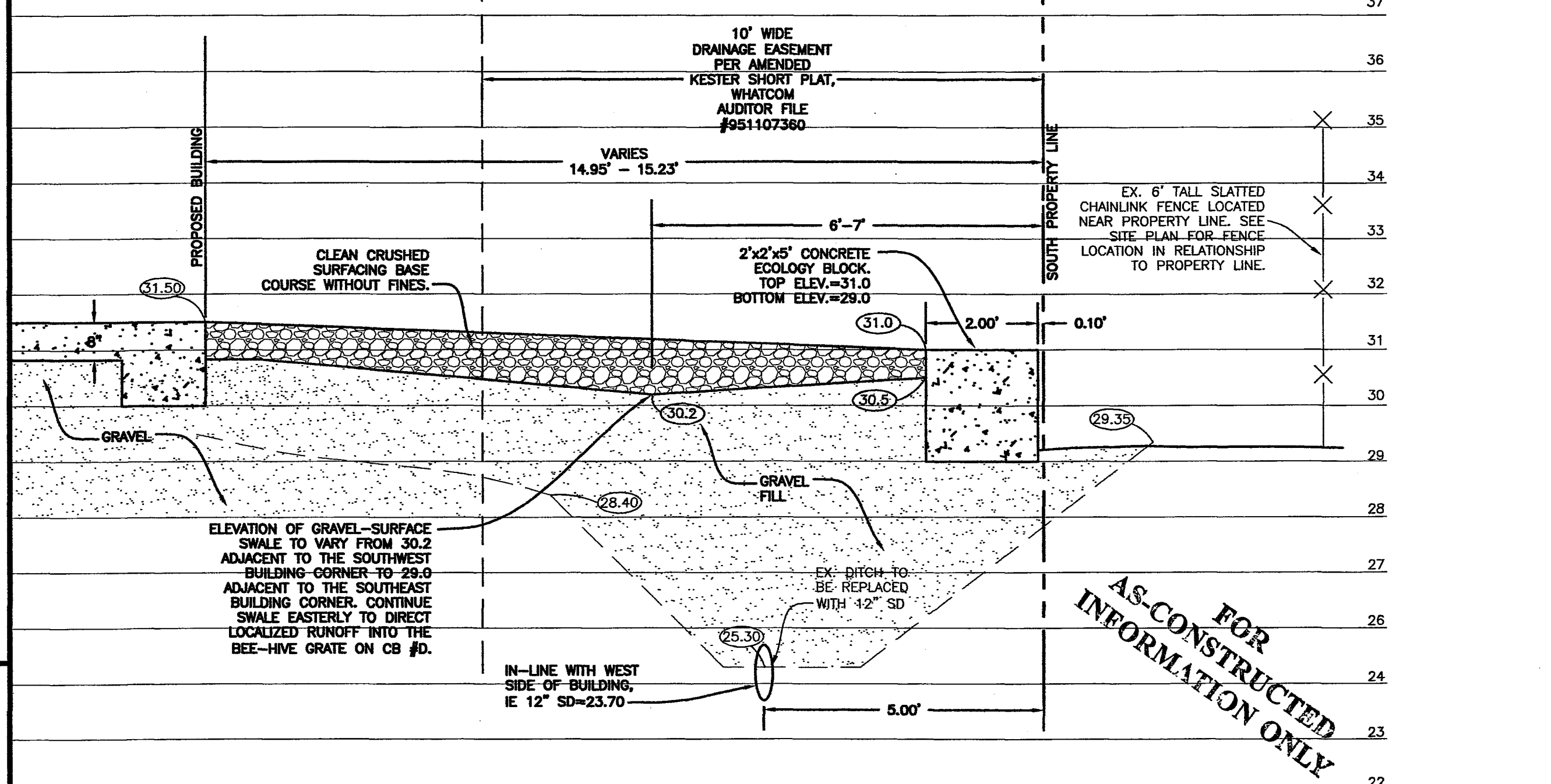


CONCRETE SLAB SECTION

NO SCALE

DETENTION FACILITY VESTING:

THE SUBJECT PROPERTY EXISTS AS LOT 4 IN THE AMENDED KESTER SHORT PLAT RECORDED DECEMBER 31, 1990. THE SHORT PLAT'S DETENTION DESIGN WAS PERFORMED IN APRIL 1992 UTILIZING THE RATIONAL METHOD WHICH WAS APPROVED BY THE CITY OF FERNDALE. THE CITY OF FERNDALE RECOGNIZES ROW TITLE AS THE BASIS OF THE CITY'S REQUIREMENTS FOR SHORT PLAT PERMITS. THE WASHINGTON STATE LAWS DO NOT DVEST UNLESS THE GOVERNING AGENCY, I.E. FERNDALE, ESTABLISHES A SPECIFIC ORDINANCE RESTRICTING THE NUMBER OF YEARS A SHORT PLAT REMAINS VESTED TO THE REGULATIONS IN EFFECT AT THE TIME OF SHORT PLAT APPROVAL. THE CITY OF FERNDALE HAS NOT ADOPTED ANY ORDINANCE RESTRICTING THE TIME OF A SHORT PLAT'S VESTING. AS PART OF LOT 4'S DEVELOPMENT REVIEW, THE CITY OF FERNDALE HAS ACKNOWLEDGED THAT THIS SHORT PLAT, AND IN PARTICULAR THE DEVELOPMENT PROPOSED ON LOT 4, REMAINS VESTED TO THE DETENTION REGULATIONS IN EFFECT WHEN THE SHORT PLAT WAS APPROVED. THE DETENTION REGULATIONS IN EFFECT AT THE TIME OF REVIEW DO NOT PROVIDE FOR ENHANCED RUNOFF TREATMENT, POND FENCING, AND POND SIDE-SLOPES. AS SUCH, ENHANCED TREATMENT IS NOT REQUIRED AND THOSE PORTIONS OF THIS SHORT PLAT'S DETENTION POND THAT ARE STEEPER THAN 3:1 ARE NOT REQUIRED TO BE FENCED.



CROSS-SECTION B-E

SCALE: 1"=2'
HORIZ. & VERT.

NOTES:

1. CRUSHED ROCK SURFACE MUST BE GRADED A MIN. OF 4" BELOW TOP OF ECO BLOCK WALL.
2. CRUSHED ROCK SURFACE MUST BE GRADED/SLOPED AWAY FROM ECO BLOCK WALL TO ENSURE DRAINAGE IS CONTAINED ONSITE.

CALL TWO
BUSINESS DAYS
BEFORE YOU DIG
"811"

PLAN STATUS: RECORD DRAWINGS

SCALE: AS NOTED

DRAWN BY: D. REMSEN

CHECKED BY: J. RAVNIK

DATE: 01.12.16

SHEET TITLE:

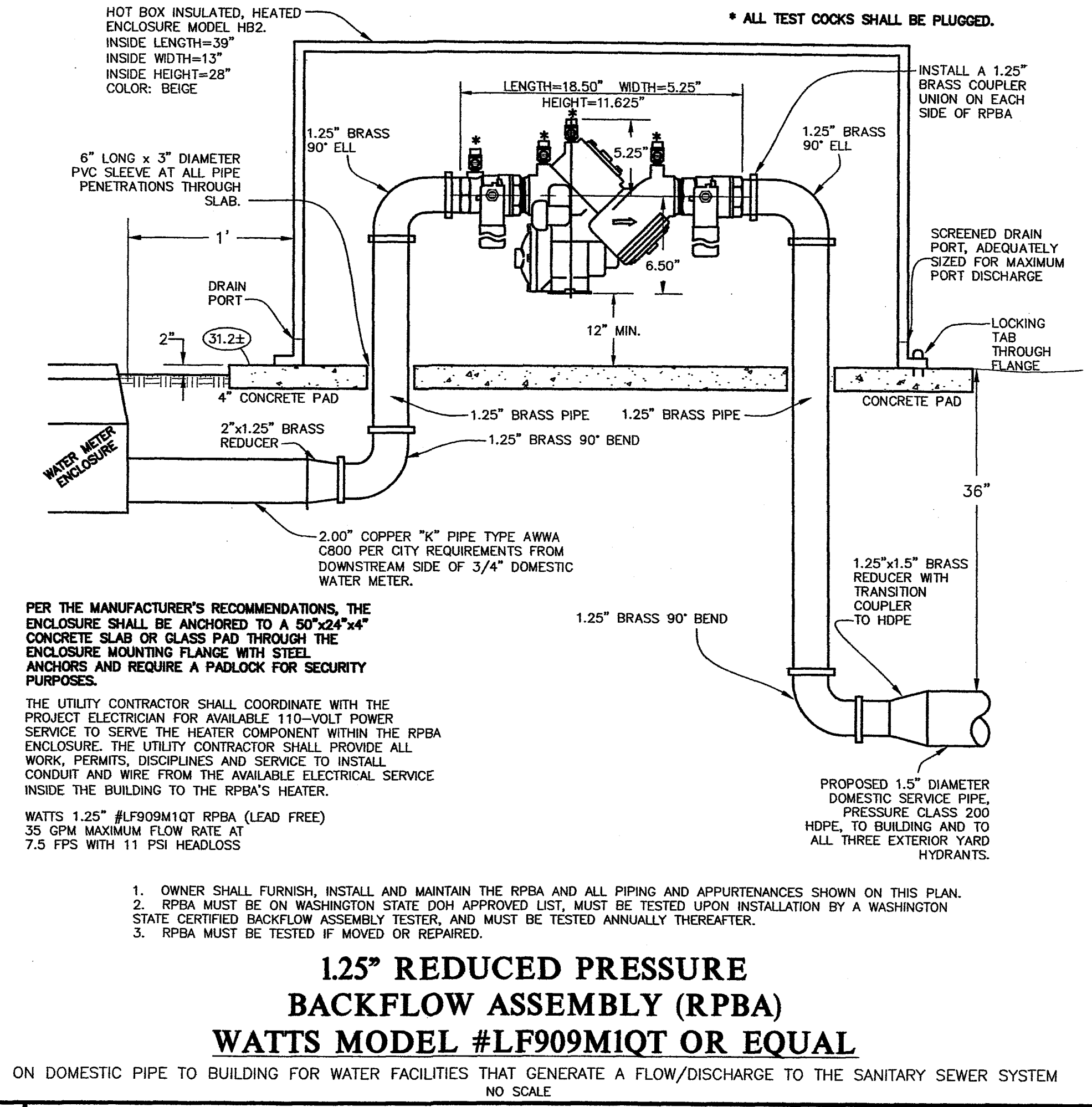
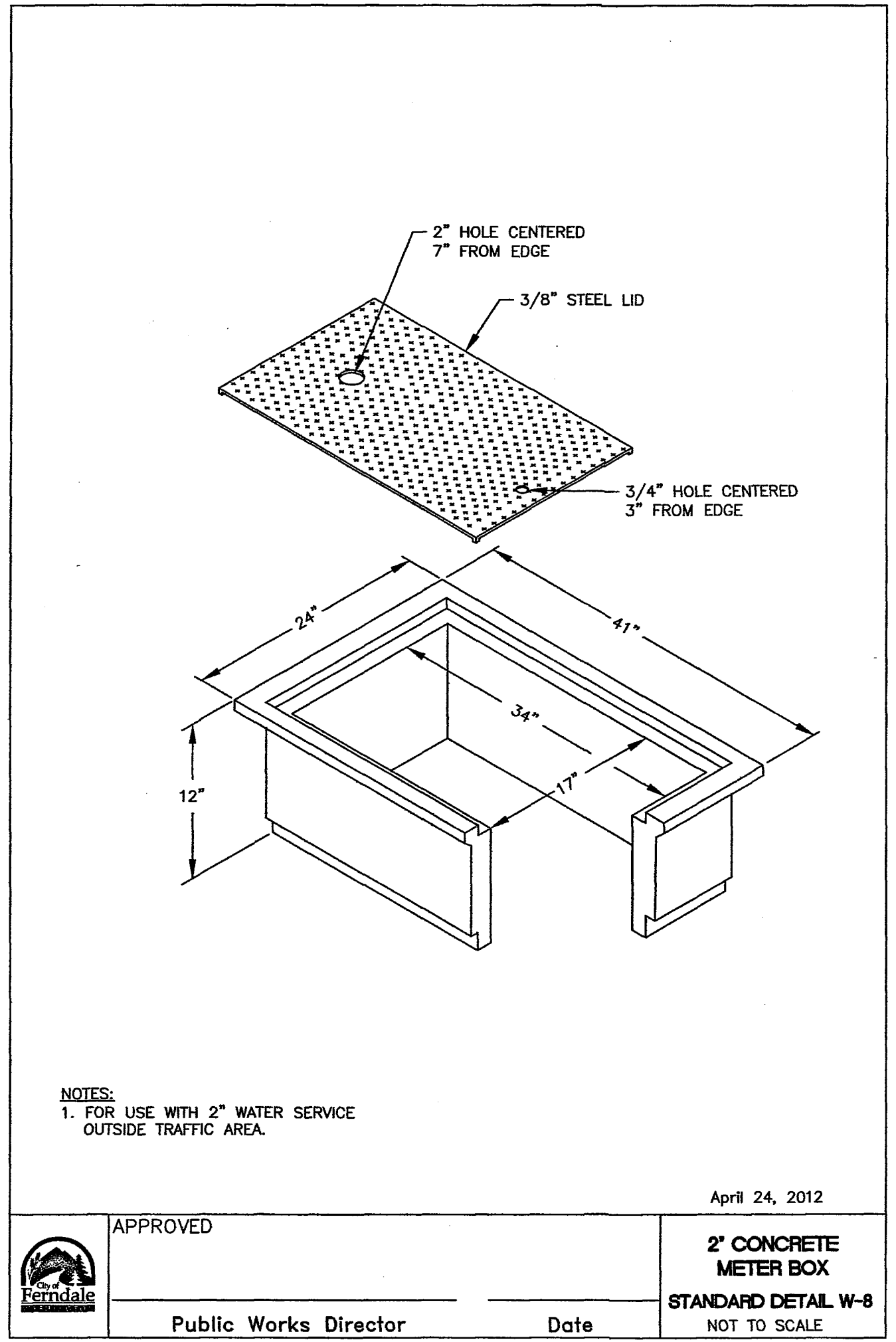
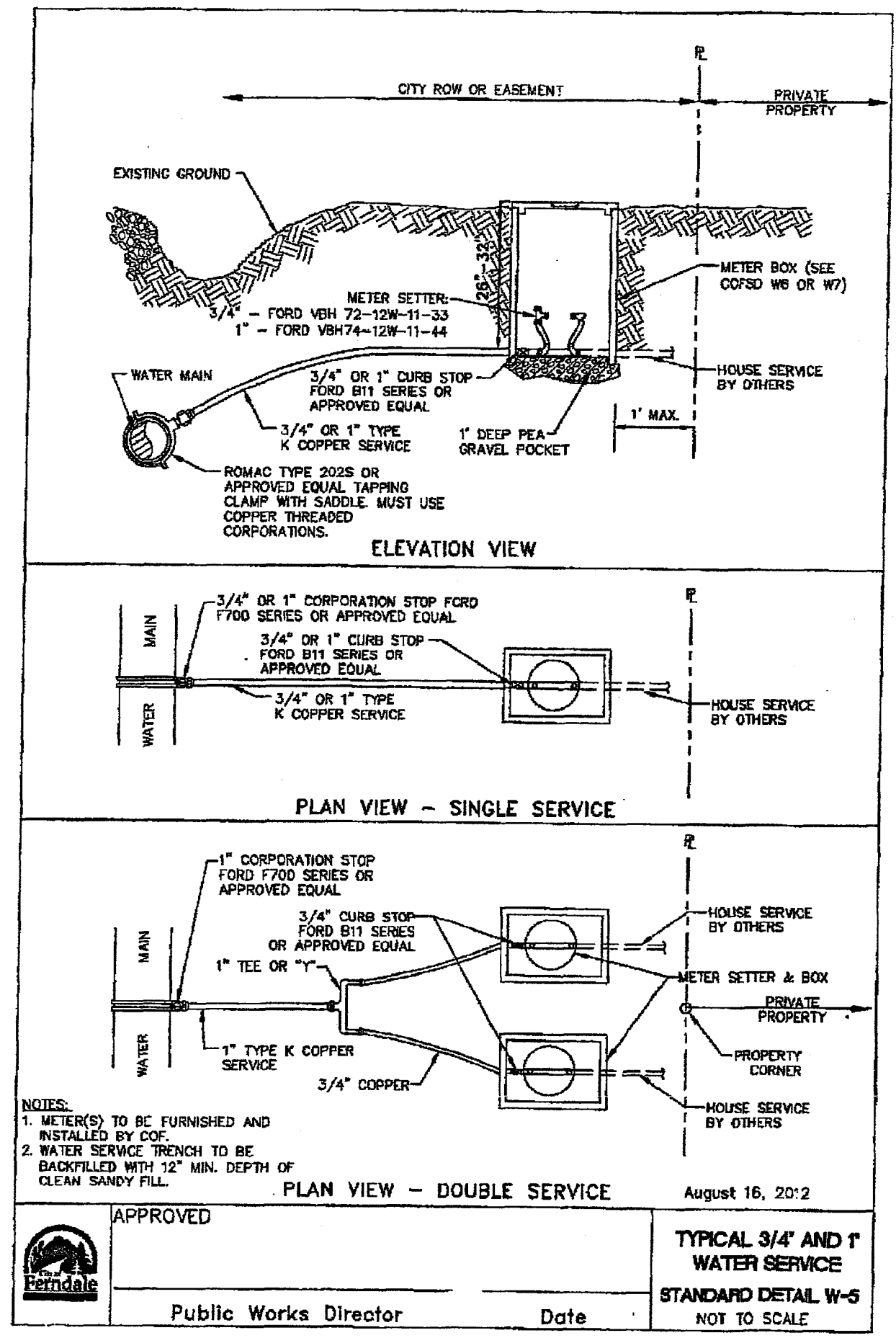
**SITE DEVELOPMENT
FOR
PACIFIC TIRE
1421 WHITEHORN STREET
SECTION 33, T. 39 N., R. 2 E., W**

