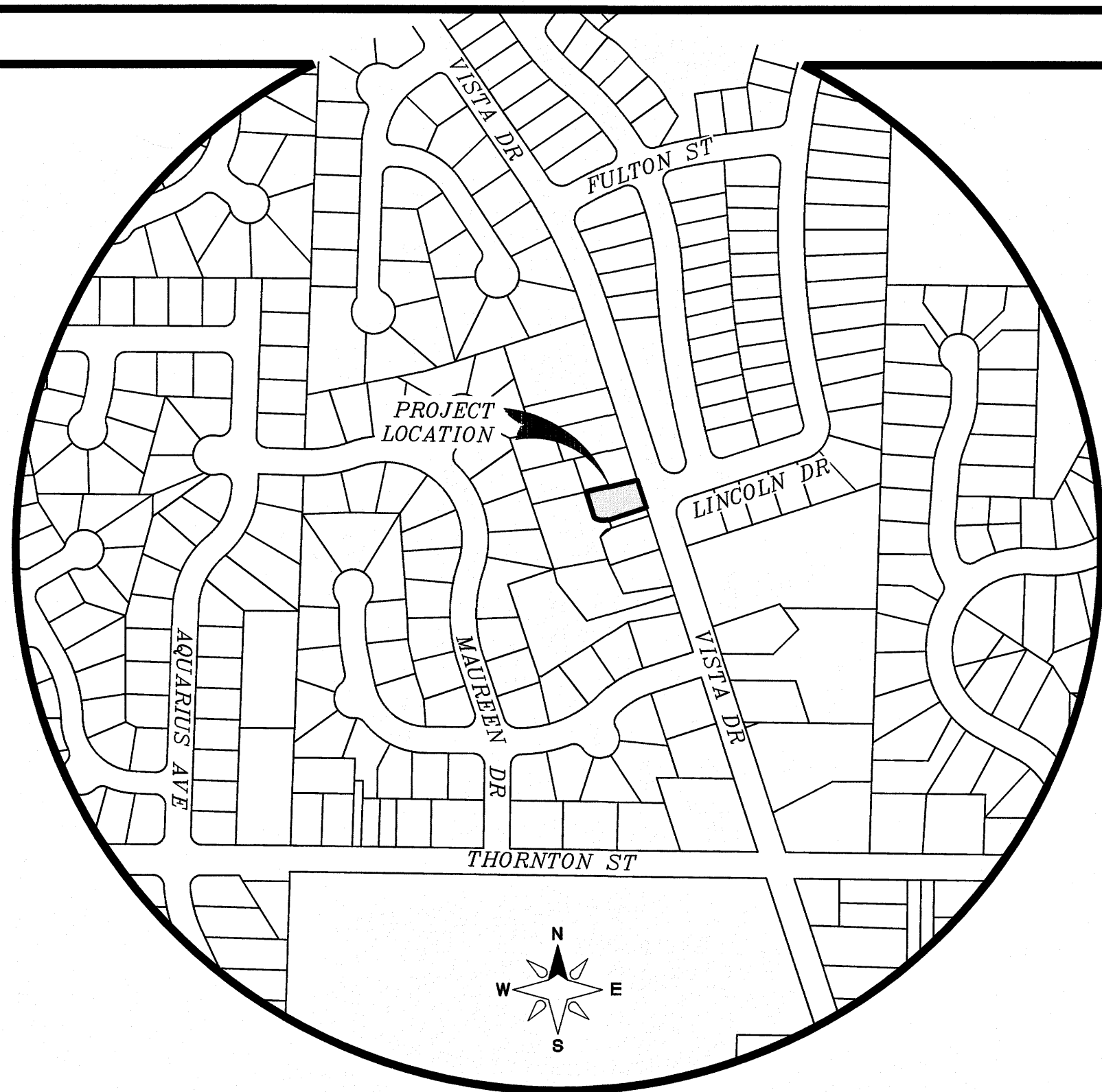


A PORTION OF THE SE 1/4 OF SECTION 18, TOWNSHIP 39 N., RANGE 2 E. OF THE W.M.  
CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON

# HANSEN RENTALS

## RECORD DRAWINGS



### SHEET INDEX

1. COVER SHEET & CITY OF FERNDAL GENERAL NOTES
2. WATER & SEWER PLAN
3. TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN & DETAILS
4. CITY OF FERNDAL DETAILS

#### GENERAL NOTE:

1. WORK PERFORMED OUTSIDE CITY RIGHT-OF-WAY ON PRIVATE PROPERTY REQUIRES PROJECT CERTIFICATION BY THE ENGINEER OF RECORD (EOR) FOR PROJECT ACCEPTANCE.

#### EXISTING SITE NOTE:

- EXISTING SEWER LOCATION INFORMATION PROVIDED BY CLIENT FROM PRODIGY PLUMBING. ALL OTHER UTILITIES ARE BASED ON AERIAL IMAGES AND CITY OF FERNDAL GIS.

### LEGEND:

- S --- S --- = EXIST WATER SERVICE LINE
- S --- S --- = EXIST SANITARY SEWER LINE
- S --- S --- = EXIST STORM DRAIN LINE
- S --- S --- = PROPOSED STORM DRAIN LINE
- S --- S --- = PROPOSED SAN. SEWER LINE
- S --- S --- = PROPOSED WATER LINE
- S --- S --- = PROPOSED SANITARY SEWER SERVICE
- S --- S --- = PROPOSED SEWER CLEANOUT
- S --- S --- = EXISTING WATER METER BOX
- S --- S --- = EXISTING WATER SPIGOT
- S --- S --- = PROPOSED WATER METER
- S --- S --- = PROPOSED STORM DRAIN CATCH BASIN
- S --- S --- = EXISTING ASPHALT
- S --- S --- = EXISTING BUILDING
- S --- S --- = PROPOSED SILT FENCE