DRAWING NO.
14017det.ASB.dwg

JOB NO.
14017

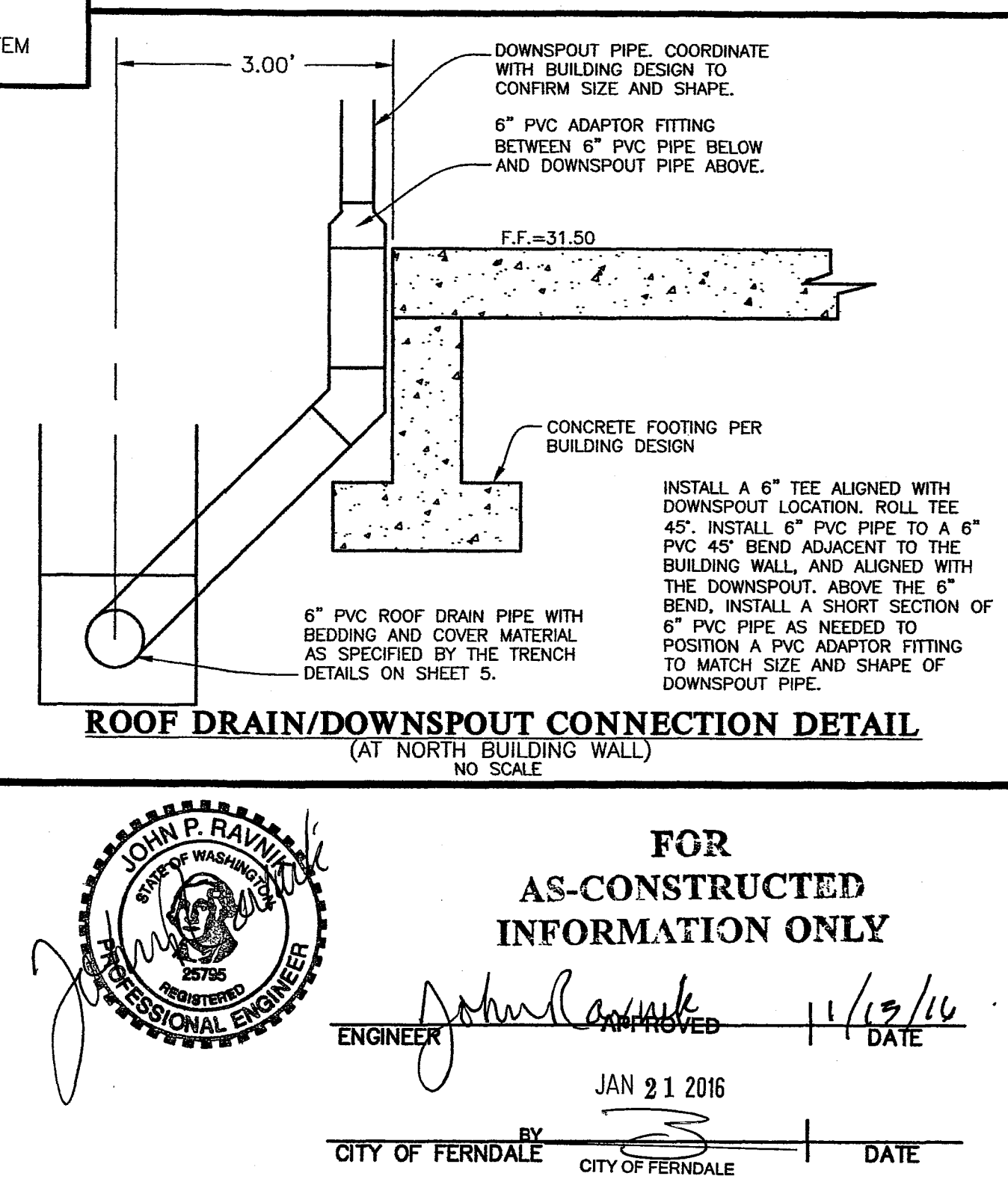
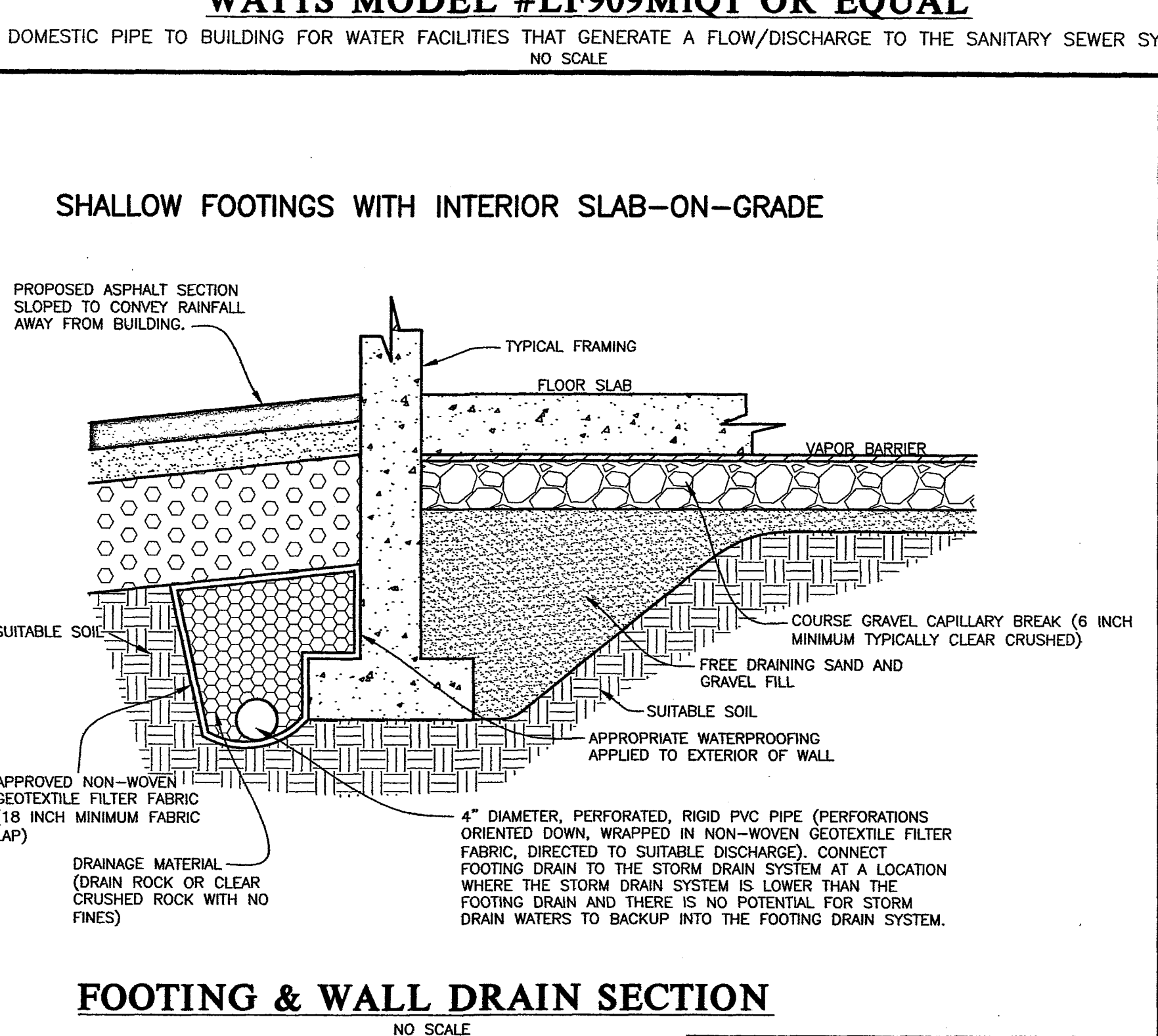
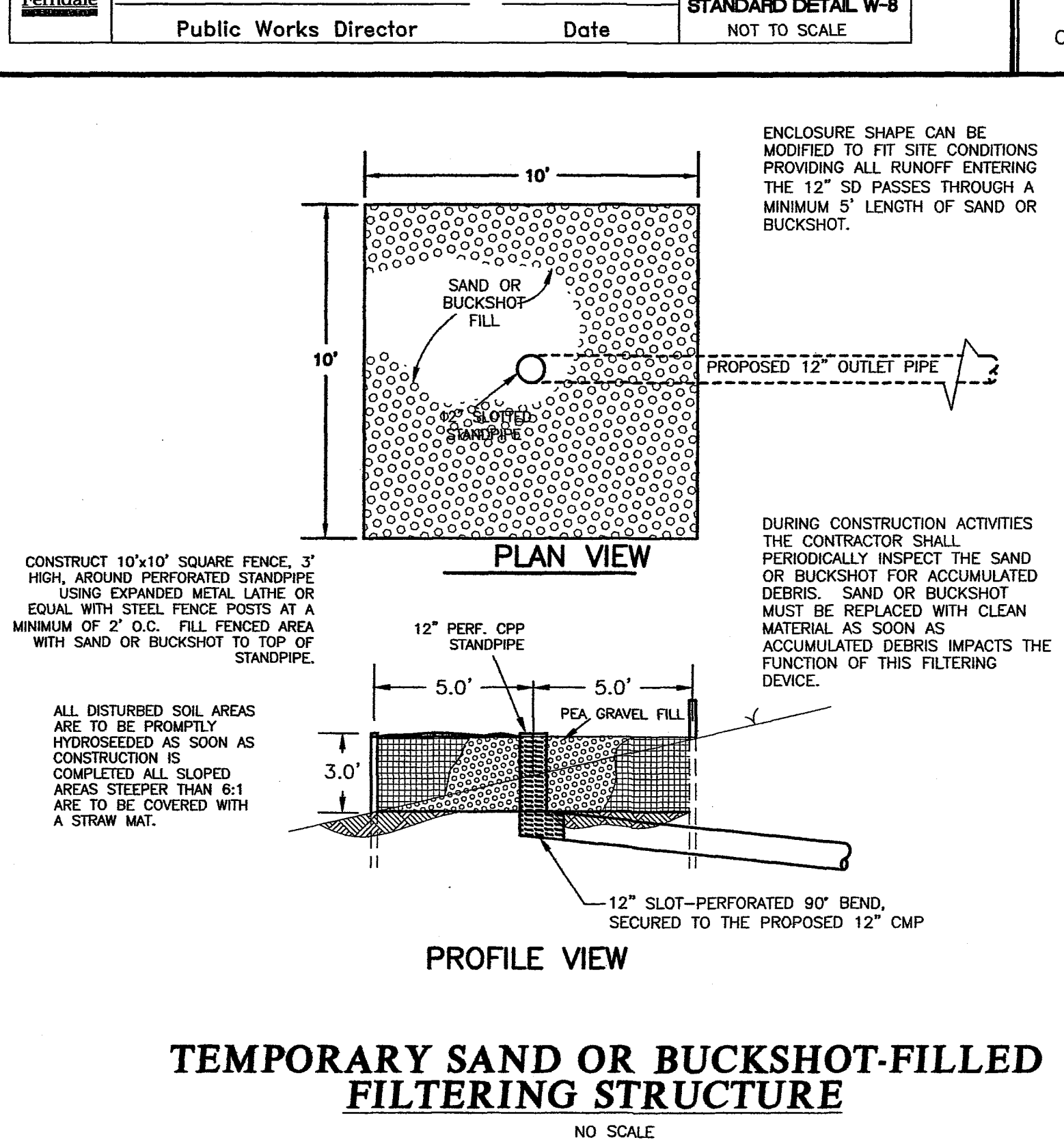
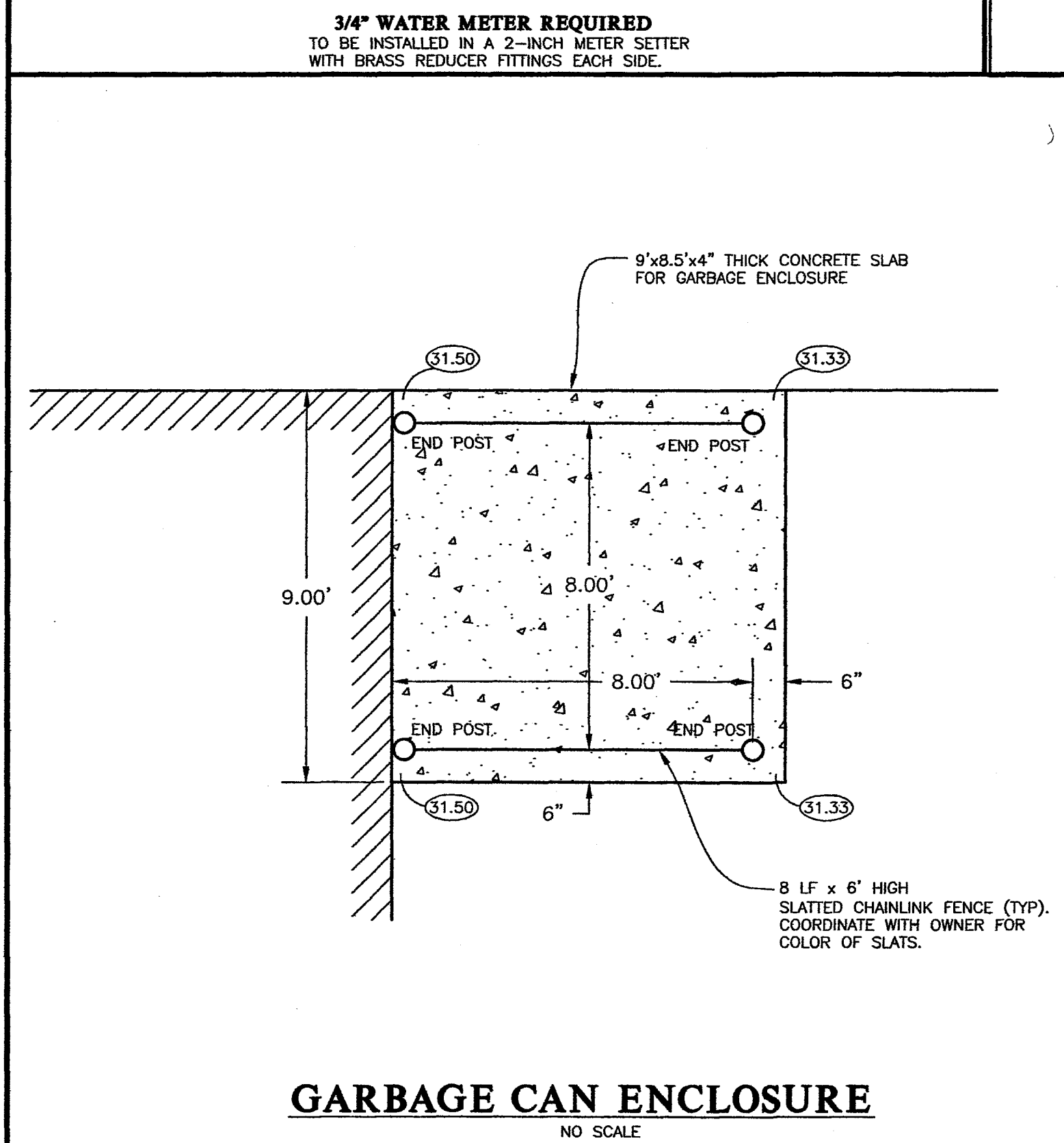
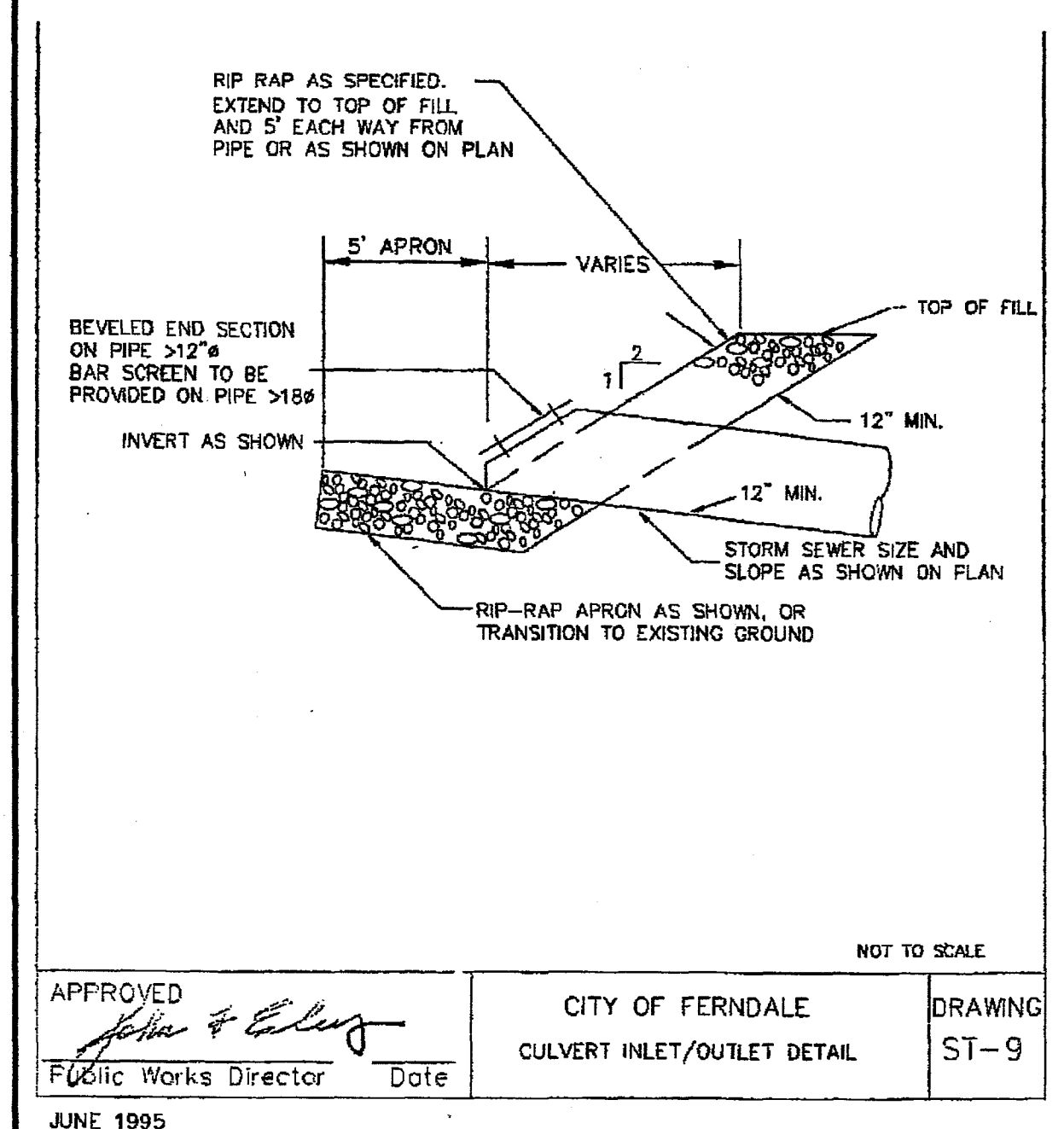
SHEET NO.
6 OF 10

6 OF 10



FIXTURE UNITS:

ITEM	QUANTITY	F.U. EACH	TOTAL F.U.
TOILETS (GRAVITY)	1	2.5	2.5
BATHROOM SINK	1	1	1.0
UTILITY SINK	1	1.5	1.5
YARD HYDRANT	1	2.5	2.5
ADDITION YARD HYDRANT	2	1.0	2.0
KITCHEN SINK	1	1.5	1.5
			11.0 FU



REV. NO.	REVISION	DATE	BY	APPROVED

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BURLINGTON, WA 98233
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SHEET DESCRIPTION:

CALL TWO BUSINESS DAYS BEFORE YOU DIG "811"

DETAILS

PLAN STATUS: RECORD DRAWINGS

SCALE: AS NOTED

DRAWN BY: D. REMSEN

CHECKED BY: J. RAVNIK

DATE: 01.12.16

SHEET TITLE: **SITE DEVELOPMENT FOR PACIFIC TIRE**
1421 WHITEHORN STREET
SECTION 33, T. 39 N., R. 2 E., W.M.

DRAWING NO. 14017det.ASB.dwg

JOB NO. 04017

SHEET NO. 7 OF 10

STRUCTURAL NOTES:
 1. Concrete 28 Day Compressive Strength $f'_c = 4500$ psi
 2. Rebar: ASTM A-615 Grade 60
 3. Mesh: ASTM A-185 Grade 65
 4. Design: AC-308 Building Code
 5. Load: H-20 Truck Wheel w/ 30% Impact Per AASHTO

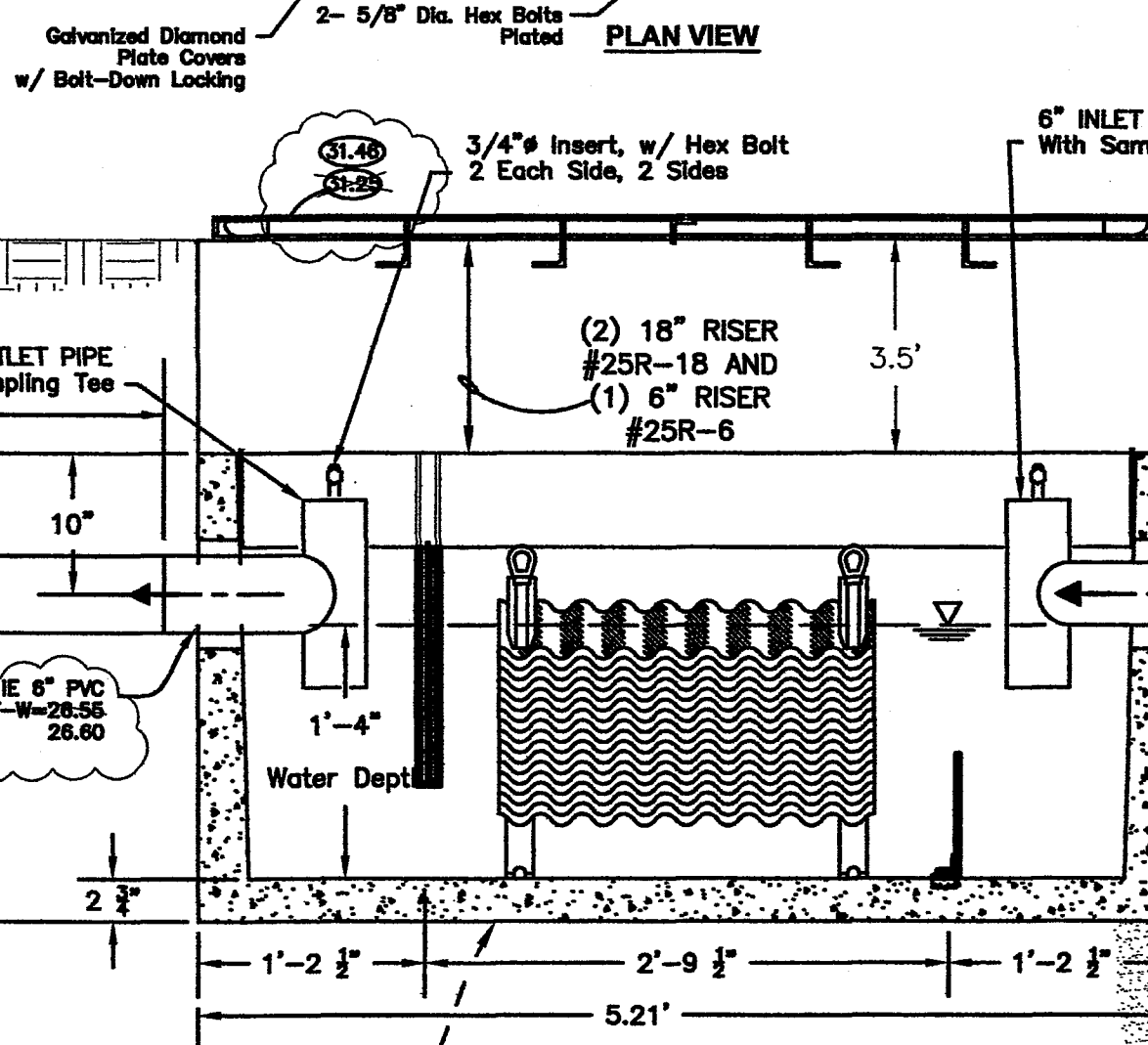
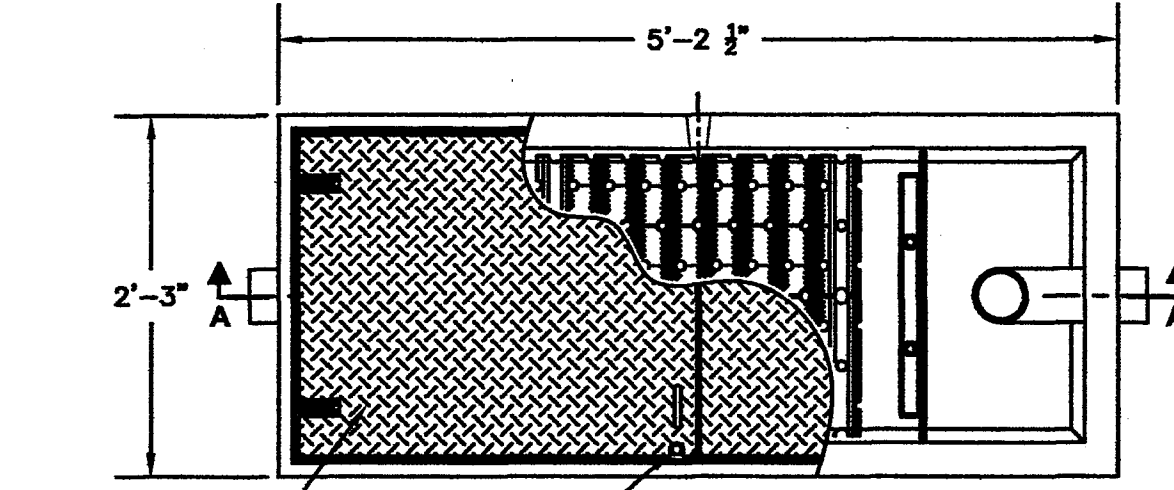
GENERAL NOTES:
 1. All Bolted and Welded To Be Precast Concrete
 2. Static Water Depth = 1'-4"
 3. Contractor to Supply and Install All Piping & Sampling Tees
 4. Cast in All Pipes
 5. Fill With Clean Water Prior To "Start-Up" Of System
 6. Verify All Blockout Sizes and Locations

INFORMATION NEEDED:
 Top Of Separator Elevation:
 Inlet Pipe Size: 6"
 Inlet Pipe Elevation: 26.55, 26.66
 Outlet Pipe Size: 6"
 Outlet Pipe Elevation: 26.55, 26.60

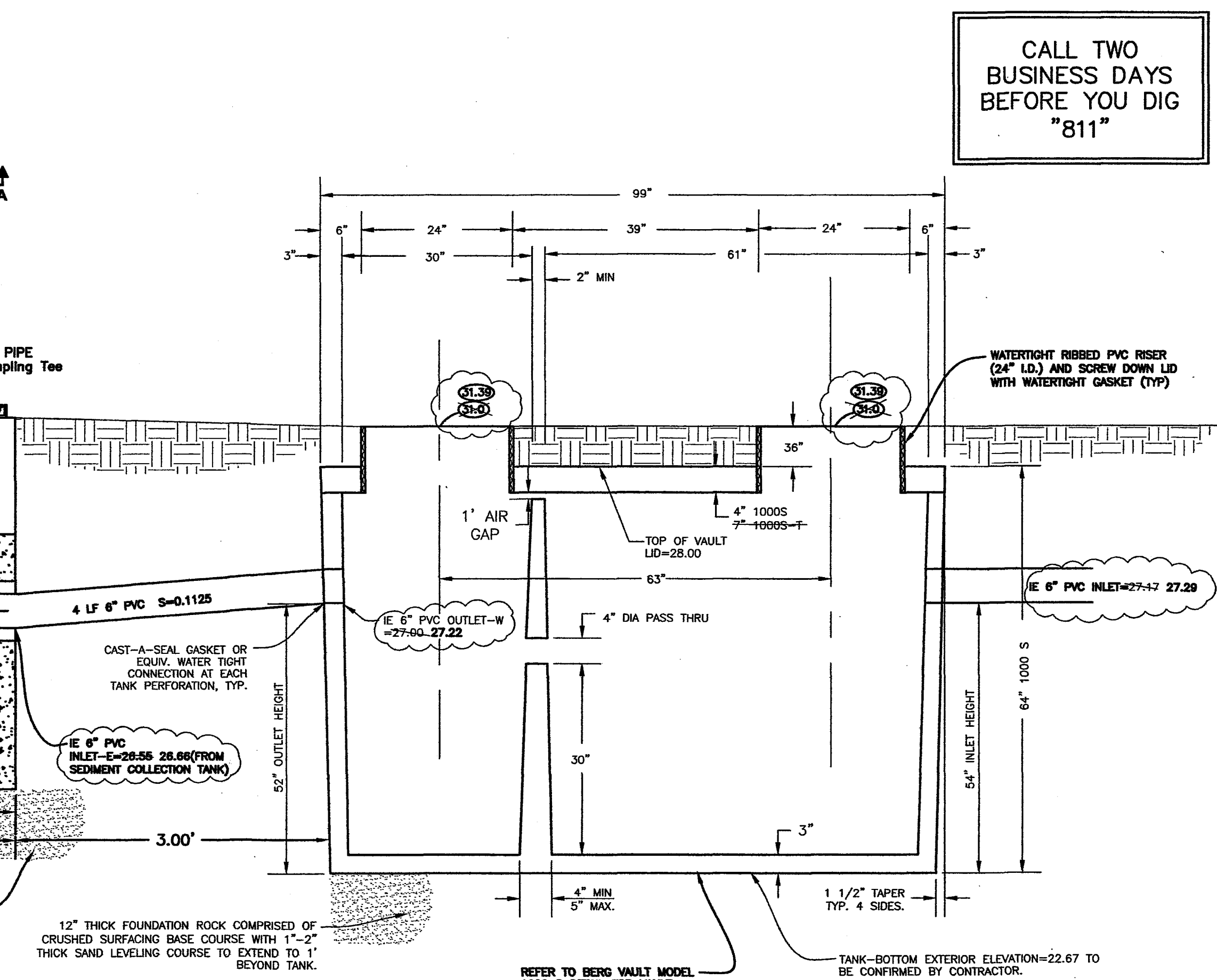
BASIC DESIGN INFORMATION:
 Influent Characteristics:
 Specific Gravity: 0.85
 Operating Temperature: 50°
 Influent Oil Concentration: 100 ppm
 Mean Oil Droplet Size: 130 Microns
 Oil Loss %/min Oil Flow Rate:
 Designed Per Washington State Department Of Ecology

FLOW RATE:
 20 GPM
EFFLUENT QUALITY:
 1000
 10 ppm
 80 Micron

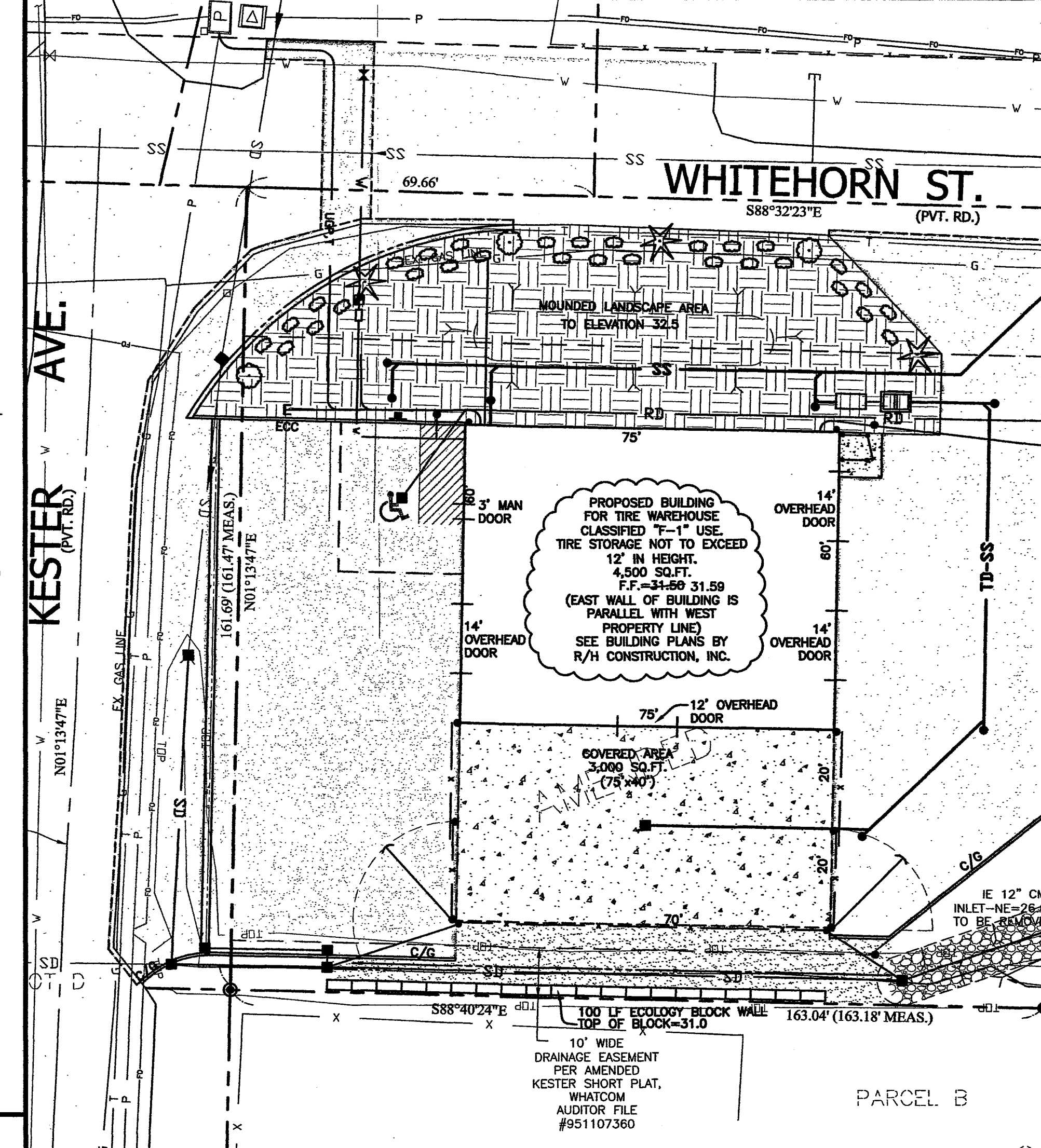
PROJECTED PLATE AREA = 64 Sq/ft
 MAXIMUM PROCESS FLOW = 60 GPM



25-CPS
 OIL/WATER SEPARATOR VAULT DETAIL
 NO SCALE



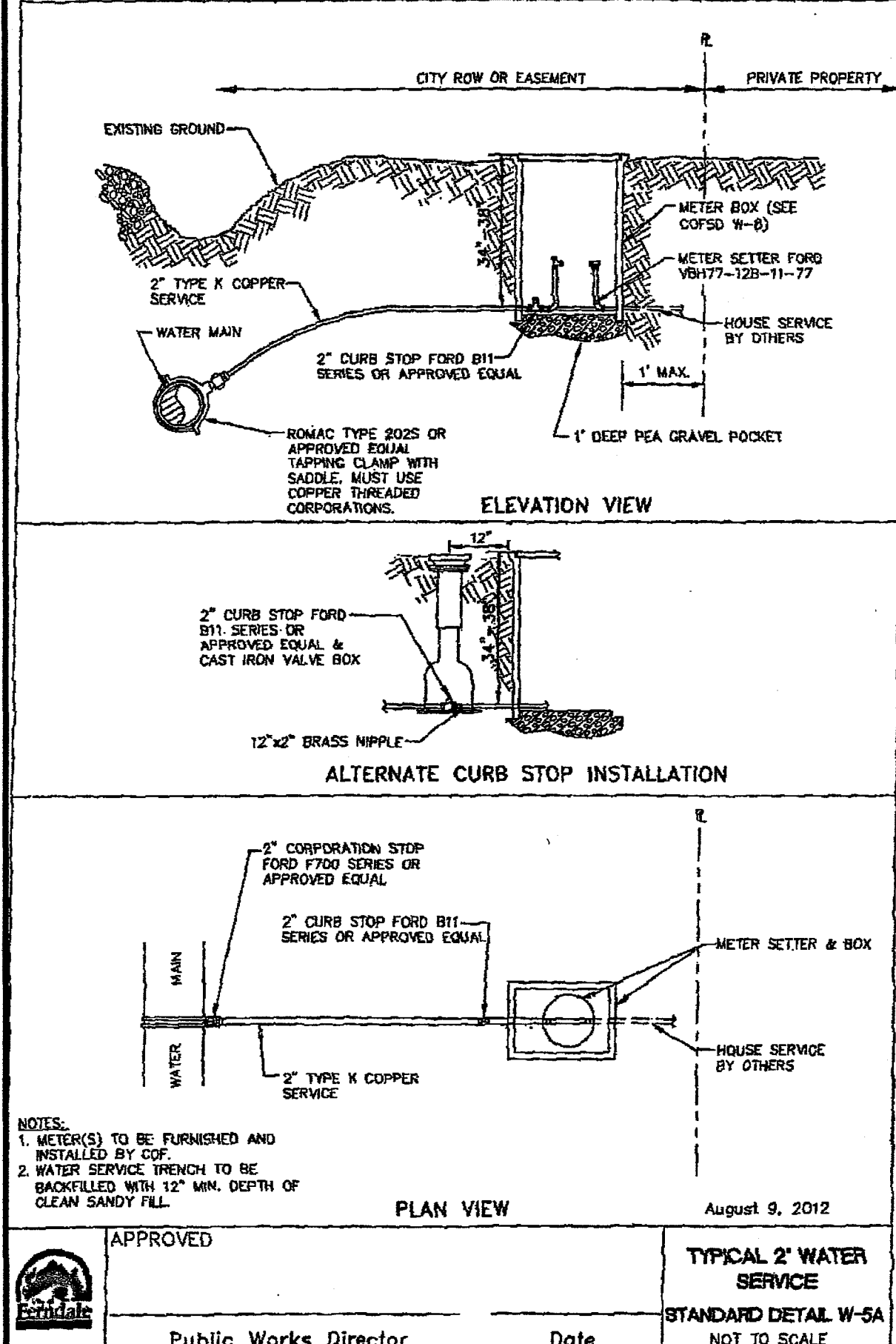
SEDIMENT-COLLECTION VAULT DETAIL
 NO SCALE



PRELIMINARY LANDSCAPE PLAN
 SCALE: 1"=20'

L-1 BASIC LANDSCAPE STANDARDS:
 ONE TREE PER 30 LINEAR FEET. TREES MAY BE EITHER DECIDUOUS OR EVERGREEN VARIETIES.
 SIX SHRUBS PER 30 LINEAR FEET. SHRUBS SHALL BE IN AT LEAST THREE-GALLON CONTAINERS PRIOR TO PLANTING.
 DROUGHT-TOLERANT, LOW-MAINTENANCE VEGETATIVE GROUND COVER IS ENCOURAGED.
 LIVING PLANT MATERIALS COVERING A MINIMUM OF 70 PERCENT OF THE REQUIRED LANDSCAPE AREA WITHIN FIVE YEARS OF PLANTING.
 THE REQUIRED PLANT MATERIALS MAY BE INSTALLED IN THE REQUIRED AREA IN ANY ARRANGEMENT AND DO NOT NEED TO BE LINEAR IN DESIGN.