#### GENERAL REQUIREMENTS:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (SDOT SPECS.), THE CITY OF FERNDAL DEVELOPMENT STANDARDS (CDFS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOW MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
3. THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m., MONDAY THROUGH SATURDAY.
5. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
6. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE EROSION & SEDIMENTATION CONTROL PLAN AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE ON SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
8. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
9. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDAL PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.
11. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT. REPRESENTATIVES FROM THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOW:
  - A. PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
  - B. CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
  - C. PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERNDAL.
  - D. PLACING OR BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDAL, OR OTHER PUBLICLY SHARED FACILITIES.
  - E. GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
    1. COMPLETION OF EXCAVATION TO SUBGRADE.
    2. COMPLETION OF BALLAST COURSE PLACEMENT.
    3. COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
  - F. POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
  - G. ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
  - H. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
  - I. END OF MAINTENANCE PERIOD.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE SDOT STANDARD SPECIFICATIONS 1-07.23 - TRAFFIC CONTROL, SHALL APPLY.
13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDAL PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT.
14. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDAL UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDAL DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

#### CONTROL NOTES:

CITY OF FERNDAL COMPREHENSIVE MAPPING PROGRAM.

BASIS OF BEARING: NAD83/91  
VERTICAL CONTROL: NGVD29

FERN 05: BASIS OF COORDINATE & REFERENCE BENCHMARK  
FOUND A BRASS DISK AT EXIT DRIVEWAY FOR VISTA SCHOOL  
NORTHING: 683'701.32'  
EASTING: 1'214'911.44'  
ELEVATION: 220.76'

FERN-04: BASIS OF BEARING  
FOUND SURFACE MONUMENT NORTH OF CONCRETE CURB EAST SIDE EAST ENTRANCE EAGLE RIDGE SCHOOL  
NORTHING: 684'485.00'  
EASTING: 1'209'546.55'

#### SURVEYOR'S NOTES:

- 1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON FEBRUARY AND MARCH OF 2017.
- 2) EQUIPMENT USED: LEICA M560: 001" ± 1 PPM, ±1.5 MM & LEICA GS14 RTK/WSRN.  
PRECISION EXCEEDS LINEAR CLOSURES OF 1:10,000 PER WAC 332-130-090
- 3) HORIZONTAL DATUM: CITY OF FERNDAL MONUMENT NETWORK WASHINGTON STATE NORTH ZONE NAD 83/91  
VERTICAL DATUM: NGVD29 (COF MON# 5, ELEV=220.76')
- 4) BOUNDARY SHOWN HEREON IS PER RECORD ONLY, NO ATTEMPT HAS BEEN MADE TO VERIFY THE ACCURACY OF SAID BOUNDARY.

#### LEGAL DESCRIPTION:

LOT 3 OF KEITCES SHORT PLAT PER THE PLAT THEREOF RECORDED UNDER WHATCOM COUNTY AUDITOR'S FILE NUMBER 1348594

OWNER/APPLICANT  
MELVIN HANSEN  
PO BOX 1091  
FERNDAL, WA  
360-739-2834

ENGINEER  
LDES, INC.  
5160 INDUSTRIAL PL., SUITE 108  
FERNDAL, WA 98248  
CONTACT: RAMON LLANOS, P.E.  
(360) 383-0620

SURVEYOR  
LDES, INC.  
5160 INDUSTRIAL PL., SUITE 108  
FERNDAL, WA 98248  
CONTACT: KYLE HAGGITH, PLS.  
(360) 383-0620

CALL 2 BUSINESS DAYS BEFORE YOU DIG  
1-800-424-5555  
UTILITIES UNDERGROUND LOCATION CENTER



#### ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN "HANSEN RENTALS" HAVE BEEN INSPECTED BY LDES AND TO THE BEST OF MY KNOWLEDGE, HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDAL DEVELOPMENT STANDARDS, THE CITY OF FERNDAL MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

*[Signature]* 1/22/18  
RAMON LLANOS, P.E.

#### 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 ON THIS DATE: JAN 22 2018

*[Signature]*  
KYLE HAGGITH, PLS.



#### UNDERGROUND UTILITIES CONSTRUCTION

- A. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE PROJECT ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
- B. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
  - I. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
  - II. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
  - III. TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
  - IV. WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
- C. UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDAL DEVELOPMENT STANDARDS.
- D. ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH 5/8-INCH MINUS WELL GRADED CRUSHED ROCK.
- E. TESTING OF NEW WATER LINES, STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
- F. ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% DENSITY IN LIFTS NOT TO EXCEED 24 INCHES WITH A "HOE PACK, OR 8 INCHES WITH HAND-OPERATED COMPACTION."
- G. OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE FERNDAL STANDARD TRENCH DETAIL(S). ALL UTILITY TRENCHES UNDERNEATH AN EXISTING ROADWAY SHALL BE BACKFILLED WITH 150 PSI CONTROLLED DENSITY FILL.
- H. NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.

#### WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:
  - PIPE BEDDING COFSD W-11
  - TRENCH BACKFILL COFSD W-11
  - WATER SERVICE COFSD W-5

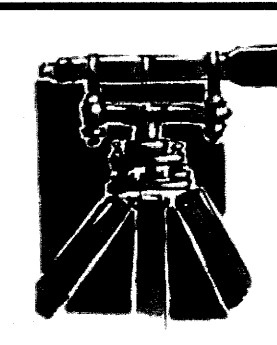
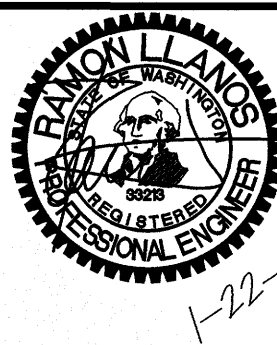
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDAL DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF SDOT STANDARD SPECIFICATIONS.
3. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, MINIMUM THICKNESS CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71.
4. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO AWWA SPECIFICATIONS C-110-71 AND C-104-71.
5. CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDAL STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE-CAST BLOCKS ARE ALLOWED.
6. CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDAL PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.
7. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(23) AND SECTION 7-09.3(24) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION - CURRENT EDITION. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 250 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDAL REQUIREMENTS. THE CITY OF FERNDAL LABORATORY SHALL CONDUCT ALL DISINFECTION TESTS AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
8. BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
9. ALL PIPES SHALL HAVE A MINIMUM COVER OF 36".
10. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 10 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.
11. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE COFSD W-5.