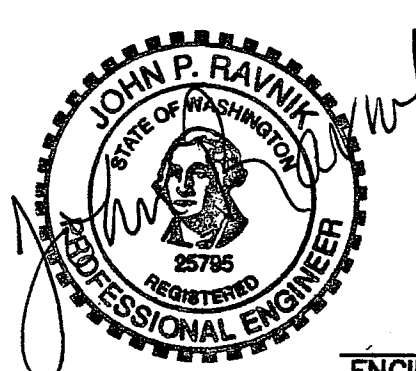
PROPOSED NATIVE TREES = 6
 PROPOSED NATIVE SHRUBS = 30



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DETAILS

PLAN STATUS: RECORD DRAWINGS			
SCALE: AS NOTED	SHEET TITLE: SITE DEVELOPMENT FOR PACIFIC TIRE	DRAWING NO. 14017det.ASB.dwg	
DRAWN BY: D. REMSEN	CHECKED BY: J. RAVNIK	JOB NO. 04017	
DATE: 01.12.16		SHEET NO. 8 OF 10	



APPROVED
 ENGINEER
 DATE: 1/15/16
 CITY OF FERNDALE

11/21/16 00542-000

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2014 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION (ASDOT/APWA) TOGETHER WITH THE REQUIREMENTS OF THE CITY OF FERNDALE PUBLIC WORKS, PLANNING, AND STREET DEPARTMENTS. REQUIREMENTS OF THE CITY OF FERNDALE FOR THE WATERLINE EXTENSIONS SERVING THIS PROJECT, REQUIREMENTS OF THE APPLICABLE UTILITY COMPANIES PROVIDING SERVICES TO THIS PROJECT, GEOTECHNICAL REQUIREMENTS FROM THE SOIL'S REPORT THAT WAS PREPARED FOR THE SUBJECT PROJECT.

IF THERE ARE ANY CONFLICTS IN REQUIREMENTS, THE MOST STRINGENT SHALL APPLY UNLESS OTHERWISE APPROVED BY THE ENGINEER.

DEVIATIONS FROM THE PLANS OR CITY STANDARDS MUST BE APPROVED BY THE PROJECT ENGINEER AND THE CITY OF FERNDALE.

2. DURING THE COURSE OF THIS PROJECT THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONDUCTING PRECONSTRUCTION MEETINGS WITH A REPRESENTATIVE FROM THE FOLLOWING AGENCIES FOR, AT A MINIMUM, THE FOLLOWING CIVIL PHASES OF WORK:

PRE-CONSTRUCTION COORDINATION WITH THE OWNER, CIVIL ENGINEER AND OWNER'S RETAINED SOILS ENGINEER TRUCK HAIL ROUTES AND CONSTRUCTION SCHEDULE - CITY OF FERNDALE EROSION & SEDIMENT CONTROLS-CITY OF FERNDALE SANITARY SEWER SYSTEM-CITY OF FERNDALE STORM DRAINAGE, ON-SITE GRADING, PIPING-CITY OF FERNDALE AND ENGINEER PRIVATE WATERLINE EXTENSION - PROJECT ENGINEER/CITY OF FERNDALE P, T, G COORDINATION-ALL UTILITY COMPANIES ON-SITE DRIVE/LANE/PARKING LOT OF FINISHED GRAVEL GRADE AND COMPACTION-SOILS ENGINEER AND PROJECT OWNER ON-SITE DRIVE/LANE/PARKING FINAL CRUSHED ROCK GRADING PRIOR TO ASPHALT-PROJECT ENGINEER AND SOILS ENGINEER TEMPORARY UTILITY SHUT-DOWNS- UTILITY COMPANY AND AFFECTED PROPERTIES FINAL GRADING & SITE CLEANUP - CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, PROJECT ENGINEER & OWNER

3. THE CONTRACTOR IS RESPONSIBLE FOR THOROUGHLY REVIEWING EACH COMPONENT OF WORK ON THE CIVIL PLANS AND ARCHITECTURAL PLANS AND COORDINATING WITH THE OWNER, ENGINEER, AND THE CITY OF FERNDALE FOR ANY QUESTIONS OR CLARIFICATIONS OF WORK BEFORE COMMENCING.

4. CONSTRUCTION STAKING FOR THIS PROJECT SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR, RETAINED BY THE CONTRACTOR. POST-CONSTRUCTION SURVEY NEEDS SHALL BE PROVIDED BY THE CONTRACTOR'S RETAINED SURVEYOR.

5. DURING THE COURSE OF THIS PROJECT, THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL ASBULTS OF UTILITIES INSTALLED; EXISTING UTILITIES ENCOUNTERED INCLUDING THEIR DEPTH, SIZE, AND MATERIAL; AND EXISTING CONDITIONS NOT CONSISTENT WITH THOSE IDENTIFIED ON THE PLANS. ALL ASBULT INFORMATION SHALL BE MAINTAINED IN A CLEAR, EASY TO UNDERSTAND, AND EASILY ACCESSIBLE ORDER. ASBULT INFORMATION FOR EVERY NEW UTILITY INSTALLATION SHALL BE CLEARLY WRITTEN ON A CLEAN SET OF CONSTRUCTION PLANS AND PROVIDED TO THE ENGINEER UPON THE PROJECT'S COMPLETION. THE CONTRACTOR'S RETAINED SURVEYOR WILL BE RESPONSIBLE FOR OBTAINING VERTICAL AND HORIZONTAL ASBULT INFORMATION AT ALL STORM DRAIN STRUCTURES, DETENTION POND, SANITARY SEWER SERVICES, AND UTILITY COMPONENTS VISIBLE FROM THE SURFACE. BEFORE PERFORMING THE POST-CONSTRUCTION SURVEY, THE SURVEYOR MUST CONTACT THE PROJECT ENGINEER TO CONFIRM INFORMATION NEEDED. THE ASBULT MYLARS, PREPARED BY THE ENGINEER, SHALL BE SUBMITTED AND APPROVED BY THE CITY PUBLIC WORKS DEPARTMENT, TOGETHER WITH A CD.

6. EXISTING UTILITIES HAVE BEEN IDENTIFIED USING THE AVAILABLE UTILITY RECORDS, PREVIOUS DESIGN DOCUMENTS, AND A TOPOGRAPHIC SURVEY OF THE SURFACE CONDITIONS WITHIN THE PROJECT AREA AND ADJUTING WHITEHORN STREET AND KESTER AVENUE. THE TOPOGRAPHIC SURVEY HAS BEEN PERFORMED BY CHRISTIE & CHRISTIE FROM BELLINGHAM, PHONE NUMBER (360) 671 - 8855.

7. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT "811" A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY WORK. THE CONTRACTOR IS ALSO RESPONSIBLE, IF NECESSARY, FOR RETAINING A PRIVATE UTILITY LOCATE SERVICE TO IDENTIFY ANY EXISTING UTILITIES BEYOND THE LIMITS OF THE PUBLIC RIGHTS-OF-WAY. DAMAGES TO THE EXISTING UTILITIES RESULTING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR OR THE UTILITY COMPANY, AS REQUIRED, AT THE CONTRACTOR'S EXPENSE.

WHERE DESIGNED UTILITIES ARE TO CROSS AN EXISTING UTILITY, THE CONTRACTOR SHALL HORIZONTALLY AND VERTICALLY ASBULT THE EXISTING UTILITY BEFORE COMMENCING UTILITY INSTALLATION TO CONFIRM NO CONFLICT WITH THE PROPOSED UTILITY INSTALLATION.

8. GENERAL CONDITIONS HAVE BEEN INDICATED ON THE PLANS FOR THE REMOVAL OF EXISTING MATERIALS AND STRUCTURES NECESSARY TO ACCOMMODATE THE PROPOSED IMPROVEMENTS. THE LIMITS OF THIS WORK ARE FOR USE BY THE CONTRACTOR IN PREPARING A COST FOR THIS PROJECT. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR THOROUGHLY INSPECTING THE ENTIRE PROJECT SITE AND ASCERTAINING THE ENTIRE LIMIT OF ALL WORK THAT WILL BE NECESSARY TO PROVIDE THE PROPOSED IMPROVEMENTS IN A COMPLETED, ACCEPTABLE CONDITION, TO THE SATISFACTION OF THE OWNER, ENGINEER, SOILS ENGINEER, PROJECT ARCHITECT, THE CITY OF FERNDALE DEPARTMENTS, AND UTILITY COMPANIES INVOLVED WITH THE CONSTRUCTION OF THESE SITE IMPROVEMENTS.

THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING ALL ELEMENTS THAT ARE TO REMAIN. DAMAGED CONDITIONS MUST BE PROMPTLY REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ASSOCIATED OWNER, AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL PROVIDE DAILY EFFORTS TO KEEP THE SITE IN A NEAT AND ORDERLY CONDITION TO THE SATISFACTION OF THE OWNER, ENGINEER, AND THE CITY OF FERNDALE. THE CONTRACTOR IS REQUIRED TO PROVIDE PROVISIONS NECESSARY TO PREVENT DEBRIS FROM BEING WASHED INTO ANY EXISTING DRAINAGE SYSTEMS ADJACENT TO THE PROJECT, AND ANY OTHER STORM SYSTEM THROUGHOUT AND NEAR THIS PROJECT SITE. IT IS IMPERATIVE THE CONTRACTOR TAKE EVERY MEASURE TO PREVENT SILT AND DEBRIS FROM BEING WASHED INTO ANY PORTION OF ANY EXISTING AND NEW DRAINAGE SYSTEM IMPROVEMENTS.

10. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS IN CONFORMANCE WITH REQUIREMENTS FROM THE WASHINGTON STATE DEPARTMENT OF ECOLOGY AND THE CITY OF FERNDALE. THE SITE CONTRACTOR SHALL HAVE A CERTIFIED EROSION CONTROL LEAD PERSON AVAILABLE AT ALL TIMES FOR INSPECTION OF EROSION CONTROL CONDITIONS, MONITORING OF THE STORMWATER RUNOFF CONDITIONS, AND IMPLEMENTING CHANGES, IMPROVEMENTS, AND MAINTENANCE OF ALL EROSION CONTROL FACILITIES.

11. TRAFFIC LANES MUST BE MAINTAINED ON ALL ADJACENT ROADWAYS. NO FULL ROAD CLOSURES WILL BE ALLOWED. PARTIAL ROAD CLOSURES SHALL BE SPECIFICALLY APPROVED BY THE CITY OF FERNDALE PUBLIC WORKS AND FIRE DEPARTMENTS. WITH EACH PARTIAL CLOSURE, AND DURING ALL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL PREPARE AND PROVIDE A TRAFFIC CONTROL PLAN TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT IDENTIFYING FLAGGERS AND TEMPORARY SIGN INSTALLATIONS FOR ON-GOING WORK ACTIVITIES. THE REQUIREMENTS OF TRAFFIC CONTROL SHALL BE APPROVED BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, PERTAINING TO FLAGGERS AND LIGHTS. ALL TRAFFIC CONTROL PLANS SHALL CONFORM TO REQUIREMENTS OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE MOST RECENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. REGARDLESS OF WHERE THE CONSTRUCTION ACTIVITY IS OCCURRING FOR THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TRAFFIC CONTROL SIGNS AND FLAGGERS FOR CONSTRUCTION VEHICLES ENTERING AND EXITING THE PROJECT SITE. FLAGGERS MUST BE USED DURING ALL PERIODS OF CONSTRUCTION WITHIN THE RIGHTS OF WAYS.

12. DURING ALL PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES TO MINIMIZE THE IMPACTS ON THE ADJOINING PROPERTIES. IT IS THE CONTRACTOR'S DAILY RESPONSIBILITY TO PROVIDE THIS MEASURE WHENEVER NECESSARY. THE PROJECT ENGINEER AND CITY OF FERNDALE PUBLIC WORKS DEPARTMENT RESERVE THE RIGHT TO REQUIRE ADDITIONAL DUST CONTROL MEASURES TO BE PROVIDED BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP OF ALL DEBRIS TRANSPORTED FROM THIS SITE.

13. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS CONCERNING THE DISPOSAL OF MATERIALS REMOVED FROM THIS PROJECT SITE. ALL ASPHALT, CONCRETE, STRUCTURES, NATIVE, AND NON-NATIVE DEBRIS REMOVED FROM THIS SITE SHALL BE DISPOSED IN A LEGALLY APPROVED DISPOSAL SITE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE DISPOSAL OF MATERIALS, REGARDLESS OF NATURE, FROM THIS PROJECT SITE.

14. IN ADDITION TO NOTIFYING THE CITY OF FERNDALE FOR ANY TEMPORARY OR PARTIAL ROAD CLOSURES, THE CONTRACTOR IS ALSO RESPONSIBLE FOR NOTIFYING ALL SURROUNDING RESIDENCES AND BUSINESSES WITHIN THE VICINITY OF THIS PROJECT TO INFORM THEM OF CONSTRUCTION ACTIVITIES AND WHEN ACCESS TO THIS AREA MAY BE LIMITED. ALL SURROUNDING BUSINESSES SHALL HAVE CONSTANT ACCESSIBILITY TO AND FROM THEIR SITE.

THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING THESE SITE IMPROVEMENTS IN SUCH A WAY AS TO NOT IMPACT THE OPERATION OF ANY ADJOINING BUSINESSES OR RESIDENCES AND IN SUCH A MANNER AS TO CONTINUALLY ALLOW THE ADJOINING BUSINESSES THE ABILITY TO DRIVE ON ALL ADJACENT ROADWAYS. AT NO TIME SHALL ANY ROADWAY BE TOTALLY CLOSED TO PUBLIC TRAFFIC.

15. THE CONTRACTOR SHALL USE EQUIPMENT THAT IS OPERATING EFFICIENTLY. ALL LAZER EQUIPMENT SHALL HAVE BEEN RECENTLY CALIBRATED AND FIELD CHECKED FOR ACCURACY. NO EQUIPMENT SHALL BE ALLOWED ON-SITE THAT LEAKS FLUIDS. AT ALL TIMES DURING THE COURSE OF THIS PROJECT, THE CONTRACTOR SHALL HAVE SPILL CLEAN UP EQUIPMENT AND MATERIALS READILY AVAILABLE. EQUIPMENT SHALL BE PARKED IN AN AREA THAT IN THE EVENT A SPILL SHALL OCCUR, THE SPILL WILL BE CONTAINED AND NO FLUIDS WILL HAVE THE POTENTIAL TO ENTER ANY DRAINAGE SYSTEM NOR GROUND WATER. ON A DAILY BASIS, THE CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND PROVIDE ALL NECESSARY MAINTENANCE OF SAID EQUIPMENT AS NEEDED TO MINIMIZE THE POTENTIAL FOR ANY SPILLS OR LEAKING OF FLUIDS.

CLEARING AND EXCAVATION

16. A GEOTECHNICAL INVESTIGATION WAS PREPARED FOR THE UNDERLYING SUBJECT PROPERTY. THE CONTRACTOR SHALL OBTAIN AND REVIEW A COPY OF THIS GEOTECHNICAL INVESTIGATION, AND SHALL IMPLEMENT ALL REQUIREMENTS AS SET FORTH WHERE APPLICABLE.

ALL MATERIALS USED IN THE CROSS-SECTION OF ACCESS/DRIVE/LANE AREAS SHALL CONFORM TO THE REQUIREMENTS OF THE GEOTECHNICAL INVESTIGATION AND THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, AND WSDOT STANDARDS.

THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY CONTACTING THE OWNER AND ENGINEER, IF SITE CONDITIONS INDICATE UNSTABLE OR NON-UNIFORM SOIL CONDITIONS.

17. ALL CLEARING AND GRUBBING AND ANY WORK THAT DISTURBS THE EXISTING GROUND SURFACE SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS REGARDING EROSION AND SEDIMENTATION CONTROLS.

18. IF NATURAL, UNDISTURBED, SUBGRADE CONDITIONS ARE IDENTIFIED DURING THE COURSE OF THIS WORK THAT REQUIRE ADDITIONAL EXCAVATION BEYOND THAT IDENTIFIED BY THE SOILS REPORT, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE OWNER'S RETAINED SOILS ENGINEER REGARDING THE ENCOUNTERED CONDITIONS. AS DIRECTED BY THE SOILS ENGINEER, THE CONTRACTOR SHALL PERFORM ADDITIONAL EXCAVATION TO REMOVE SOFT, YIELDING, OR ORGANIC MATERIALS WITHIN THE PRISMS OF THE PROPOSED ON-SITE AND OFFSITE IMPROVEMENTS. WHERE NECESSARY, EXCAVATION SHALL BE PERFORMED TO REMOVE VEGETATION, TOPSOIL, DEBRIS, REMNANT STRUCTURE ON THE EXCAVATED SUBGRADE OR ON PLACED MATERIAL SURFACE TO REMOVE SOFT, YIELDING, OR ORGANIC MATERIALS WITHIN THE PRISMS OF THE PROPOSED ON-SITE AND OFFSITE IMPROVEMENTS. STRIPPED ORGANIC MATERIALS SHALL NOT BE USED, NOR MIXED, WITH ANY OTHER MATERIALS TO BE USED AS STRUCTURAL FILL. ORGANIC NATIVE MATERIALS ARE UNACCEPTABLE AS STRUCTURAL FILL, AND SHALL NOT BE USED FOR ANY IMPROVEMENT EXCEPT FINAL SURFACE GRADING AS SPECIFIED AND FILL WITHIN LANDSCAPE AREAS. THE USE OF NON-ORGANIC NATIVE MATERIALS AS ANY FORM OF STRUCTURAL FILL SHALL BE PRE-APPROVED BY THE SOIL'S ENGINEER.

ALL SUBGRADE CONDITIONS SHALL BE PREPARED AND COMPACTED CONFORMING TO WSDOT SECTION 2-06.3(1) AND 2-06.3(2). THE SUBGRADE CONDITIONS SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY AT A MOISTURE CONTENT PLUS OR MINUS 2 PERCENT FROM OPTIMUM. THE CONTRACTOR MUST HAVE ALL SUBGRADE AT THE MINIMUM OF GRAVEL, INSPECTED AND TESTED BY THE OWNER'S RETAINED SOILS ENGINEER AND THE CITY OF FERNDALE. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO ACHIEVE THE REQUIRED SUBGRADE CONDITIONS, INCLUDING PROTECTING THE SUBGRADE FROM EXCESSIVE MOISTURE, AND CONDITIONING THE NATIVE SUBGRADE TO REMOVE MOISTURE.

19. THE CONTRACTOR IS RESPONSIBLE FOR CLEARING GRASSES AND OTHER VEGETATION IN ORDER TO PREPARE THE SITE FOR CONSTRUCTION. ON-SITE BURNING IS NOT ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR ALL LOADING, HAULING, AND PROPER OFFSITE DISPOSAL OF VEGETATED MATTER.

20. SUBGRADE CONDITIONS AND PLACED-MATERIAL CONDITIONS THAT ARE APPROVED, BUT LATER FAIL TO MEET SPECIFICATIONS DUE TO EXCESSIVE TRAFFIC, UNPROTECTED FROM WEATHER, OR UNDUKE IMPACTS, AS DETERMINED BY THE ENGINEER, SHALL BE REBUILT/RECONSTRUCTED BY THE CONTRACTOR AT THE CONTRACTOR'S COST.