#### SANITARY SEWER SYSTEMS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF FERNDAL STANDARD SPECIFICATIONS AND DETAILS, A.P.W.A. STANDARD SPECIFICATIONS, AND SDOT STANDARD SPECIFICATIONS, MOST RECENT EDITIONS.
2. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDAL. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDAL REPRESENTATIVE.
3. SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.
4. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
5. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDAL STANDARD DETAILS AND SHALL BE PRE-CHANNELED. MANHOLE COVERS ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
6. ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDAL STANDARD DETAILS SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".
7. CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE. EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENOILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.
- 8.

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NO.	REVISION	BY	DATE
ASBUILT SUBMITTAL		RL	01/22/18



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639

JOB NO.:	1724
DWG. NAME:	1724-ASBUILT.dwg
DESIGNED BY:	AD
DRAWN BY:	AD/EH
CHECKED BY:	RL

MEL HANSEN  
PO BOX 1091  
FERNDAL WA

APPROVED

JAN 23 2018

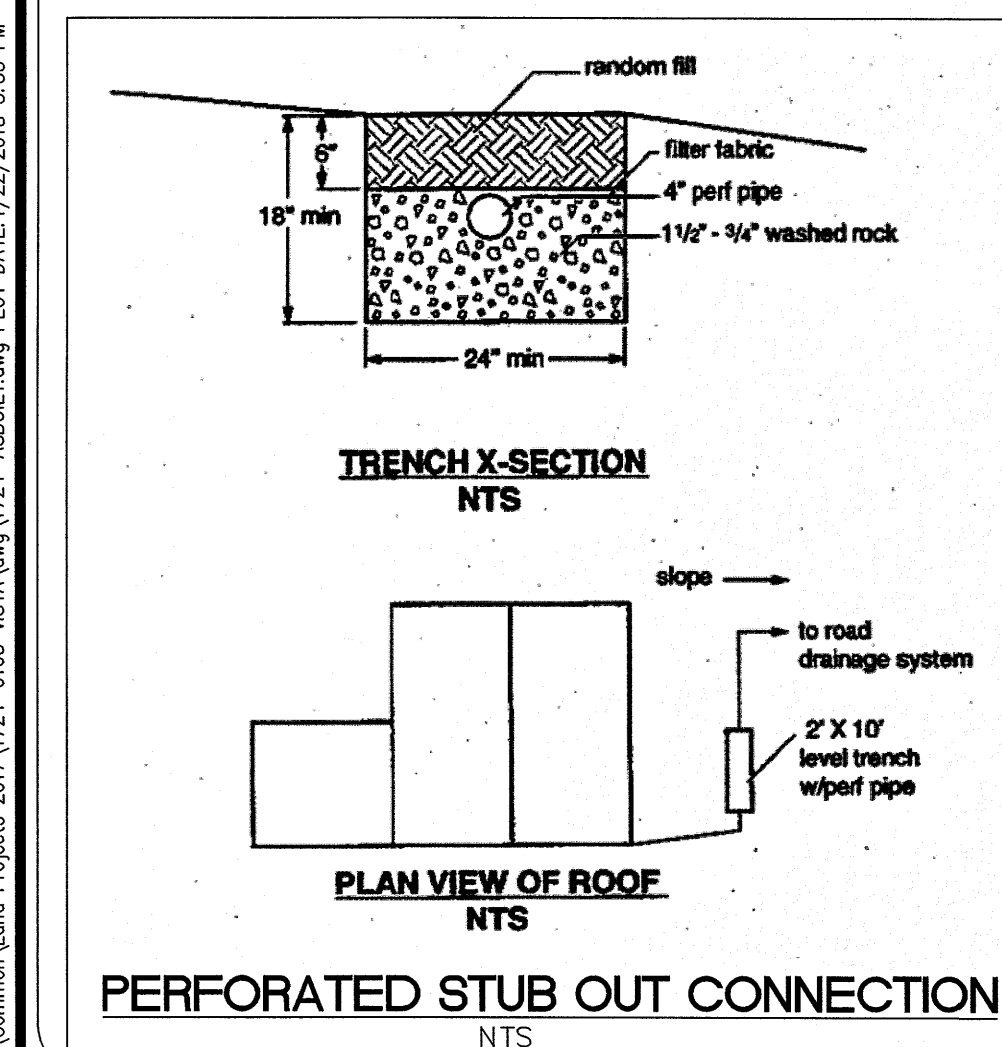
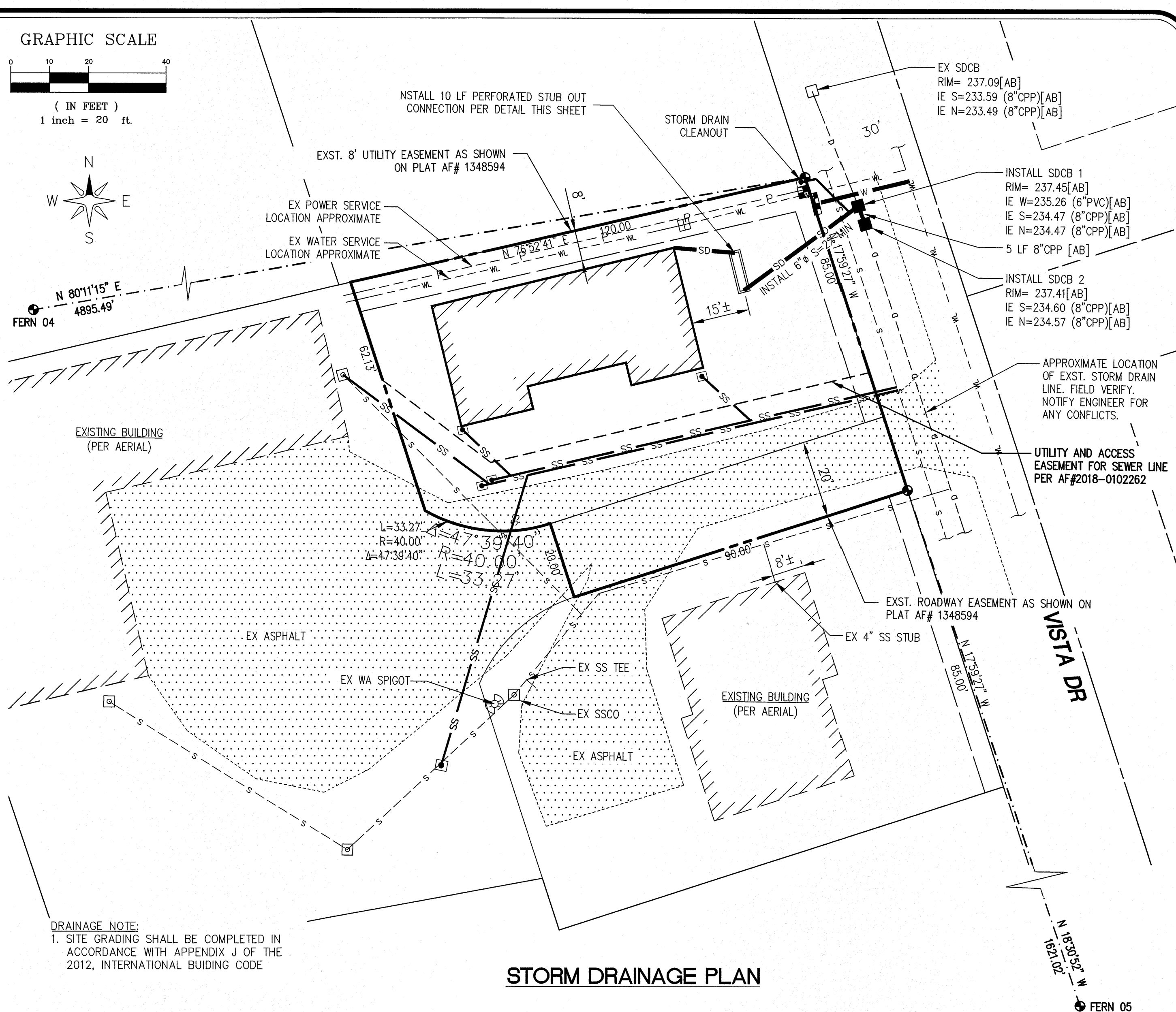
BY  
CITY OF FERNDAL  
PUBLIC WORKS DEPARTMENT