21. DURING ALL COURSES OF THIS PROJECT, THE CONTRACTOR IS TO PROVIDE ALL POSSIBLE MEANS TO PREVENT STORMWATER FROM PONDING ON THE EXCAVATED SUBGRADE OR ON PLACED MATERIAL SURFACES, AND FROM CAUSING EXCESSIVE MOISTURE THEREIN. PROVISIONS TO PREVENT AND/OR REMOVE STORM RUNOFF SHALL INCLUDE, BUT ARE NOT LIMITED TO, PLASTIC COVERS, TEMPORARY DITCHING, PUMPS, AND SILLATION PONDS. ALL STORMWATER DISCHARGED FROM THIS SITE SHALL BE THOROUGHLY FILTERED THROUGH EROSION AND SEDIMENTATION CONTROLS PRIOR TO BEING DISCHARGED INTO ANY NEW OR EXISTING DRAINAGE CONVEYANCE SYSTEM. THE ON-SITE NATIVE SOILS ARE VERY MOISTURE-SENSITIVE; THEREFORE, ALL CONSTRUCTION PRACTICES AND SITE OPERATIONS SHALL BE PERFORMED TO PROTECT THE UNDERLYING SOILS.

THIS AREA OF FERNDALE CAN HAVE HIGH GROUND WATER CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING THE GROUND WATER CONDITIONS AND PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL WORK WITHIN THIS PROJECT, REGARDLESS OF THE GROUND WATER ELEVATION. DEWATERING MAY BE REQUIRED FOR SOME WORK WITHIN THIS PROJECT. THE EXTENT OF DEWATERING NECESSARY TO FULLY ACCOMPLISH ALL WORK IS THE CONTRACTOR'S RESPONSIBILITY. AS COORDINATED WITH THE OWNER, THE CONTRACTOR SHALL PERFORM THEIR OWN SITE EVALUATIONS TO ESTABLISH GROUND WATER CONDITIONS.

22. AT ANY LOCATIONS WHERE TREE STUMPS OR ORGANIC MATERIALS ARE REMOVED FROM WITHIN THE IMPERVIOUS, THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIALS FROM THE EXCAVATED AREA. THE OVEREXCAVATION WITH COMPACTED GRAVEL MATERIAL AS SPECIFIED. NATIVE ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL AT ANY LOCATION BELOW OR WITHIN THREE FEET OF THE PROPOSED IMPERVIOUS AND BUILDING IMPROVEMENTS, NOR WITHIN THE RIGHT-OF-WAY, EXCEPT IN LANDSCAPE AREAS AS FINAL SURFACE GRADING AS SPECIFIED.

23. DURING THE COURSE OF THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR STOCKPILE CLEAN, NATIVE TOPSOIL MATERIALS TO BE USED FOR FINAL GRADING AGAINST BACKS OF CURBS, BACK OF CURBS, AND AT DESIGNATED AREAS. ONLY ORGANIC RICH TOPSOIL COMPRISED OF UNDISTURBED NATURAL CONDITIONS SHALL BE USED AS LANDSCAPE FILL; STOCKPILED TOPSOIL, TO BE USED FOR FINAL GRADING WITHIN LANDSCAPE AREAS, SHALL BE CLEAN, FREE OF ORGANIC MATERIALS, CLUMPS, ROCKS, STICKS, AND DEBRIS GREATER THAN 2 INCH IN SIZE. THE CONTRACTOR IS RESPONSIBLE FOR STOCKPILING TOPSOIL AT LOCATIONS THAT WILL NOT INTERRUPT CONSTRUCTION ACTIVITIES, AND FOR PROTECTING THE STOCKPILE FROM CONTAMINATION AND SATURATION.

TOPSOIL MATERIAL SHALL BE GRADED AS SPECIFIED, AND STATIC ROLLED TO PROVIDE FOR A LIGHTLY DENSE SURFACE CONDITION. PRIOR TO PLACING TOPSOIL, SCARIFY SURFACES TO A DEPTH OF 3-INCHES MINIMUM. PLACE SIX-INCH COMPACTED THICKNESS OF TOPSOIL IN ALL AREAS TO BE SEEDD WITH GRASS. PLACE A 4-INCH COMPACTED THICKNESS OF TOPSOIL IN AREAS TO BE SOODED. ALL TOP SOIL TO BE PLACED DURING DRY WEATHER.

CONSTRUCTION OF THE PROPOSED ON-SITE AND OFFSITE IMPROVEMENTS WILL REQUIRE THE EXCAVATION OF ORGANIC AND NON-SUITABLE MATERIALS WITHIN THE PROPOSED STRUCTURAL FILL PRISMS. THE CONTRACTOR IS RESPONSIBLE FOR HAULING OFF AND PROPERLY DISPOSING ALL EXCESS, UNSUABLE, EXCAVATED MATERIALS. WHERE CLEAN, NATIVELY GROWN MATERIALS ARE USED, THE CONTRACTOR SHALL PROVIDE STOCKPILED MATERIALS THAT DO NOT CONTAIN MANMADE NOR MANUFACTURED MATERIALS, AND SHALL BE SHAPED TO PROMOTE SURFACE RUNOFF. TO THE EXTENT NECESSARY, EROSION CONTROL DEVICES SHALL BE INSTALLED AROUND THE STOCKPILED AREA TO PREVENT DEBRIS FROM ENTERING ANY NEW AND EXISTING DRAINAGE FACILITY.

AS NEEDED TO CREATE ALL GRADED LANDSCAPE CONDITIONS SPECIFIED, THE CONTRACTOR SHALL PROVIDE CLEAN ORGANIC TOPSOIL, INCLUDING ITS PLACEMENT, SHAPING AND COMPACTION AS APPROVED BY THE OWNER. LANDSCAPE IMPROVEMENTS SHALL MEET THE REQUIREMENTS OF THE CITY OF FERNDALE.

ALL UNPAVED AREAS OF THE SITE ARE TO BE STABILIZED WITH TOPSOILS AND LANDSCAPED AS SPECIFIED.

24. CONSTRUCTION OF THE PROPOSED ON-SITE AND OFFSITE IMPROVEMENTS MAY REQUIRE THE EXCAVATION OF GRAVEL BACKFILL. UPON ENCOUNTERING GRAVEL BACKFILL, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER'S RETAINED SOILS ENGINEER TO DETERMINE WHETHER THE GRAVEL BACKFILL IS SUITABLE FOR USE AS STRUCTURAL BACKFILL WITHIN THE PROJECT LIMITS. UPON RECEIVING CONFIRMATION FROM THE SOILS ENGINEER, THE CONTRACTOR SHALL UTILIZE THE GRAVEL BACKFILL AS STRUCTURAL FILL. IF THE GRAVEL BACKFILL IS DETERMINED TO BE UNSUITABLE FOR USE AS STRUCTURAL FILL OR AS BACKFILL IN NON-STRUCTURAL AREAS, THE CONTRACTOR SHALL REMOVE THE MATERIAL FROM THE SITE AS UNSUITABLE MATERIAL.

EXISTING UTILITIES

25. THROUGHOUT THE COURSE OF THIS PROJECT, VARIOUS UTILITY COMPANIES WILL BE INVOLVED IN SITE IMPROVEMENTS TO MAKE CONNECTIONS FROM THE PROPOSED WORK HEREIN TO THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH EACH UTILITY COMPANY PRIOR TO COMMENCING ANY ACTIVITIES, AND CONDUCTING A COORDINATION MEETING ON-SITE WITH A REPRESENTATIVE FROM EVERY UTILITY COMPANY. THE CONTRACTOR SHALL PERFORM EXCAVATION, BACKFILL, AND WORK AS REQUIRED BY THE UTILITY COMPANIES FOR THE COMPLETE AND FUNCTIONAL INSTALLATION OF EACH SERVICE.

26. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES. ANY DAMAGED UTILITY CONDITIONS MUST BE PROMPTLY REPAIRED, IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS, AT THE CONTRACTOR'S EXPENSE.

WHERE NEW UTILITIES ARE PROPOSED TO CROSS EXISTING UTILITIES, THE EXISTING UTILITY SHALL BE HORIZONTALLY AND VERTICALLY ASBULT BY THE CONTRACTOR TO DETERMINE IF THERE ARE ANY CONFLICTS WITH INSTALLATION OF THE NEW UTILITY. CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE OWNER AND ENGINEER SO A TIMELY SOLUTION CAN BE MADE BEFORE CONSTRUCTION OF THE ASSOCIATED UTILITY BEGINS.

27. PRIOR TO PERFORMING ANY WORK THAT WILL INTERRUPT ANY EXISTING SERVICES; THE CONTRACTOR MUST COORDINATE WITH THE ASSOCIATED UTILITY COMPANY AND THE ASSOCIATED PROPERTY OWNERS REGARDING THE TEMPORARY UTILITY SHUTDOWNS. UTILITY SHUTDOWNS MUST BE PERFORMED AND COORDINATED SO IMPACT TO THOSE EXISTING PARTIES SERVED IS MINIMIZED.

28. FOR POWER, TELEPHONE, AND GAS; THE CONTRACTOR MUST INDEPENDENTLY COORDINATE WITH EACH UTILITY COMPANY REGARDING TRENCH CONDITIONS AND REQUIREMENTS, BEDDING AND COVER MATERIALS, CONDUIT AND ROAD CASINGS. THE CONTRACTOR SHALL EXCAVATE, GRADE, AND PROVIDE BACKFILL FOR ALL VAULTS AND STRUCTURES.

EROSION AND SEDIMENTATION CONTROLS

29. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL EROSION AND SEDIMENTATION CONTROL NOTES AS PROVIDED BY THE CITY OF FERNDALE AND AS CONTAINED ON THE CIVIL PLANS HEREIN. THE CONTRACTOR MUST ASSIGN A QUALIFIED INDIVIDUAL TO INSTALL, INSPECT, AND MAINTAIN ALL EROSION CONTROL ELEMENTS OF THIS PROJECT. THE CONTRACTOR MUST INSPECT ALL EROSION CONTROL DEVICES DURING AND AFTER EACH RAINFALL OCCURRENCE, AND SHALL PROVIDE MAINTENANCE OF ALL EROSION CONTROLS TO MAINTAIN THEIR FUNCTION.

30. PRIOR TO COMMENCING SITE CONSTRUCTION ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING SILT FENCE, SILT SACKS, AND CONSTRUCTING THE TEMPORARY QUARRY SPALL CONSTRUCTION ENTRANCE ROAD AS IDENTIFIED ON THE CIVIL PLANS, AND AS NECESSARY TO PREVENT SILT LOADED STORM RUNOFF FROM ENTERING ANY EXISTING DRAINAGE FACILITY. THE CONTRACTOR MUST PERFORM ALL SITE CONSTRUCTION ACTIVITIES IN SUCH A MANNER TO PROVIDE ALL RUNOFF WATERS AN OPPORTUNITY FOR SEDIMENT AND DEBRIS TO SETTLE OUT OF RUNOFF WATERS, PRIOR TO THEM FLOWING INTO ANY EXISTING DITCH OR ANY OTHER EXISTING DRAINAGE FACILITY.

31. FILTER FABRIC FENCE IS TO BE INSTALLED TO AID IN THE REMOVAL OF DEBRIS FROM STORMWATER EXITING THE SUBJECT PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, CLEANING, REPLACEMENT IF NECESSARY, AND MAINTENANCE OF FILTER FABRIC SILT FENCE AS NECESSARY TO ADEQUATELY CONTROL ALL SURFACE RUNOFF FROM THIS PROPERTY AND ITS ASSOCIATED DEVELOPMENT.

THE CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE PROJECT SITE AND DETERMINING LOCATIONS WHERE STORMWATER MAY EXIT THE SUBJECT PROPERTY AND FLOW ONTO ADJACENT AREAS. AT ALL OF THESE LOCATIONS, THE CONTRACTOR MUST INSTALL FILTER FABRIC FENCE TO AID IN THE REMOVAL OF DEBRIS FROM STORMWATER EXITING THE SUBJECT PROPERTY. CONSTRUCTION ACTIVITIES SHALL NOT BE ALLOWED TO CAUSE ANY CONCENTRATED RUNOFF WATERS ONTO ADJOINING PROPERTIES OR RIGHT OF WAY AREAS.

AFTER SITE WORK IS COMPLETED AND SITE SOIL CONDITIONS ARE STABILIZED, THE CONTRACTOR SHALL CLEAN UP AND REMOVE THE EROSION CONTROL ITEMS AND ALL ACCUMULATED DEBRIS. UNTIL THE SITE IS APPROPRIATELY STABILIZED, AS DETERMINED BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION AND SEDIMENTATION CONTROL FACILITIES.

32. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PREVENTING DIRTY STORMWATER FROM EXITING ANY PORTION OF THE SUBJECT PROPERTY. DURING ALL PERIODS OF CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MAINTAINING, REPLACING, AND CLEANUP OF ANY AND ALL EROSION AND SEDIMENT CONTROL DEVICES.

33. WITHIN NEW CATCH BASINS AS THEY ARE INSTALLED AND ALL EXISTING CATCH BASINS RECEIVING AND POTENTIALLY RECEIVING STORM RUNOFF FROM THE PROJECT AREA, THE CONTRACTOR SHALL INSTALL FILTER FABRIC SACKS UNDER THE RESPECTIVE GRATES. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING, MAINTENANCE, AND REPLACEMENT OF FILTER FABRIC SACKS AS NECESSARY TO CONTINUALLY ALLOW STORMWATER TO BE FILTERED PRIOR TO ENTERING THE DRAINAGE SYSTEM.

34. UPON COMPLETION OF THE PROJECT IMPROVEMENTS, THE CONTRACTOR IS RESPONSIBLE FOR THOROUGHLY CLEANING OUT ALL NEW AND EXISTING STORM PIPES AND ASSOCIATED STORM STRUCTURES INCLUDING CATCH BASINS.

35. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CONDITIONS UPON ON-SITE AND OFF-SITE PROPERTIES IN SUCH A MANNER THAT A SIGNIFICANT RAINFALL EVENT WILL NOT CAUSE SILT-LOADED STORM RUNOFF WATERS TO ENTER ANY PORTION OF AN EXISTING OR NEW DRAINAGE SYSTEM, WITHOUT BEING APPROPRIATELY FILTERED AND CLEANED. THE PROJECT SITE SHALL BE MANAGED AND MAINTAINED SO THAT NO DAMAGES OCCUR FROM NORMAL RAINFALL EVENTS EXPERIENCED IN THE CITY OF FERNDALE.

36. AS REQUIRED BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, THE CONTRACTOR SHALL CONSTRUCT A QUARRY SPALL CONSTRUCTION ENTRANCE ROAD INTO THE PROJECT IMPROVEMENT AREA. CONSTRUCTION OF THE TEMPORARY, QUARRY SPALL ROADS SHALL CONFORM TO THE DETAIL ON THE CIVIL PLANS AND REQUIREMENTS OF THE CITY OF FERNDALE. THE CONTRACTOR IS RESPONSIBLE FOR CONTINUALLY INSPECTING, MAINTAINING, CLEANING, AND REPLACEMENT OF SPALLS, IF NECESSARY, TO PREVENT DEBRIS FROM BEING TRACKED OUT ONTO THE PUBLIC RIGHT-OF-WAY.

37. THROUGHOUT THE COURSE OF THE PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE ADJOINING ROADWAYS CLEAN. IF DEBRIS IS TRANSPORTED FROM THE PROJECT SITE ONTO THE ADJOINING ROADWAYS, THE ROADWAYS MUST BE THOROUGHLY SWEEP TO REMOVE AS MUCH DEBRIS AS POSSIBLE, AND THEN WASHED OR VACUUMED. WHEREVER ROAD-WASHING ACTIVITIES OCCUR, SEDIMENT-CONTROL DEVICES SHALL BE PLACED TO CAPTURE AND DEBRIS FROM BEING WASHED INTO THE DRAINAGE SYSTEM AND UPON ADJOINING PROPERTIES. THE CONTRACTOR SHALL PROTECT ALL PROPERTIES FROM BEING DAMAGED AND IMPACTED BY WASH WATER.

GRAVEL AND PROCESSED MATERIALS

38. STRUCTURAL FILL, AS NEEDED TO COMPLETE GRADING CONDITIONS AND AS NECESSARY WITHIN THE PROPOSED IMPERVIOUS AREAS, SHALL CONFORM TO THE GRAVEL BORROW SPECIFICATION IN WSDOT SECTION 9-03.14(1). GRAVEL BORROW MATERIAL SHALL NOT CONTAIN MORE THAN FIVE PERCENT MAXIMUM ANY MATERIAL PASSING THE NO. 200 SIEVE. IF IN THE OPINION OF THE ENGINEER, OWNER, OR CITY OF FERNDALE, THE IMPORTED STRUCTURAL FILL MATERIAL APPEARS TO CONTAIN MORE THAN FIVE PERCENT OF MATERIAL PASSING THE NO. 200 SIEVE, OR DOES NOT APPEAR TO CONFORM TO THE REQUIRED GRADATION, THE CONTRACTOR SHALL PROVIDE A NEW GRADATION ANALYSIS AT NO ADDITIONAL CHARGE TO THE OWNER.

PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST PROVIDE A NEW GRADATION ANALYSIS OF THE GRAVEL MATERIAL TO BE IMPORTED. THIS ANALYSIS IS TO BE PROVIDED TO THE SOILS ENGINEER FOR REVIEW AND APPROVAL.

THE OWNER WILL BE RETAINING A SOILS ENGINEER TO PERFORM COMPACTION TESTING OF STRUCTURAL FILL MATERIALS IDENTIFIED HEREIN. THE CONTRACTOR SHALL PAY ALL EXPENSES TO HAVE THEIR MATERIALS TESTING COMPANY OBTAIN A NEW SAMPLE OF GRAVEL AND PROVIDE A NEW GRADATION ANALYSIS AND PROCTOR ANALYSIS FOR REVIEW AND APPROVAL BY THE SOILS ENGINEER.

MATERIALS THAT ARE DETERMINED TO BE UNACCEPTABLE SHALL BE PROMPTLY REMOVED FROM THE PROJECT SITE AND REPLACED WITH APPROPRIATE MATERIALS AT NO ADDITIONAL CHARGE TO THE CONTRACTOR.

EACH LIFT OF STRUCTURAL FILL MATERIAL, REGARDLESS OF LOCATION, SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT OF THE MAXIMUM DRY DENSITY, AT A MOISTURE CONTENT PLUS OR MINUS TWO PERCENT FROM OPTIMUM, AS DETERMINED BY THE ASTM TEST METHOD D-1557. MATERIALS THAT ARE DETERMINED TO BE UNACCEPTABLE SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH APPROPRIATE MATERIALS AT NO ADDITIONAL CHARGE TO THE CONTRACTOR. GRAVEL MATERIALS SHALL BE TESTED FOR COMPACTION AS REQUIRED.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ALL IMPORTED GRAVEL THAT CONFORMS TO THE REQUIRED GRADATION AND CAN BE COMPACTED AS SPECIFIED

39. CRUSHED SURFACING TOP COURSE AND CRUSHED SURFACING BASE COURSE, BEING 100 PERCENT FULL-FRACTURE FACE FROM A ROCK QUARRY AND CONFORMING TO WSDOT SECTION 9-03.9(3), SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING FOUR INCHES IN DEPTH AND COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM TEST METHOD D-1557. MOISTURE CONTENT OF ALL MATERIALS SHALL BE PLUS OR MINUS TWO PERCENT FROM OPTIMUM. THE OWNER RESERVES THE RIGHT TO EXCHANGE CRUSHED SURFACING BASE COURSE WITH CRUSHED SURFACING TOP COURSE AT NO CHARGE IN CONTRACT PRICE.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ALL IMPORTED CRUSHED ROCK MATERIALS THAT CONFORM TO THE REQUIRED GRADATION AND CAN BE COMPACTED AS SPECIFIED. THE COMPLETED PORTION FOR PLACED CRUSHED ROCK SHALL BE A DENSE, NON-YIELDING, TIGHT, CONDITION FROM THE BOTTOM TO THE TOP OF THE CRUSHED ROCK SECTION.

40. QUARRY SPALLS ARE TO BE USED WHERE NECESSARY AS UTILITY TRENCH FOUNDATION, STRUCTURE FOUNDATION, TEMPORARY CONSTRUCTION ACCESS ROADS, AND ARMORING ALL EXPOSED ENDS OF CULVERTS AND STORM PIPES. QUARRY SPALLS SHALL CONFORM TO WSDOT SECTION 9-13.3.2. AT LOCATIONS WHERE QUARRY SPALLS ARE PLACED AT PIPE ENDS, THE QUARRY SPALLS SHALL BE MECHANICALLY COMPACTED TO PROVIDE A MINIMUM OF 5 FOOT WIDE x 5-FOOT LONG x 8-INCH THICK, FIRM, ENERGY-DISSIPATING PAD AT A LEVEL THAT WILL NOT IMPEDE NOR OBSTRUCT DRAINAGE FLOW, UNLESS LARGER ARMORED AREAS ARE SPECIFIED.

41. AT LOCATIONS WITHIN THE PROJECT SITE WHERE OVER EXCAVATION IS NECESSARY TO REMOVE SOFT, YIELDING, SUBGRADE MATERIALS, AND AS DIRECTED BY THE SOILS ENGINEER, THE CONTRACTOR SHALL UTILIZE TWO LAYERS OF GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL BE PLACED ALONG THE BOTTOM OF THE OVEREXCAVATED AREA, AND SHALL EXTEND BEYOND THE OVER EXCAVATED AREA A MINIMUM DISTANCE OF FIVE FEET ONTO AREAS WHERE THE SUBGRADE CONDITIONS ARE FIRM AND NON-YIELDING. THE OVER EXCAVATED AREA SHALL BE FILLED WITH MECHANICALLY COMPACTED GRAVEL BORROW MATERIAL TO THE DESIGNED SUBGRADE ELEVATION WHERE THE SECOND SHEET OF GEOTEXTILE FABRIC SHALL BE PLACED.

ASPHALT PAVING

42. HOT MIX ASPHALT (HMA) AS SPECIFIED IN THE GEOTECHNICAL INVESTIGATION, SHALL CONFORM TO WSDOT SECTION 5-04. ALL ON-SITE ASPHALT PLACEMENT SHALL CONFORM TO REQUIREMENTS OF THE CIVIL PLANS, THE GEOTECHNICAL INVESTIGATION, AND THE REQUIREMENTS OF THE OWNER'S RETAINED SOILS ENGINEER. THE ENGINEER AND OWNER SHALL APPROVE ALL ON-SITE ASPHALT IMPROVEMENTS. THE CITY OF FERNDALE SHALL APPROVE ALL ASPHALT IMPROVEMENTS WITHIN THE EXISTING ROADWAYS.

ALL ASPHALT SHALL BE COMPACTED TO A MINIMUM OF NINETY-TWO PERCENT OF THE RICE DENSITY AND TESTED FOR COMPACTION BY THE OWNER'S RETAINED MATERIALS TESTING FIRM AND THE CONTRACTOR'S SUBCONTRACTOR PERFORMING THE PARTICULAR WORK. THERE IS NO ADDITIONAL PAYMENT FOR ASPHALT COMPACTION GREATER THAN 92%.

THE CONTRACTOR IS RESPONSIBLE FOR BECOMING FAMILIAR WITH THE CIVIL PLANS AND THE GEOTECHNICAL INVESTIGATION THAT WAS DONE FOR THE PROJECT. THE CONTRACTOR MUST PERFORM AN ON-SITE CONSTRUCTION MEETING WITH THE OWNER'S RETAINED SOILS ENGINEER, CITY OF FERNDALE, AND THE ASPHALT PAVING CONTRACTOR, PRIOR TO ASPHALT PAVING, TO DETERMINE ANY ADDITIONAL SPECIFIC REQUIREMENTS OR CONCERNS EXPRESSED BY THE SOILS ENGINEER RELATIVE TO THE ON-SITE ASPHALT IMPROVEMENTS AND FROM THE CITY OF FERNDALE FOR ADJACENT EXISTING ASPHALT ROADWAY IMPROVEMENTS.

43. POROUS AGGREGATE CONDITIONS WITHIN THE ASPHALT PAVING, THAT ARE NOT CONSISTENT WITH THE AVERAGE ASPHALT PAVING SURFACE OR ARE UNACCEPTABLE TO THE SOILS ENGINEER, OWNER, OR THE CITY OF FERNDALE, SHALL BE REPAIRED OR RECONSTRUCTED AT NO ADDITIONAL COST TO THE CONTRACTOR. IF PORTIONS OF THE ASPHALT SURFACE ARE TOO OPEN AND POROUS, THE ENTIRE ASPHALT SURFACE SHALL BE FOG-SEALED AS DIRECTED BY THE SOILS ENGINEER OR OWNER, AT NO ADDITIONAL CONTRACT AMOUNT.

ALL ABUTTING EDGES OF EXISTING ASPHALT SHALL BE NEATLY SAWCUT FULL DEPTH TO PROVIDE A NEAT, STABLE EDGE FOR THE NEW ASPHALT IMPROVEMENTS. SAWN ASPHALT FACES THAT ARE BROKEN AS A RESULT OF THIS CONSTRUCTION, OR RAVEL, SHALL BE SAWCUT AND REMOVED IMMEDIATELY PRIOR TO ASPHALT PAVING. ALL SAWCUT FACES AND THE FACE OF ADJUTING STRUCTURES SHALL BE THOROUGHLY COATED WITH ASPHALT TACK COAT MATERIAL PRIOR TO ASPHALT PAVING.

UPON COMPLETION OF ALL ASPHALT WORK, THE CONTRACTOR SHALL IMMEDIATELY, AND THOROUGHLY, CLEAN THIS SITE OF ALL LOOSE AND TRACKED ASPHALT DEBRIS. FAILURE OF THE CONTRACTOR TO PERFORM AND COMPLETE THIS WORK WITHIN TWO CALENDAR DAYS AFTER EACH PHASE OF PAVING, GIVES THE OWNER THE RIGHT TO HAVE THIS WORK DONE BY OTHERS, AT THE CONTRACTOR'S EXPENSE.

UPON COMPLETION OF ALL ASPHALT PAVING, ALL SURFACE JOINTS BETWEEN EXISTING AND NEW ASPHALT SHALL BE THOROUGHLY SEALED WITH HEAT-APPLIED AR4000 AND SAND COAT, UNLESS OTHERWISE SPECIFIED BY THE CITY OR ENGINEER.

44. WITHIN TWENTY-FOUR HOURS PRIOR TO ASPHALT PAVING, SOIL RESIDUAL HERBICIDE SHALL BE APPLIED TO ALL SURFACES TO BE PAVED. SOIL RESIDUAL HERBICIDE SHALL CONFORM TO WSDOT SECTION 5-04.3(5)(D).

45. WITHIN THE PROPOSED ASPHALT IMPROVEMENTS, THE TOPS OF ALL STRUCTURES SUCH AS MANHOLES, CATCH BASINS, VAULTS, AND WATER VALVES, SHALL BE SET AND GROUTED FLUSH WITH THE FINISHED ASPHALT GRADE. ALL STRUCTURE TOPS SHALL BE PROPERLY ALIGNED WITH THE UNDERLYING STRUCTURE.

CONCRETE STRUCTURES

46. STANDARD CAST IN PLACE CEMENT CONCRETE TRAFFIC CURB AND GUTTER SHALL CONFORM TO WSDOT SECTION 8-04 AND WSDOT STANDARD PLAN F-10.12-00. CONCRETE FOR TRAFFIC CURB AND GUTTER SHALL BE CLASS 3000 AND SHALL BE FOUNDED ON A MINIMUM 12-INCH DEPTH OF COMPACTED GRAVEL, AS SPECIFIED, OVER A NON-YIELDING, FIRM, SUBGRADE.

AS SPECIFIED, DEPRESSED CURB/GUTTER SECTION SHALL BE REINFORCED.

CURB/GUTTER SHALL HAVE EXPANSION JOINTS AT 15 FEET ON CENTER.

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING AND PROTECTING ALL CURB AND GUTTERS.

47. ALL CONCRETE SURFACES FOR CURBS, GUTTERS, SIDEWALKS, AND SLABS SHALL BE VERY NEATLY BROOMED AND FREE OF EXCESS CONCRETE DEBRIS. NON-UNIFORM SURFACES AND NON-BROOMED SURFACES WILL NOT BE ACCEPTED. UNACCEPTABLE CONCRETE IMPROVEMENTS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR AND REPLACED TO THE SATISFACTION OF THE OWNER AND ENGINEER, AT NO ADDITIONAL CONTRACT COST.

48. THE CONTRACTOR SHALL PROVIDE AND INSTALL PRECAST CONCRETE WHEEL STOPS AT THE LOCATIONS IDENTIFIED ON THE CIVIL PLANS. THE PRECAST CONCRETE WHEEL STOPS SHALL BE SIX FEET LONG AND BE OF THE STYLE IDENTIFIED ON THE CIVIL PLANS. THERE SHALL BE THREE POINTS OF BEARING ON THE UNDERLYING ASPHALT SURFACE. THIS WILL ALLOW FOR ANY STORMWATER RUNOFF TO FLOW UNDER THE REMAINING PORTION OF THE CONCRETE WHEELSTOPS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE POSITIONING AND LAYOUT OF ALL CONCRETE WHEELSTOPS. TYPICALLY, THE CENTERLINE OF WHEELSTOPS ARE TO BE PLACED TWO FEET PRIOR FROM THE HEAD END OF THE PARKING STALL. ALL WHEELSTOPS ARE TO BE SECURED TO THE UNDERLYING ASPHALT SURFACE USING A 24-INCH LONG, HALF-INCH DIAMETER STEEL REBAR. THE STEEL REBAR IS TO BE POUNDED THROUGH THE CONCRETE WHEELSTOP, INTO THE UNDERLYING SURFACE, UNTIL THE TOP OF REBAR IS FLUSH WITH THE TOP OF THE WHEELSTOP. ALL WHEELSTOPS SHALL BE OF THE SAME STYLE, COLOR, AND BE FREE FROM DEFECTS AND CHIPS.

49. EXTERIOR CONCRETE SLABS SUBJECTED TO HEAVY LOADS SHALL BE A MINIMUM OF EIGHT-INCH THICK AND REINFORCED WITH MACRO-SYNTHETIC FIBER AS SPECIFIED. THE PERIMETER EDGE OF CONCRETE SLAB WHERE SUBJECTED TO HEAVY LOADS SHALL BE THICKENED WITH REINFORCING TO PREVENT THE EDGE OF SLAB FROM CRACKING.

CONCRETE SLABS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS. THE SITE UTILITY CONTRACTOR SHALL PERFORM ALL WORK ASSOCIATED WITH THE SLABS. THE ENTIRE SLABS SHALL BE THE THICKNESS DEPICTED ON THE CIVIL PLANS, BE COMPRISED OF CLASS 4000 CONCRETE, REINFORCED AS SPECIFIED. AIR-ENTRAINMENT OF SIX PERCENT, PLUS OR MINUS ONE PERCENT, SHALL BE ACHIEVED.

SLABS SHALL BE REINFORCED WITH GRADE 60 REBAR PLACED AND TIED ON CENTER EACH WAYS SPECIFIED. THE REBAR SHALL BE SUPPORTED TO MAINTAIN A CONS

PLACEMENT OF THE CONCRETE SLAB, TOGETHER WITH ITS CURING TIME, SHALL BE PERFORMED AT A TIME WHEN THE AMBIENT WEATHER TEMPERATURE REMAINS ABOVE 40 DEGREES FAHRENHEIT AND BELOW 75 DEGREES FAHRENHEIT. THE COMPLETED CONCRETE SHALL BE COVERED FOR PROTECTION AND KEPT MOIST.

TO THE MAXIMUM EXTENT POSSIBLE, THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT TO ASSURE A CONSISTENT SLOPE, A CONSISTENT SURFACE-FINISH, AND NO CRACKING WITHIN THE CONCRETE SLABS. CRACKED SLAB SECTIONS WILL NOT BE ACCEPTED, AND MUST BE REMOVED AND REPLACED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.

THE CONCRETE SLABS SHALL BE SPRAYED WITH THE HIGHEST-QUALITY CURING COMPOUND.

DAMAGED AND UNACCEPTABLE SLAB AREAS SHALL BE REMOVED AND REPLACED TO THE LIMITS OF THE RESPECTIVE JOINTING.

ALL SLABS WILL BE CHECKED FOR THEIR ABILITY TO SHED WATER. CONCRETE SURFACES THAT HOLD PONDED WATER WILL NOT BE ACCEPTED AND SHALL BE REPLACED AT NO ADDITIONAL CONTRACT CHARGE.

50. WHERE ABUTTING THE BUILDING, FULL-DEPTH EXPANSION JOINTS ONE-HALF-INCH-WIDE SHALL BE PROVIDED USING A COMPOUND THAT ADHERES TO CONCRETE, REMAINS FLEXIBLE AFTER CURING, AND IS NOT DEGRADED BY SUN LIGHT AND FUEL PRODUCTS.

51. AT A MINIMUM, FULL DEPTH EXPANSION JOINT MATERIAL SHALL BE PLACED IN-BETWEEN THE SLAB AND BUILDING FOUNDATION.

52. CONCRETE SLABS SHALL BE SUPPORTED ON A MINIMUM 12 INCH DEPTH OF MECHANICALLY COMPACTED GRAVEL STRUCTURAL FILL OVER A NATIVE SUBGRADE FREE OF ALL ORGANICS THAT HAS BEEN INSPECTED AND APPROVED BY THE SOILS ENGINEER.

53. ALL FORMS AND MATERIALS USED IN PLACEMENT OF THE CONCRETE SLAB SHALL BE EQUAL TO NEW, FREE OF ALL DEBRIS, AND STRAIGHT IN ALL DIRECTIONS. PLACEMENT OF THE CONCRETE SLAB SHALL BE PROVIDED IN NEAT, CLEAN, STRAIGHT LINES.

STORM DRAINAGE

54. THE FOLLOWING PIPE MATERIALS ARE APPROVED FOR USE AS STORM DRAINAGE PRODUCTS FOR THE PROPOSED IMPROVEMENTS. WHICHEVER CHOSEN, THE SAME TYPE SHALL BE USED THROUGHOUT EACH INDIVIDUAL STORM SEWER SYSTEM BETWEEN STRUCTURES. IF A SPECIFIC MATERIAL IS IDENTIFIED ON THE CIVIL PLANS, OR HEREIN, THE CONTRACTOR SHALL PROVIDE THE INSTALLATION AS NOTED. PVC PIPE AS SPECIFIED BELOW SHALL BE USED FOR ALL STORM PIPES 8" IN DIAMETER AND SMALLER UNLESS A DIFFERENT PIPE-MATERIAL IS SPECIFIED.

A. REINFORCED CONCRETE PIPE SHALL CONFORM TO SECTION 9-05.3 AND SECTION 9-05.7.

B. PVC STORM PIPES SHALL CONFORM TO WSDOT SECTION 9-05.12 (1) MEETING THE REQUIREMENTS OF ASTM D 3034, SDR 35. ALL PVC PIPES SHALL HAVE GASKETED JOINTS CONNECTED WITH INJECTION MOLDED FITTINGS ALSO WITH GASKETS. ALL PVC PIPE SHALL BE SOLID WALL, NOT PROFILE WALL.

C. CORRUGATED POLYETHYLENE PIPE (CPP) SHALL HAVE A SMOOTH BARREL INTERIOR, CORRUGATED EXTERIOR CONFORMING TO WSDOT SECTION 9-05.20 AND MEETING THE REQUIREMENTS OF ASTM D 294. POLYETHYLENE PIPE THAT IS CORRUGATED INSIDE AND OUTSIDE IS NOT ACCEPTABLE WITHIN ANY PORTION OF THIS PROJECT. ALL JOINTS SHALL BE PREMIUM, WATER TIGHT COUPLERS WITH GASKETS. NON-GASKETED BANDS THAT ARE SECURED WITH POLYETHYLENE TIE-STRIPS ARE UNACCEPTABLE.

D. DUCTILE IRON PIPE SHALL BE CLASS 50, CONFORMING TO WSDOT SECTION 9-05.13. DUCTILE IRON PIPE SHALL BE USED AT ALL LOCATIONS SPECIFIED AND WHERE THE DEPTH OF COVER IS 15-INCHES OR LESS.

E. AT LOCATIONS SPECIFIED IN THE PLANS AND BY THE ENGINEER, CONTECH STORM WATER QUALITY PRODUCTS SHALL BE INSTALLED. INSTALLATION SHALL MEET THE REQUIREMENTS OF THE MANUFACTURER, THE SPECIFICATIONS, THE PLANS, AND THE ENGINEER.

55. AT ALL LOCATIONS WHERE STORM PIPES CONNECT TO CONCRETE STRUCTURES, THE CONTRACTOR SHALL NEATLY GROUT THE INSIDE AND OUTSIDE OF THE STRUCTURE TO TOTALLY ENCOMPASS THE STORM PIPE CONNECTION. GROUTING MATERIAL SHALL BE NONSHRINK, CONCRETE-TYPE MATERIAL. THE CONSTRUCTION OF STORM PIPE CONNECTIONS TO CATCH BASIN STRUCTURES SHALL BE PERFORMED IN SUCH A WAY THAT NO GROUND WATER WILL LEAK INTO THE STRUCTURE, NOR WILL WATER LEAK FROM THE STRUCTURE. THE CONTRACTOR HAS THE OPTION OF USING RUBBER BOOTS OR OTHER DEVICES TO ASSURE NO LEAKAGE OCCURS.

AT ALL LOCATIONS WHERE PVC PIPE IS USED AT CONNECTIONS TO CONCRETE STRUCTURES, THE CONTRACTOR SHALL INSTALL A PVC/SAND COLLAR ADAPTER OR RUBBER BOOT ADAPTOR ON THE END OF THE PVC PIPE IN ORDER TO PROVIDE A CLEAN, GROUTED, WATERIGHT CONNECTION BETWEEN THE STORM PIPE AND THE CONCRETE STRUCTURE.

56. UPON COMPLETION OF ALL SITE IMPROVEMENTS, THE CONTRACTOR SHALL THOROUGHLY FLUSH OUT ALL EXISTING AND NEW STORM PIPES TO REMOVE ALL DEBRIS. DEBRIS REMOVED FROM THE STORM SYSTEM IS NOT TO BE WASHED INTO THE DOWNSTREAM DRAINAGE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF ALL MATERIALS REMOVED FROM THE STORM SYSTEM CLEANING.