COVER SHEET &  
CITY OF FERNDAL GENERAL NOTES  
HANSEN RENTALS  
6165 VISTA DR, FERNDAL WA  
A PORTION OF SECTION 18, TOWNSHIP 39N, RANGE 2E, W.M.


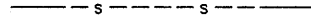










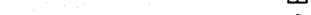

SHEET  
01  
OF  
04

RECORD DRAWING





# LEGEND:

	= EXIST WATER SERVICE LINE
	= EXIST SANITARY SEWER LINE
	= EXIST STORM DRAIN LINE
	= PROPOSED STORM DRAIN LINE
	= PROPOSED SAN. SEWER LINE
	= PROPOSED WATER LINE
	= PROPOSED SANITARY SEWER SERVICE
	= PROPOSED SEWER CLEANOUT
	= EXISTING WATER METER BOX
	= EXISTING WATER SPIGOT
	= PROPOSED WATER METER
	= PROPOSED STORM DRAIN CATCH BASIN
	= EXISTING ASPHALT
	= EXISTING BUILDING

GENERAL NOTE:  
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EXISTING SITE NOTE:  
- EXISTING SEWER LOCATION INFORMATION PROVIDED BY CLIENT FROM  
PRODIGY PLUMBING. ALL OTHER UTILITIES ARE BASED ON AERIAL  
IMAGES AND CITY OF FERNDALE GIS.

### OPERATION AND MAINTENANCE STANDARDS

CATCH BASIN (ALSO REFERRED TO AS INLET OR MANHOLE)

DEFINITION: AN UNDERGROUND CONCRETE WATER RECEIVING INLET, RECTANGULAR IN SHAPE (APPROXIMATELY 3' X 2' X 4' DEEP) WITH A SLOTTED IRON GRATE ON TOP TO INLET WATER OR A SOLID RECTANGULAR COVER. WATER MAY ALSO ENTER/EXIT THROUGH CULVERTS VISIBLE IN THE SIDE WALLS OF BASIN. INVERT REFERS TO THE LOWEST POINT OF A PIPE WHERE IT ENTERS OR EXITS A CATCH BASIN.

DEFECT NUMBER & DEFECT:  
A-1 GENERAL-TRASH & DEBRIS (INCLUDING SEDIMENT) BLOCKING WATER FROM ENTERING BASIN: TRASH OR DEBRIS COVERING ANY PORTION OF THE CATCH BASIN GRATE OR BLOCKING INLET GRATE TO BASIN.

MAINTENANCE NECESSARY TO BRING TO STANDARD: REMOVE ALL TRASH, DEBRIS AND SEDIMENT FROM IN FRONT OF THE CATCH BASIN INLET. REFER TO THE DISPOSAL GUIDELINES IN APPENDIX A FOR INSTRUCTIONS ON DISPOSAL OF TRASH, DEBRIS AND SEDIMENT.