57. STORM CATCH BASIN STRUCTURES AND THEIR APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE FOLLOWING WSDOT STANDARD PLANS:

TYPE I CATCH BASIN-STANDARD PLAN B-5-20-00
TYPE II CATCH BASIN-STANDARD PLAN B-5-20-00
SOLID METAL COVER FOR CATCH BASINS-STANDARD PLAN B-30-10-00 AND B-30-20-01
METAL FRAME AND GRATE-STANDARD PLAN B-30-10-00 AND B-30-50-00
CATCH BASIN TYPE II-48", 60" 96" INCH-STANDARD PLAN B-10-20-00
MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES-STANDARD PLAN B-30-90-00

IF SUBGRADE CONDITIONS ARE SOFT BELOW PROPOSED STRUCTURES, THE FOUNDATION SHALL BE OVER-EXCAVATED TWO FEET BELOW THE STRUCTURE TO AND TO THREE FEET BEYOND THE PERIMETER EDGE OF THE STRUCTURE AND FILLED WITH MECHANICALLY COMPACTED QUARRY SPALLS TO PROVIDE FOR A FIRM, DENSE, NON-YIELDING SUBGRADE CONDITION. IF REQUIRED BY THE SOILS ENGINEER, THE BOTTOM AND SIDES OF THE OVER-EXCAVATION SHALL BE LINED WITH GEOTEXTILE FABRIC AS SPECIFIED FOR THE ASPHALT SUBGRADE.

58. AT VARIOUS LOCATIONS WITHIN THE STORM DRAINAGE CLEAN OUT ASSEMBLIES ARE IDENTIFIED. CLEAN OUT ASSEMBLIES SHALL BE INSTALLED AT THE LOCATIONS AND ELEVATIONS AS IDENTIFIED ON THE CIVIL PLAN. WITHIN LANDSCAPED AREAS, THE TOP OF THE CLEAN OUT SHALL COMPRISE ITS CAP, SET FLUSH WITH THE FINISHED LANDSCAPE GRADE. WITHIN HARD SURFACED AREAS, THE TOP OF THE CLEAN OUT CAP SHALL BE CONTAINED WITHIN A CONCRETE OR ALUMINUM FOG-TIGHT ENCLOSURE, WITH THE CLEAN OUT CAP SET WITHIN THREE TO SIX INCHES BELOW THE ENCLOSURES LID. AT ALL LOCATIONS WHERE THE FOG-TIGHT ENCLOSURE IS INSTALLED, IT SHALL BE SET FLUSH WITH THE FINISHED HARD SURFACE GRADE. AFTER PAVING, CLEANOUT AND STRUCTURE LIDS SHALL BE CLEANED SO THE LID IS EASILY REMOVABLE.

BEFORE INSTALLING THE ROOF DRAIN PIPING SYSTEM, THE CONTRACTOR SHALL CAREFULLY REVIEW THE BUILDING PLANS TO CONFIRM THE LOCATION OF ALL DOWNSPOUTS. WITHIN THE ROOF DRAIN PIPING SYSTEM, AT ALL DOWNSPOUT LOCATIONS, THE CONTRACTOR SHALL INSTALL ALL PIPE, FITTINGS AND COUPLERS ALIGNED DIRECTLY BELOW THE PROPOSED DOWNSPOUT. THE BUILDING CONTRACTOR WILL BE RESPONSIBLE FOR TRIMMING THE VERTICAL PIPE, CONFIRMING THE STYLE OF CONNECTION BETWEEN THE DOWNSPOUT AND THE ROOF DRAIN TEE, AND CONNECTING THE DOWNSPOUT PIPE TO THE STANDPIPE

59. AT LOCATIONS DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL EXPAND THE EXISTING ONSITE DETENTION POND NORTHWESTERLY. THE EXPANDED POND AREA SHALL BE GRADED AND SHAPED IN ACCORDANCE WITH PLANS. TOP SOIL SHALL BE PLACED AT LOCATIONS AND DEPTHS SHOWN IN THE PLANS. GROUNDCOVER AND GRASSES WITHIN POND SHALL CONFORM TO THE 2005 DEPARTMENT OF ECOLOGY STORMWATER MANUAL VOLUME SECTION 9.3 AND 9.4 (PAGE 9-18) FOR SUITABLE GROUNDCOVERS. SOD MEETING THE REQUIREMENTS CAN BE USED AND SHALL BE PLACED OVER CLEAN TOPSOIL. MODIFICATION TO THIS GRASS SEED MIXTURE MAY BE PROVIDED BY THE CONTRACTOR AS AVAILABLE BY LOCAL SOD SUPPLIERS. THE SUBSTITUTED SOD INFORMATION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND CONSIDERATION PRIOR TO ITS APPLICATION.

60. THE CONTRACTOR SHALL FURNISH AND INSTALL TRENCH DRAIN SYSTEMS AS NOTED ON THE CIVIL PLANS SO THAT IS COMPLETE AND FULLY OPERATIONAL. ALL TRENCH DRAINS SHALL BE PRECAST/PRE-MANUFACTURED ARRANGEMENTS FABRICATED WITH A PRE-DETERMINED SLOPE.

SANITARY SEWER

61. SANITARY SEWER PIPE SHALL BE PVC CONFORMING TO WSDOT SECTION 9-05.12(1) MEETING THE REQUIREMENTS OF ASTM D 3034, SDR 35. ALL JOINTS SHALL BE GASKETED WITH RUBBER GASKETS. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO WSDOT SECTION 7-08 AND 7-17 AND REQUIREMENTS OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT. THE CITY OF FERNDALE MUST BE CONTACTED PRIOR TO THE SEWER INSTALLATION TO COORDINATE THE CITY'S INSPECTION REQUIREMENTS.

62. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL COMPONENTS OF THE SANITARY SYSTEM IN SUCH A MANNER AS TO PREVENT ANY GROUNDWATER INTRUSION.

63. THE CONTRACTOR IS RESPONSIBLE FOR TESTING THE NEW POTIONS OF THE SEWER SYSTEM AS REQUIRED BY THE CITY. LEAKAGE TESTING SHALL BE ACCORDING TO WSDOT SECTION 7-17.3(4)F FOR NON-AIR-PERMEABLE MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR RESTRAINING ALL PIPE ENDS, CLEANOUTS, AND SERVICES DURING AS NECESSARY FOR TESTING. THIS TEST MUST BE MONITORED BY THE ENGINEER AND THE CITY (IF REQUIRED).

64. AT THE ENDS OF ALL SANITARY SEWER SERVICES, THE CONTRACTOR SHALL INSTALL A CAP ON THE END OF PIPE AND INSTALL A MARKER POST. THE MARKER POST SHALL BE INSTALLED VERTICALLY PLUMB, PAINTED WHITE, AND STENCILED WITH LARGE BLACK LETTERS, THE WORD "SEWER" AND THE DEPTH OF BURY FROM THE ADJACENT FINISHED GRADE. THE MARKER POST MUST BE SET AT THE TIME THE UTILITY IS INSTALLED.

65. AT LOCATIONS WHERE PROPOSED SEWER LINES CROSS EXISTING OR PROPOSED WATERLINES, THE INTERSECTION OF THE SEWER PIPE AND THE WATER PIPE SHALL BE AT A MID-PIPE LOCATION FOR THE PVC SEWER PIPE AS WELL AS THE MID-PIPE LOCATION FOR DUCTILE IRON WATER PIPE. AT THESE INTERSECTIONS, A MINIMUM 1.5-FEET OF VERTICAL CLEARANCE BETWEEN THE PIPE-WALLS SHALL BE ACHIEVED.

66. CLEANOUT ASSEMBLIES WITHIN THE SANITARY SEWER SYSTEM SHALL BE INSTALLED AT THE LOCATION AND ELEVATIONS IDENTIFIED ON THE CIVIL PLANS, AND AS NECESSARY TO ACCOMMODATE THE SANITARY SEWER SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR SETTING THE TOP OF THE CLEANOUT ASSEMBLY WITHIN 3" - 6" BELOW THE ENCLOSURE ASSEMBLY'S LID. CLEANOUT ASSEMBLIES SHALL CONFORM TO WSDOT STANDARD PLAN B-85.40-00, THE REQUIREMENTS OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT, AND THE DETAIL PROVIDED ON THE CIVIL PLANS. ALL CLEANOUT ASSEMBLIES THAT ARE INSTALLED WITHIN PROPOSED AND FUTURE HARD SURFACED AREAS SUCH AS GRAVEL, CRUSHED ROCK, ASPHALT, CONCRETE, OR HEAVY TRAFFIC AREAS, SHALL BE CONTAINED WITHIN A CAST IRON OR ALUMINUM FOG-TITE LID ASSEMBLY. THE FOG TITE LID ASSEMBLY SHALL BE SIZED APPROPRIATELY TO ALLOW REMOVAL OF THE CAP ON THE TOP PORTION OF THE VERTICAL CLEANOUT STANDPIPE ASSEMBLY. CLEANOUT ASSEMBLIES WITHIN LANDSCAPE AREAS SHALL HAVE THEIR TOP CAP SET FLUSH WITH THE FINISHED LANDSCAPE GRADE.

WATER

67. STANDARD SPECIFICATIONS SHALL BE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION 2014. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, APWA CURRENT STANDARDS AND THE CITY OF FERNDALE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE CITY OF FERNDALE REQUIREMENTS PRIOR TO COMMENCING WORK. SPECIFIC SPECIFICATIONS FROM THE CITY ARE PROVIDED BELOW, AND SHALL BE CONFORMED TO. WHERE THERE IS A DISCREPANCY IN THE WATER SYSTEM SPECIFICATIONS HEREIN AND THOSE FROM THE CITY, THE MOST STRINGENT SHALL APPLY UNLESS OTHERWISE APPROVED BY THE CIVIL ENGINEER AND THE CITY.

68. THE CONTRACTOR MUST NOTIFY THE FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED WATER CONNECTION AT LEAST 48 WORKING DAYS IN ADVANCE OF THE WORK BEING PERFORMED.

69. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE CITY TO SCHEDULE A PRECONSTRUCTION CONFERENCE AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE TO DETERMINE WHAT DOCUMENTATION THE CITY WILL REQUIRE SUCH AS A LIST OF ALL MATERIALS, WATERLINE INSTALLATION AND TESTING SCHEDULE, METHOD AND LOCATION FOR DISPOSING OF CHLORINATED FLUSHING WATERS, CONTRACTOR'S LICENSE, AND OTHER INFORMATION, CERTIFICATIONS, ETC.

70. BEFORE CONNECTION TO AN EXISTING WATER MAIN, ALL NEW WATER MAINS AND REPAIRED PORTIONS OF/OR EXTENSION TO EXISTING MAINS SHALL BE ADEQUATELY CHLORINATED, HYDROSTATICALLY PRESSURE TESTED, AND A SANITARY BACTERIOLOGICAL REPORT OBTAINED. BACTERIA SAMPLING AND TESTING SHALL BE PERFORMED TO THE REQUIREMENTS OF THE CITY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CITY TO OBTAIN WATER SAMPLING DEVICES, OBTAINING THE WATER SAMPLES UNDER THE CITY OBSERVATION, OR BY THE CITY, AND SUBMITTING ALL SAMPLES FOR TESTING. THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING FEES.

71. ALL TIE-INS, SHUTDOWNS, FLUSHING, AND HEALTH SAMPLES SHALL BE COORDINATED WITH THE CITY. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES.

72. THE CONTRACTOR IS RESPONSIBLE FOR ALL GRAVEL TRENCH BACKFILL WITHIN WATERLINE TRENCHES AND RESTORATION OF THE TRENCH CONDITIONS TO THE FINISHED CONDITION REQUIRED.

73. MAXIMUM TRENCH DEPTH SHALL BE 48 INCHES BELOW FINISHED GRADE ELEVATION WITH MINIMUM COVER OF 36 INCHES OTHERWISE SPECIFIED ON THE CIVIL PLANS AND AS NECESSARY TO AVOID CONFLICTS WITH OTHER UTILITIES. A MINIMUM OF 1.5-FOOT VERTICAL CLEARANCE AND 5-FOOT HORIZONTAL CLEARANCE BETWEEN WATER PIPELINE AND ALL OTHER UTILITIES UNLESS OTHERWISE SPECIFIED. WATER PIPELINE HORIZONTAL AND VERTICAL ALIGNMENTS ARE REQUIRED TO BE STAKED AS REQUIRED BY THE CITY.

LOCATIONS WHERE PROPOSED WATERLINES CROSS EXISTING OR PROPOSED SEWER LINES, THE INTERSECTION OF THE WATER PIPE AND THE SEWER PIPE SHALL BE AT A MID-PIPE LOCATION FOR THE WATER PIPE AS WELL AS A MID-PIPE LOCATION FOR THE SEWER PIPE. AT THESE POINTS OF INTERSECTION, A MINIMUM OF 18 INCHES VERTICAL CLEARANCE MUST BE MAINTAINED BETWEEN WATER MAINS AND SEWER MAINS.

74. CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATIONS, INSTALLATION OF DOMESTIC SERVICE TAPS, INSTALLATION OF SERVICE PIPE, AND MARKER POSTS AT EACH END OF WATER PIPE FOR FUTURE DOMESTIC SERVICES.

75. THE CONTRACTOR IS RESPONSIBLE FOR CHLORINATING ALL PORTIONS OF THE NEW WATERLINE AS REQUIRED BY WSDOT SPECIFICATIONS. CHLORINATED WATER SHALL SOAK A MINIMUM OF 24 HOURS AND AS PER WSDOT STANDARDS. FLUSHING WATER MUST BE DISCHARGED INTO A TANKER TRUCK FOR OFF-SITE DISPOSAL, OR FLUSHING WATER MAY BE DEPOSITED INTO THE PUBLIC SANITARY SEWER SYSTEM ONLY UPON APPROVAL FROM THE CITY OF FERNDALE SEWER DEPARTMENT. ABSOLUTELY NO PORTION OF CHLORINATED FLUSHING WATER SHALL BE ALLOWED TO ENTER THE DRAINAGE SYSTEM OR BE SPRAYED UPON THE SITE.

76. AT THE PRECONSTRUCTION MEETING FOR THE PROPOSED PROJECT IMPROVEMENTS, THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE PLAN AND SCHEDULE FOR ALL WATERLINE INSTALLATION, FLUSHING, PRESSURE TESTING, DISPOSAL OF CHLORINATED WATER, AND CONNECTIONS.

77. COORDINATE ALL SHUTDOWN, FLUSHING, AND HEALTH SAMPLES WITH THE CITY INSPECTOR.

78. BEDDING AND PIPE COVER SHALL BE SELECT, NATIVE, GRANULAR MATERIAL FREE FROM WOOD WASTE, ORGANIC MATERIAL, OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS AND SHALL BE A MAXIMUM SIZE OF 1.5 INCHES OR APPROVED PIPE BEDDING PER WSDOT STANDARDS 7-09.3(9) AND 9-03.12(3). THE CONTRACTOR SHALL MAKE ALL PAVEMENT REPAIRS AND PERFORM ALL RESTORATION. TRENCH BACKFILL REQUIREMENTS SHALL CONFORM TO THE SPECIFICATIONS HEREIN WITHIN THE UTILITY TRENCH SECTION.

79. BACKFLOW PREVENTION FOR THE DOMESTIC WATER SERVICE IS PROVIDED THROUGH A REDUCED PRESSURE BACKFLOW ASSEMBLY AS REPRESENTED ON THE CIVIL PLANS. THE CONTRACTOR MAY ELECT TO USE A DIFFERENT TYPE OF REDUCED PRESSURE BACKFLOW ASSEMBLY HOWEVER; THE CONTRACTOR MUST CONFIRM THAT IT IS A WASHINGTON STATE CERTIFIED AND APPROVED COMPONENT. THE INSTALLATION OF ALL REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE ABOVE GROUND SO AS TO PROVIDE A CLEAR DISTANCE BELOW THE COMPONENT TO THE UNDERLYING GROUND FOR THE EVENT OF PURGING WATER FROM THE COMPONENT. IF A DIFFERENT TYPE OF REDUCED PRESSURE BACKFLOW ASSEMBLY IS SELECTED OTHER THAN THAT REPRESENTED ON THE PLANS, THE CONTRACTOR SHALL CONFIRM THAT THE INSULATED AND HEATED ENCLOSURE IS SUFFICIENTLY SIZED.

A SEPARATE CONDUITED ELECTRICAL SERVICE SHALL BE PROVIDED FROM THE BUILDING TO THE REDUCED PRESSURE BACKFLOW ASSEMBLY'S ENCLOSURE FOR ITS INTERNAL HEATING COMPONENTS. THE ENCLOSURE SHALL BE ABOVE GROUND, INSULATED, AND HEATED TO PREVENT FREEZING OF THE REDUCED PRESSURE BACKFLOW ASSEMBLY COMPONENT AND ASSOCIATED PIPING.

FERNDALE WATER REQUIREMENTS

78. WATER SERVICE INSTALLATION REQUIREMENTS

A. TAPPING WITH TAPPING CLAMP AND SADDLE MUST USE 1/2" THREADED CORPORATIONS. IF THE DRY-TAP METHOD IS USED, THE FOLLOWING MINIMUM HOLE SIZES SHALL BE USED:

1-7/8" FOR 2" SERVICE
1-7/16" FOR 1-1/2" SERVICE
15/16" FOR 1" SERVICE
11/16" FOR 3/4" SERVICE

CAUTION, CARE, AND PRUDENCE IS NECESSARY IN ALIGNING THE CLAMP AND SADDLE TO ASSURE FULL FLOW CAPABILITY.

B. CORPORATION TAPS SHALL MAKE AS NEARLY AS POSSIBLE A 45 DEGREE ANGLE OFF THE VERTICAL CENTER LINE OF THE MAIN. NO TAP IS TO BE MADE ON THE TOP OF A WATER MAIN.

C. TYPE "K" COPPER SHALL BE USED ON WATER SERVICES WITHIN THE PUBLIC RIGHT-OF-WAY.

D. CURB STOPS SHALL BE LOCATED NO CLOSER THAN THREE (3) FEET OR FARTHER THAN FIVE (5) FEET FROM THE PROPERTY LINE. STOP-AND-WASTE TYPE CURB STOPS ARE NOT ALLOWED.

E. ALL UNDERGROUND FITTINGS SHALL BE FLARED WITHIN THE PUBLIC RIGHT-OF-WAY, NO SWEAT OR COMPRESSION CONNECTIONS ARE TO BE USED. THE USE OF TEFLON TAP AS SEALANT IS ACCEPTABLE, BUT THE USE OF PIPE DOPE IS NOT ACCEPTABLE.

F. THE WATER SERVICE PIPE SHALL HAVE A MINIMUM OF 24 INCH DEPTH AND A MAXIMUM OF 36 INCH DEPTH, INCLUDING UNDER DITCH SECTIONS. IF A METER IS REQUIRED, THERE SHALL BE 30 INCHES COVER IN THE METER AREA.

ALL METERS AND METER INSTALLATIONS SHALL MEET CITY OF FERNDALE STANDARD DETAIL W-5. IF DEVELOPER CHANGES GROUND ELEVATION AFTER COMPLETION OF WATER SERVICE INSTALLATION, DEVELOPER IS RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT OF SAID CHARGES.

G. NO SERVICE IS TO BE COVERED UNTIL THE CITY INSPECTOR HAS INSPECTED THE INITIAL INSTALLATION. NOTE THAT ALL CORPORATIONS MUST BE IN AN ON POSITION AND ALL CURB STOPS MUST BE IN THE OFF POSITION.

H. SERVICE TESTING SHALL BE DONE IN CONJUNCTION WITH WATER MAIN TESTING. ANY AIR RELIEF AND FLUSHING SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.