A-2 GENERAL-TRASH & DEBRIS (INCLUDING SEDIMENT): TRASH, DEBRIS AND SEDIMENT (IN THE BASIN) THAT EXCEEDS ONE-THIRD THE DEPTH FROM THE BOTTOM OF THE BASIN TO INVERT OF THE LOWEST PIPE INTO OR OUT OF THE BASIN. THIS IS THE MOST COMMON MAINTENANCE REQUIREMENT.

MAINTENANCE NECESSARY TO BRING TO STANDARD: REMOVE ALL TRASH, DEBRIS AND SEDIMENT FROM THE CATCH BASIN. REFER TO THE DISPOSAL GUIDELINES IN APPENDIX A FOR INSTRUCTIONS ON DISPOSAL OF TRASH, DEBRIS AND SEDIMENT.

A-3 GENERAL-TRASH & DEBRIS (INCLUDING SEDIMENT): TRASH, DEBRIS AND SEDIMENT IN ANY INLET OR OUTLET PIPE BLOCKING MORE THAN ONE-THIRD OF ITS HEIGHT.

MAINTENANCE NECESSARY TO BRING TO STANDARD: REMOVE ALL TRASH, DEBRIS AND SEDIMENT FROM INLET AND OUTLET PIPES. REFER TO THE DISPOSAL GUIDELINES IN APPENDIX A FOR INSTRUCTIONS ON DISPOSAL OF TRASH, DEBRIS AND SEDIMENT.

A-4 STRUCTURAL-STRUCTURAL DAMAGE TO FRAME AND/OR TOP SLAB: TOP CONCRETE SLAB HAS HOLES LARGER THAN 2 SQUARE INCHES OR CRACKS WIDER THAN 1/4 INCH (INTENT IS TO MAKE SURE ALL MATERIAL IS RUNNING INTO THE BASIN THROUGH THE GRATE).

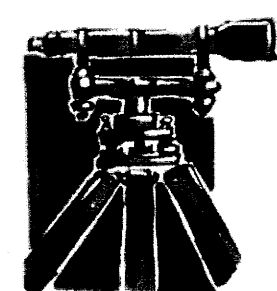
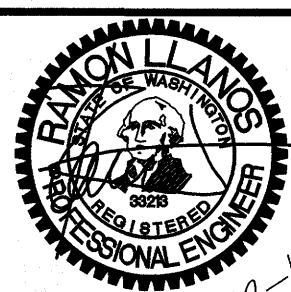
MAINTENANCE NECESSARY TO BRING TO STANDARD: REPAIR TOP SLAB SO THAT IT IS FREE OF HOLES AND CRACKS.

A-5 STRUCTURAL-FRAME NOT SITTING FLUSH ON TOP SLAB, I.E., SEPARATION OF MORE THAN 3/4 INCH OF THE FRAME FROM THE TOP SLAB. MAINTENANCE NECESSARY TO BRING TO STANDARD; REPAIR SO THAT FRAME IS SITTING FLUSH ON TOP SLAB.

A-6 STRUCTURAL—CRACKS IN BASIN WALLS/BOTTOM: CRACKS WIDER THAN 1/2 INCH, ANY EVIDENCE OF SOIL PARTICLES OR WATER ENTERING CATCH BASIN THROUGH CRACKS, OR MAINTENANCE PERSON JUDGES THAT STRUCTURE IS UNSOUND.

MAINTENANCE NECESSARY TO BRING TO STANDARD: REPLACE OR REPAIR BASIN TO DESIGN STANDARDS.

<u>0</u>	ASBUILT SUBMITTAL	RL	01/22/18
<u>1</u>			
<u>2</u>			
<u>3</u>			
<u>4</u>			
<u>5</u>			
NO.	REVISION	BY	DATE



**LDES, INC.**  
**5160 INDUSTRIAL PL. #108**  
**FERNDALE, WA 98248**  
**PHONE 360-383-0620**  
**FAX 360-383-0639**

JOB NO.:	1724
DWG. NAME:	1724-ASBUILT.dwg
DESIGNED BY:	AD
DRAWN BY:	AD/EH
CHECKED BY:	R

MEL HANSEN  
PO BOX 1091  
FERNDALE WA

APPROVED

JAN 23 2018

BY \_\_\_\_\_  
CITY OF FERNDALE  
PUBLIC WORKS DEPARTMENT

## WATER AND SEWER PLAN

**HANSEN RENTALS**  
6165 VISTA DR, FERNDALE WA  
A PORTION OF SECTION 18, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET

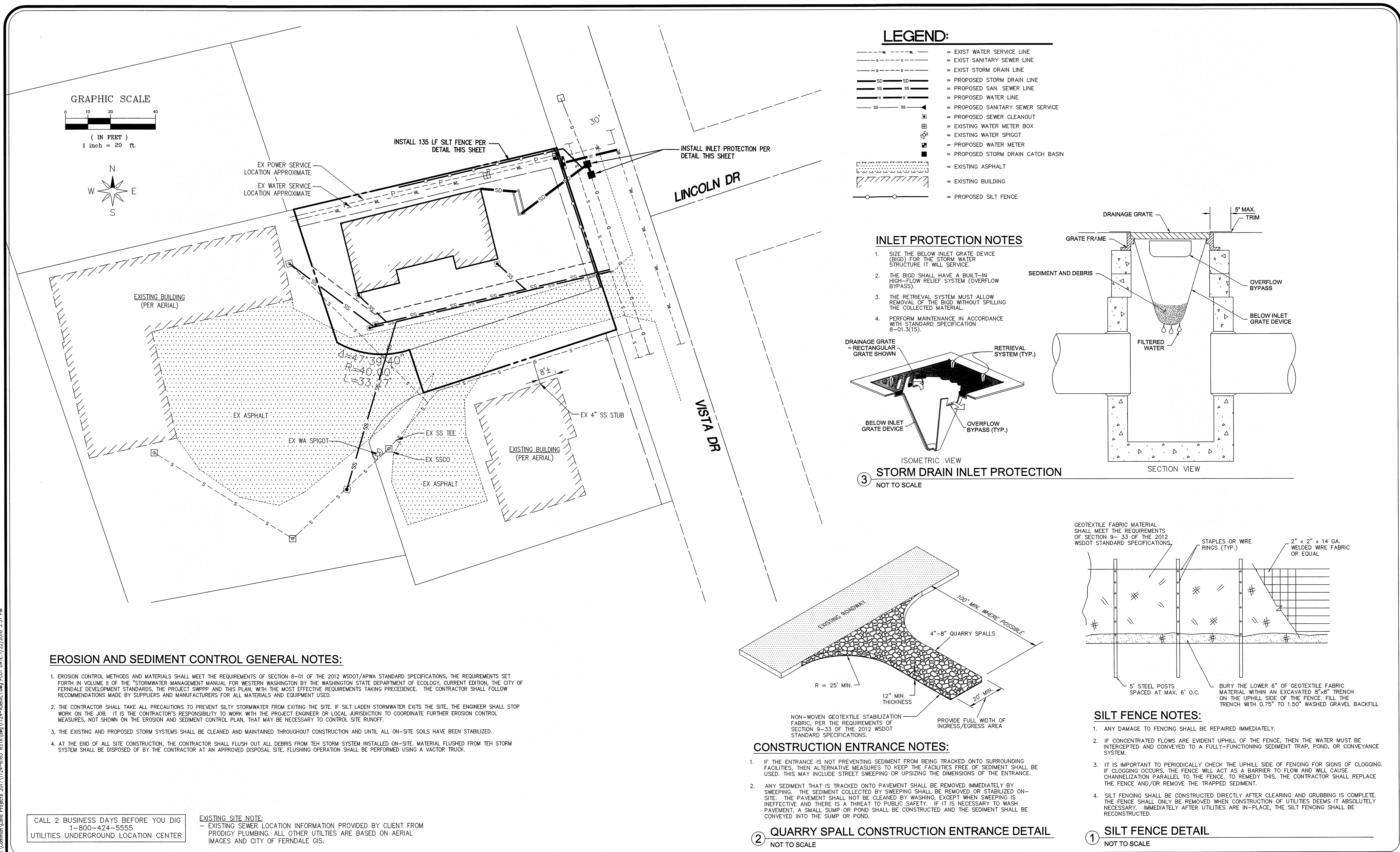
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OF

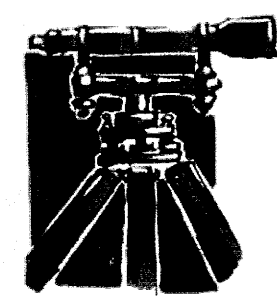
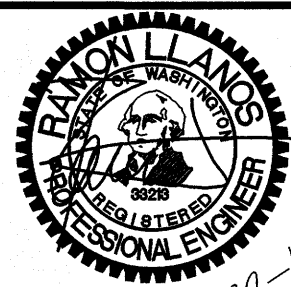
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ASBUILT SUBMITTAL	RL	01/22/18
REVISION	BY	DATE



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**MEL HANSEN**  
PO BOX 1091  
FERNDAL, WA

APPROVED

JAN 23 2018

BY  
CITY OF FERNDAL  
PUBLIC WORKS DEPARTMENT

## TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN & DETAILS

HANSEN RENTALS  
6165 VISTA DR, FERNDAL, WA  
A PORTION OF SECTION 18, TOWNSHIP 39N, RANGE 2E, WM.

SHEET

03

OF

04

RECORD DRAWING



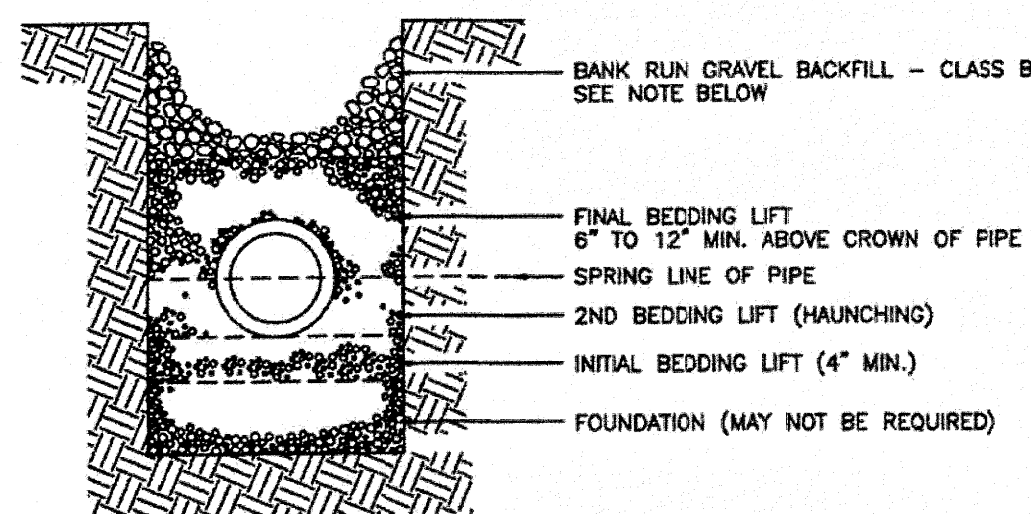
THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

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

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

U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING, BY WT.
3/4"	100
3/8"	95-100
#8	0-10
#200	0-5