I. AN ACCEPTANCE INSPECTION WILL BE MADE BY THE CITY UPON COMPLETION OF ALL PROJECT WORK. DURING THE INSPECTION ON TO ITS FULL CAPACITY TO CHECK FLOW AND GUARANTEE THAT EACH SERVICE LINE HAS BEEN FLUSHED. IN NO CASE SHALL THE ACCEPTANCE INSPECTION BE MADE UNTIL ALL PROJECT WORK IS COMPLETE, DAMAGE INCURRED DURING OTHER CONSTRUCTION WORK ON THE PROJECT SHALL BE CORRECTED BY THE DEVELOPER OR HIS AGENT PRIOR TO ACCEPTANCE BY THE CITY.

J. THE BOND RELEASE INSPECTION SHALL BE MADE PRIOR TO THE END OF THE 2 YEAR MAINTENANCE BOND PERIOD. ANY PROBLEMS NOTED AT THIS TIME SHALL BE CORRECTED BY THE DEVELOPER AND/OR BONDING COMPANY PRIOR TO RELEASING THE BOND.

K. TOOLS, MATERIALS AND WORK AREA SHALL BE MAINTAINED IN A SANITARY CONDITION AT ALL TIMES.

79. WATER SERVICE METER BOX INSTALLATION REQUIREMENTS

A. COVER OF 24 TO 30 INCHES SHALL BE MAINTAINED FROM FINISHED GRADE TO THE SERVICE PIPE EXCEPT WHERE A VARIANCE IS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. NOTE THAT THE TOP OF THE BOX SHALL BE FLUSH WITH THE FINISHED GRADE AND THAT THIS INCLUDES THE EXPANSION MATERIAL WHEN REQUIRED.

B. THE METER SETTER OR CURB STOP SHALL BE LOCATED WITHIN THE METER BOX.

1. MINIMUM CLEARANCE OF 1 INCH FROM INSIDE SURFACE.
2. MAXIMUM CLEARANCE OF 2 INCHES FROM INSIDE SURFACE SHALL BE MAINTAINED FROM THE STOP.
3. STOPS SHALL BE WITHIN 3 TO 5 FEET FROM THE PROPERTY LINE WITHIN THE PUBLIC RIGHT-OF-WAY OR AS APPROVED BY THE CITY, EXCEPT WHEN THIS PUTS THE STOP IN THE SIDEWALK, IN WHICH CASE THE STOP WILL BE LOCATED IN THE PLANTING STRIP.

C. METER BOXES SHALL CONFORM TO CITY OF FERNDALE STANDARD DETAILS W-6 THROUGH W-8. P.V.C. BOXES ARE NOT TO BE USED.

D. LOCATION OF METER BOXES.

1. IF A METER BOX FOR A 3/4 OR 1 INCH SERVICE IS TO BE LOCATED WITHIN A SIDEWALK AREA, A #3 SKAGIT METER TRAFFIC-TYPE BOX MUST BE USED WITH HEAVY-DUTY 1/4 INCH DECK PLATE LID. IN ANY TRAFFIC AREAS A PYRAMID-TYPE BOX WITH FRAMED LID MUST BE USED.

2. AN EXPANSION MATERIAL MUST BE USED AROUND THE LID SECTION TO ENABLE REMOVAL FOR MAINTENANCE. THE FLUSH WITH THE LID SECTION TO AVOID ANY CRACKS OR PROTRUSIONS.

3. AS-BUILTS SHALL SHOW LOCATION OF WATER SERVICE TAPS INTO MAIN, LOCATION OF METER/BOXES WITH DISTANCES TO THE RIGHT-OF-WAY OR NEAREST PROPERTY CORNERS.

UTILITY TRENCHES

80. ALL UTILITY TRENCHES FOR POWER, GAS, TELEPHONE, WATER LINES, SANITARY SEWER, AND STORM DRAINS SHALL BE EXCAVATED TO ALLOW A MINIMUM OF NINE INCHES BETWEEN THE EDGE OF THE UTILITY AND THE TRENCH WALL. TRENCHES SHALL BE EXCAVATED TO THE DEPTH AS REQUIRED FOR GRAVITY UTILITIES AND SHALL BE EXCAVATED TO ALLOW A MINIMUM OF 36-INCHES OF COVER OVER THE TOP OF PROPOSED WATERLINES TO THE FINISHED GRADE. THE DEPTH OF THE UTILITY TRENCHES FOR POWER, TELEPHONE, AND GAS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFIC UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE ALL SITE REQUIREMENTS AND SCHEDULING WITH THE NECESSARY UTILITY COMPANIES.

81. ALL UTILITY TRENCHES, REGARDLESS OF UTILITY TYPE, SHALL BE INSTALLED WITH MARKING TAPE CONFORMING TO WSDOT SECTION 9-15.18. MARKING TAPE SHALL BE SIX-INCH WIDE AND COLOR-CODED AS REQUIRED BY THIS WSDOT SECTION AND SHALL BE INSTALLED AT A LOCATION 12 TO 18 INCHES BELOW THE FINISHED GRADE. MARKING TAPE SHALL BE POLYETHYLENE PLASTIC COLORED AND LABELED AS FOLLOWS:

WATER-BLUE
SEWER-GREEN
ELECTRICAL-RED
GAS-OIL-YELLOW
TELEPHONE-CATV-ORANGE

THE TAPE WIDTH SHALL BE A MINIMUM OF SIX INCHES.

82. UNLESS OTHERWISE SPECIFIED HEREIN, ALL UTILITIES SHALL BE BED ON A MINIMUM OF SIX INCHES OF SAND, BUCKSHOT, OR GRAVEL 100 PERCENT PASSING THE QUARTER-INCH SCREEN. BEDDING TYPE MATERIAL SHALL ALSO BE PLACED TO SIX INCHES OVER THE TOP OF EACH UTILITY PIPE. ALL BEDDING MATERIAL AND PIPE COVERING MATERIAL SHALL BE THOROUGHLY HAND COMPACTED ALONG THE SIDES AND OVER THE TOP OF EACH INDIVIDUAL UTILITY AND CONDUIT. REGARDLESS OF LOCATION, ALL UTILITIES SHALL BE BED AND COVERED AS SPECIFIED.

83. THE BOTTOM OF UTILITY TRENCHES SHALL HAVE A STABLE, NON-YIELDING SOIL CONDITION, SUITABLE FOR SUPPORTING THE DESIGN LOAD. WHERE THE BOTTOM OF TRENCH CONDITIONS EXHIBIT PUMPING, YIELDING CONDITIONS, THE BOTTOM OF THE TRENCH SHALL BE OVER-EXCAVATED TO EXPOSE A FIRM, STABLE, NON-YIELDING MATERIAL AND BACKFILLED WITH AN 18-INCH THICK COMPACTED BED OF QUARRY SPALLS, TO THE BOTTOM OF THE REQUIRED UTILITY BEDDING MATERIAL, AS DIRECTED BY THE SOILS ENGINEER.

84. TRENCH BACKFILL SHALL CONSIST OF STRUCTURAL FILL MATERIAL AS SPECIFIED. STRUCTURAL FILL TRENCH BACKFILL IS REQUIRED IN ALL TRENCHES UNDER PROPOSED ASPHALT, CONCRETE, CRUSHED ROCK, FUTURE BUILDING FOOTPRINTS, AND HEAVY CONSTRUCTION TRAFFIC AREAS AND TO AN EXTENT OF THREE FEET BEYOND THE ABOVE LISTED CONDITIONS. ALL STRUCTURAL FILL MATERIAL WITHIN UTILITY TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY, AT A MOISTURE CONTENT PLUS OR MINUS TWO PERCENT FROM OPTIMUM, REGARDLESS OF DEPTH, AND TESTED ACCORDING TO THE ASTM TEST METHOD D-1557, AS SPECIFIED.

85. NATIVE SOIL MATERIALS MAY BE USED AS TRENCH BACKFILL ONLY AT LOCATIONS BEYOND THOSE REQUIRING GRAVEL STRUCTURAL FILL. PROVIDING THEY ARE OUTSIDE OF EXISTING AND PROPOSED RIGHT OF WAY. ALL UTILITIES SHALL BE BED AND COVERED AS SPECIFIED. NATIVE MATERIALS SHALL NOT BE USED AT ANY LOCATION FOR BED AND COVER.

AT LOCATIONS WHERE NATIVE SOIL IS USED AND RESULTS IN A PUMPING, UNSTABLE TRENCH CONDITION, OR THE SOILS USED CONTAIN UNSUITABLE PRODUCTS, THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIALS AND REPLACE WITH APPROPRIATE NATIVE MATERIALS, OR IMPORTED GRAVEL STRUCTURAL FILL MATERIAL AT NO ADDITIONAL COST TO THIS CONTRACT. NATIVE MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90 PERCENT DRY DENSITY AT A MOISTURE CONTENT PLUS OR MINUS OF TWO PERCENT FROM OPTIMUM.

COMPACTION TESTING

86. THE OWNER WILL RETAIN PERSONNEL LICENSED AND EXPERIENCED IN PERFORMING SUBGRADE INSPECTIONS AND COMPACTION TESTING FOR GRAVEL PLACEMENT AND ASPHALT PAVING. PROVIDED BELOW IS A LIST OF REQUIRED COMPACTION TESTING AREAS. IF WORK CONDITIONS INDICATE SUBSTANDARD COMPACTION, THE ENGINEER, OWNER, OR CITY OF FERNDALE PUBLIC WORKS DEPARTMENT RESERVE THE RIGHT TO REQUIRE THE CONTRACTOR TO PERFORM ADDITIONAL WORK AS NECESSARY TO RESOLVE ALL DEFICIENCIES AND RESERVE THE RIGHT TO REQUIRE THE CONTRACTOR TO HAVE COMPACTION TESTS PERFORMED, AT THE CONTRACTOR'S EXPENSE, TO SUBSTANTIATE WORK.

EVEN THOUGH THE OWNER WILL RETAIN PERSONNEL FOR COMPACTION TESTING, THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RETESTING COMPACTION AT AREAS THAT PREVIOUSLY FAILED COMPACTION TESTING. IF THE CONTRACTOR ELECTS, COSTS INCURRED BY THE OWNER FOR RETESTING OF PREVIOUSLY-TESTED FAILED AREAS SHALL BE DEDUCTED BY THE OWNER FROM MONIES OWED TO THE CONTRACTOR.

87. PRIOR TO PERFORMING SITE CONSTRUCTION ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR HAVING THEIR OWN MATERIALS TESTING COMPANY PERFORM AND PROVIDE A NEW GRADATION AND PROCTOR ANALYSIS OF THE GRAVEL MATERIAL TO BE USED FOR THE ASPHALT AND UTILITY IMPROVEMENTS. THE GRADATION AND PROCTOR ANALYSIS MUST BE NEW AND MUST REPRESENT THE LOCATION AND QUALITY OF MATERIAL THAT IS BEING PROVIDED TO THIS SITE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THIS GRADATION AND PROCTOR ANALYSIS TO THE OWNER'S RETAINED SOILS ENGINEER FOR THEIR REVIEW AND APPROVAL PRIOR TO MATERIALS BEING IMPORTED TO THE PROJECT SITE.

AFTER SUBGRADE EXCAVATION, PRIOR TO GEOTEXTILE FABRIC AND GRAVEL PLACEMENT, THE CONTRACTOR SHALL SCHEDULE THE CITY AND THE OWNER'S RETAINED SOILS ENGINEER TO INSPECT AND APPROVE ALL EXISTING GRAVEL AND NATIVE SUBGRADE CONDITIONS. THE CONTRACTOR SHALL PROVIDE A FULLY LOADED GRAVEL TRUCK FOR THIS INSPECTION PHASE.

88. WITHIN ALL UTILITY TRENCHES, THE CONTRACTOR SHALL COORDINATE COMPACTION TESTS ON THE TOP OF GRAVEL GRADE. TESTS SHALL BE PERFORMED WITHIN UTILITY TRENCHES AT 50-FOOT INTERVALS. WITHIN TRENCHES HAVING MORE THAN FIVE FEET OF GRAVEL BACKFILL-DEPTH, TEST SHALL ALSO BE TAKEN AT THE MID-DEPTH OF GRAVEL, AT 50-FOOT INTERVALS.

89. THERE ARE STRUCTURES WITHIN THE GRAVEL-FILLED AREA SUCH AS CATCH BASINS AND VALVE CASINGS. AROUND EVERY STRUCTURE, TWO COMPACTION TESTS SHALL BE PERFORMED AT EACH STRUCTURE WITHIN ONE TO TWO FEET OF THE STRUCTURE, TO CONFIRM BACKFILL PLACEMENT.

90. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING COMPACTION TESTING OF THE COMPLETED GRAVEL-FILLED CONDITION. GRAVEL COMPACTION TESTS SHALL BE TAKEN ON A FIFTY FOOT GRID, EACH DIRECTION, THROUGHOUT THE ENTIRE PROJECT SITE.

91. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S RETAINED SOILS ENGINEER TO ASSURE THAT ALL COMPACTION TESTING IS PERFORMED AS IDENTIFIED HEREIN. IF THE CONTRACTOR FAILS TO COORDINATE HAVING COMPACTION TESTS PERFORMED, THE CONTRACTOR WILL BE RESPONSIBLE FOR EXCAVATING AND EXPOSING SUFFICIENT AREAS FOR COMPACTION TESTING TO BE PERFORMED AS REQUIRED BY THE PROJECT ENGINEER, SOILS ENGINEER, AND CITY. THE CONTRACTOR IS THE RESPONSIBLE PARTY FOR CONTACTING THE OWNER'S RETAINED MATERIALS TESTING FIRM. THE CONTRACTOR SHALL CONTACT THE TESTING FIRM WHEN THE CONTRACTOR FEELS THE COMPLETED WORK IS SUFFICIENT AND READY FOR COMPACTION TESTING. AT ALL LOCATIONS WHERE COMPACTION TEST RESULTS ARE INSUFFICIENT, THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY WORK TO RESOLVE THE CONDITION, AND FOR HAVING FURTHER COMPACTION TESTS PERFORMED TO SUBSTANTIATE THAT THE WORK MEETS THE SPECIFICATIONS HEREIN.

92. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXPENSES ASSOCIATED WITH RE-TESTING WHERE PREVIOUS TESTS HAD IDENTIFIED INSUFFICIENT CONDITIONS.

TO THE EXTENT THAT ANY RE-TESTING GETS PERFORMED AT THE OWNER'S EXPENSE, THE OWNER WILL DEDUCT THESE EXPENSES FROM MONIES OTHERWISE PAID TO THE CONTRACTOR.

SEED, FERTILIZER, AND MULCH

93. DURING THE COURSE OF CONSTRUCTION, EXCAVATION WILL BE PERFORMED IN NATIVE SOILS. FOR THE PURPOSES OF LANDSCAPE FILL AND PERIMETER SITE GRADING, OUTSIDE OF IMPERVIOUS AREAS AND HEAVY TRAFFIC AREAS, CLEAN NATIVE TOPSOIL MATERIALS SHALL BE USED AS FILL. NATIVE SOILS SHALL NOT BE USED AT ANY LOCATION WHERE STRUCTURAL FILL (GRAVEL) IS REQUIRED AND NEEDED. DURING THE COURSE OF CONSTRUCTION, CLEAN NATIVE SOILS SHALL BE STOCKPILED AND COVERED FOR EVENTUAL USE AS LANDSCAPE FILL AND LANDSCAPE GRADING. EXCESS NATIVE SOILS NOT NEEDED FOR LANDSCAPE FILL AND LANDSCAPE GRADING SHALL BE HAULED OFFSITE BY THE CONTRACTOR AND DEPOSITED AT A LEGALLY PERMITTED LOCATION APPROVED FOR RECEIPT OF SAID PRODUCTS, UNLESS OTHERWISE DIRECTED BY THE OWNER. UNTIL NEEDED, CLEAN NATIVE SOILS SHALL BE COVERED WITH AN IMPERVIOUS MATERIAL TO PREVENT EROSION FROM RAINFALL AND TO AID IN PREVENTING GROWTH OF UNSUITABLE VEGETATION IN THE STOCKPILED SOIL.

NATIVE SOILS THAT HAVE BECOME CONTAMINATED BY GRAVEL AND OTHER PROCESSED MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, AND DEPOSITED AT A LEGALLY-PERMITTED LOCATION APPROVED FOR THE RECEIPT OF THE PRODUCT.

94. ALL SEEDING PERFORMED DURING EXTENSIVE PERIODS OF DRY WEATHER SHALL BE APPLIED USING A HYDROSEEDER APPLICATION OF FLEX-TERRA WITH A MIXTURE OF GRASS SEED, FERTILIZER, AND MULCH. HAND APPLICATION OF THIS MIXTURE IS ACCEPTABLE PROVIDED THERE IS SUFFICIENT MOISTURE WITHIN THE SOIL FOR GERMINATION. ON ALL STEEP SLOPED AREAS GREATER THAN 6:1, THE CONTRACTOR SHALL ALSO APPLY A DENSE STRAW MAT TO REDUCE EROSION, AND TO SUPPORT THE UNDERLYING SEEDING CONDITIONS.

95. AFTER COMPLETION OF SITE IMPROVEMENTS, THE CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL DISTURBED SOIL AREAS WITHIN THE SITE AREAS. LANDSCAPE IMPROVEMENTS ARE PROPOSED TO ENCOMPASS THE PROJECT AREA AROUND THE BUILDING, WITHIN THE LIMITS OF THE PROPERTY.

GRASS SEED: 200 LBS. PER ACRE
10X HIGHLAND COLONIAL BENTGRASS
40 PERCENT INTERSEEDED PERKYRA
40 PERCENT PENLAWN RED FESCUE
10 PERCENT WHITE CLOVER

MODIFICATIONS TO THIS GRASS SEED MIXTURE MAY BE PROVIDED BY THE CONTRACTOR AS AVAILABLE BY LOCAL SUPPLY COMPANIES. THE SUBSTITUTED MIXTURE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND CONSIDERATION PRIOR TO ITS APPLICATION.

FERTILIZER: 100 LBS. PER ACRE
MIXTURE: 10-20-20
MULCH: 1000 TO 2000 POUNDS PER ACRE DEPENDING UPON SLOPE CONDITIONS

96. THE CONTRACTOR SHALL PROVIDE ALL MAINTENANCE AND PROTECTION OF THE SEEDING CONDITION UNTIL A SUBSTANTIAL DENSE GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE SEEDING CONDITIONS FROM DAMAGES CAUSED BY EROSION AND RAINFALL. DAMAGED AREAS SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR.

97. DURING SITE WORK PERIODS AND EVEN AFTER SEEDING, THE CONTRACTOR IS RECOMMENDED TO STABILIZE THE SURFACE OF SEEDING CONDITIONS.

98. ONCE SITE CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE SITE CONDITIONS TO ASSURE ALL DIRT PILES ARE CLEANED UP AND NEATLY GRADED WITH THE SURROUNDING CONDITIONS. ALL DEBRIS AND GARBAGE SHALL BE REMOVED AND THE OWNER AND ENGINEER SHALL BE CONTACTED FOR A SITE REVIEW.

STRIPING AND SIGNAGE

99. SPECIFIC SIGNS ARE TO BE INSTALLED WITH THIS PROJECT, AS IDENTIFIED ON THE CIVIL PLANS. SIGN MATERIALS AND INSTALLATION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

ALL SIGNS MUST CONFORM TO MUTCD
ALL SIGNS SHALL BE DIAMOND GRADE OR AL