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



MARCH 13, 2012



APPROVED

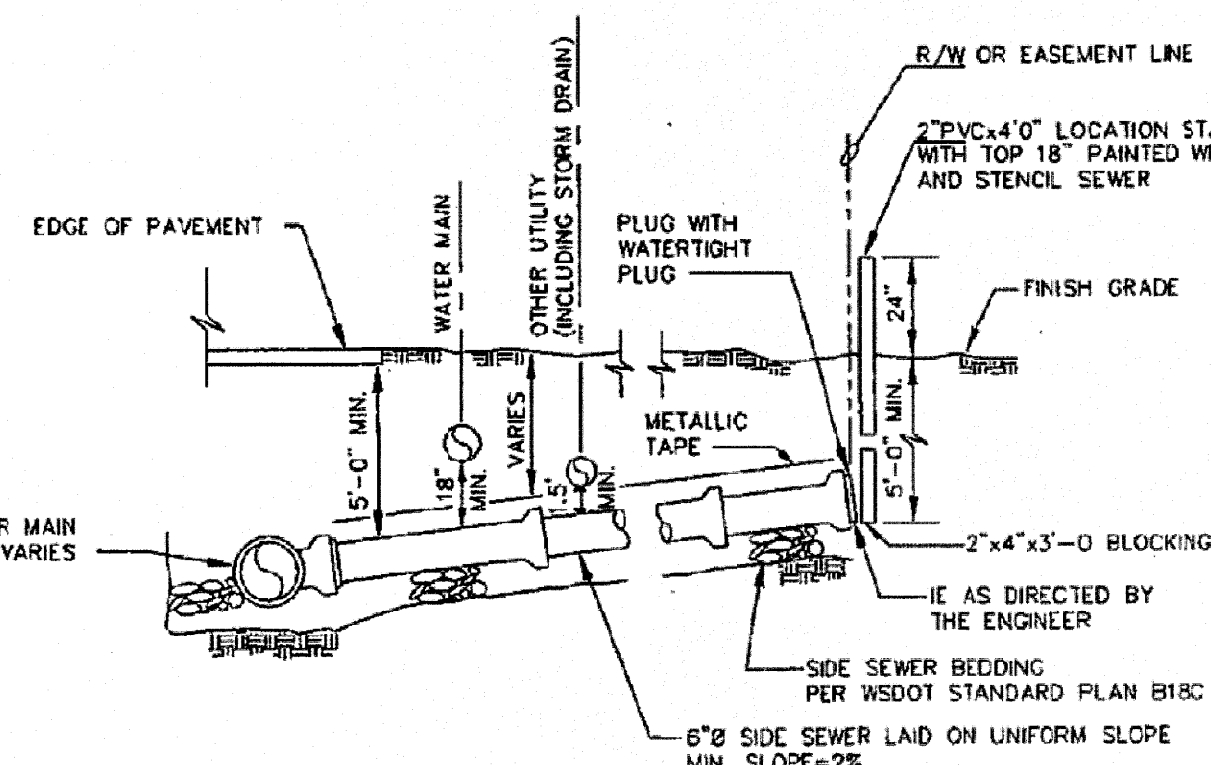
Public Works Director

Date

BEDDING SPECIFICATIONS

FOR PVC PIPE

STANDARD DETAIL SS-1



NORMAL INSTALLATION SIDE SEWER  
15" AND SMALLER

NOT TO SCALE

APPROVED

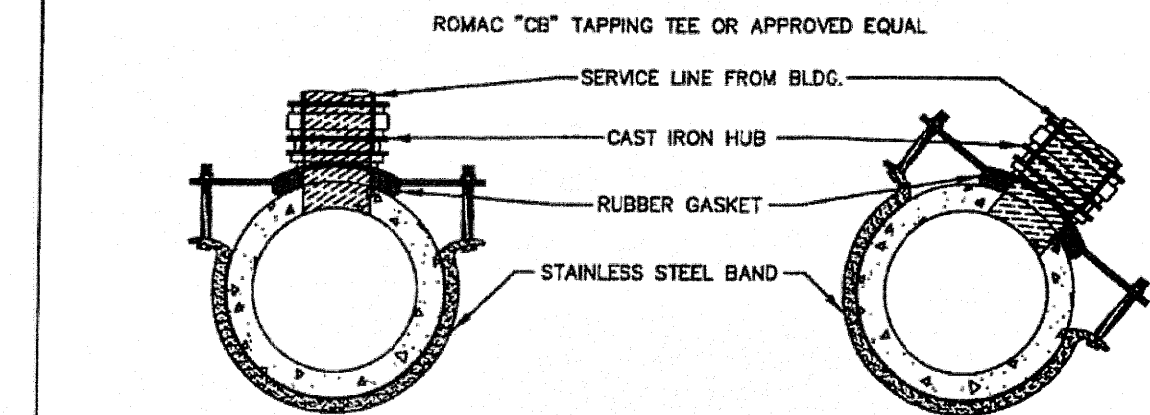
Public Works Director

CITY OF FERNDAL  
NORMAL INSTALLATION  
15" AND SMALLER SEWER MAINS

DRAWING  
SS-6

JUNE 1995

2091SE3A/SS-6



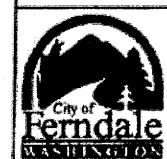
DRILL ONE HOLE PROPERLY SIZED FOR TAPPING SANITARY SEWER MAIN

6" MINIMUM  
FOR USE ON VITRIFIED CLAY OR CONCRETE SANITARY SEWER MAINS.

RESTORE EXCAVATED AREAS WITH APPROVED PIPE ZONE MATERIAL

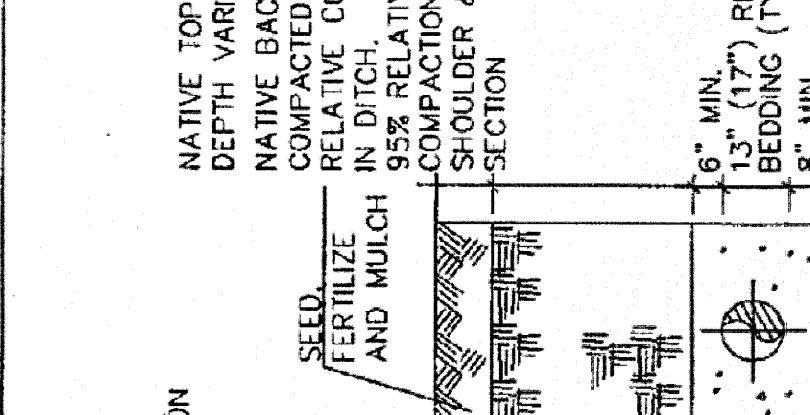
NOT TO SCALE

APRIL 2005



CITY OF FERNDAL  
SANITARY SEWER  
BANDED TAPPING TEE

DETAIL  
SS-12



- NOTES:
1. NATIVE BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION
  2. SELECT BACKFILL/CRUNSED SURFACE COURSE SHALL BE COMPACTED TO 95% COMPACTION.
  3. PAVEMENT SHALL BE SAW CUT, TACKED, AND COMPACTED TO 92% OF ABSOLUTE DENSITY.
  4. P.C.C. REPLACEMENT SHALL BE 2" GREATER THAN EXISTING COURSE, 7" MINIMUM, 6.5 P.C.C. (HES - AIR ENTRAINED)
  5. ALL TRENCH RESTORATION SHALL MEET CITY STANDARDS.

NOT TO SCALE

APPROVED

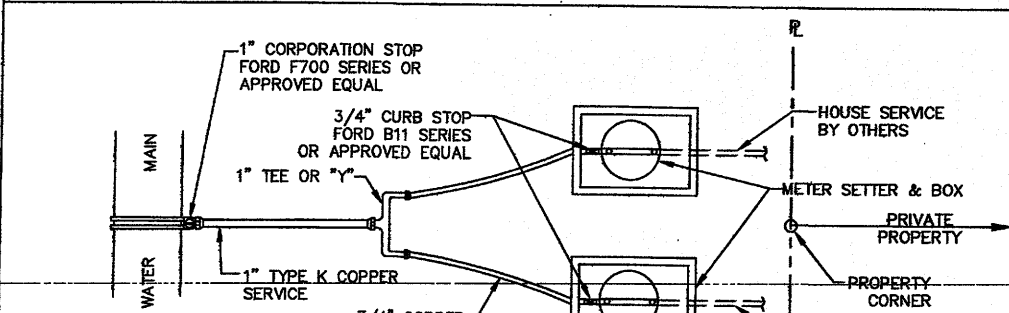
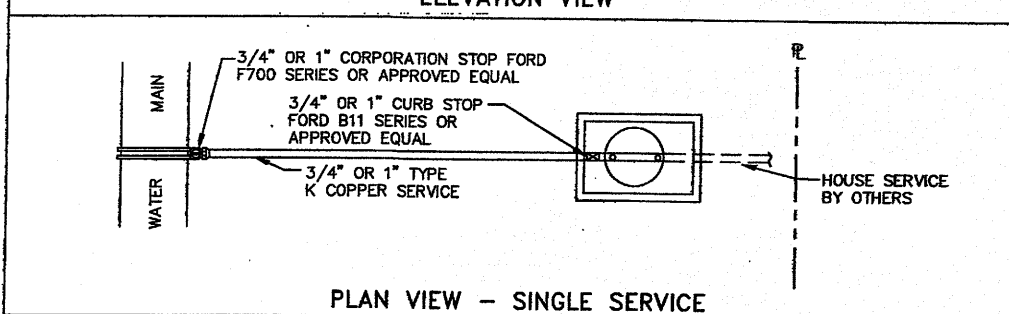
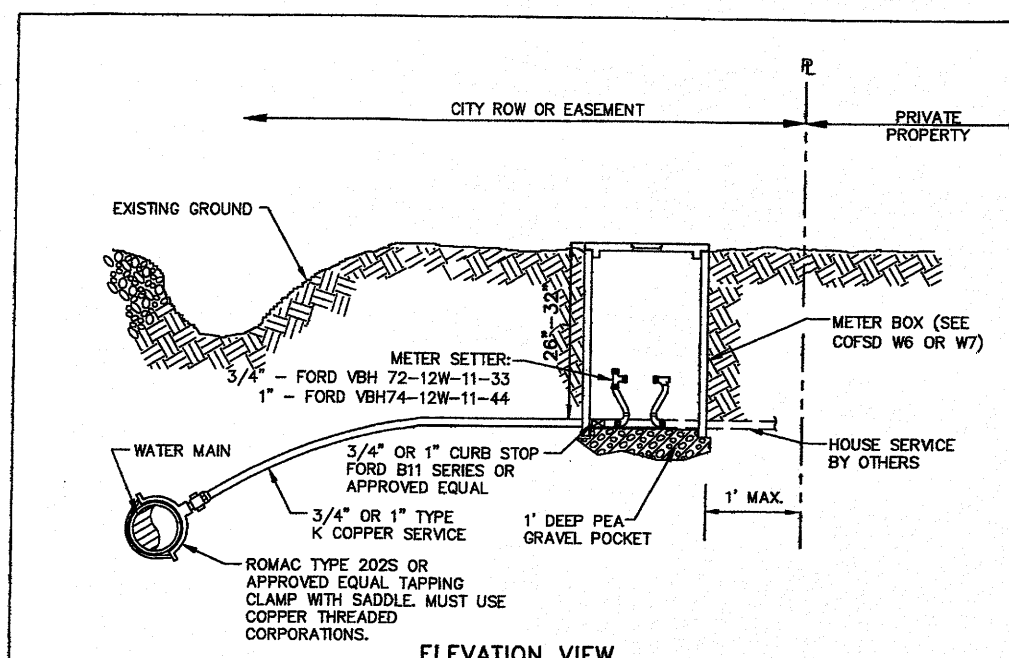
Public Works Director

Date

CITY OF FERNDAL  
TRENCHING DETAIL

DRAWING  
SS-15

JUNE 1995



NOTES:  
1. METERS TO BE FURNISHED AND INSTALLED BY CDP.  
2. WATER SERVICE TRENCH TO BE BACKFILLED WITH 12" MIN. DEPTH OF CLEAN SANDY FILL.

AUGUST 16, 2012

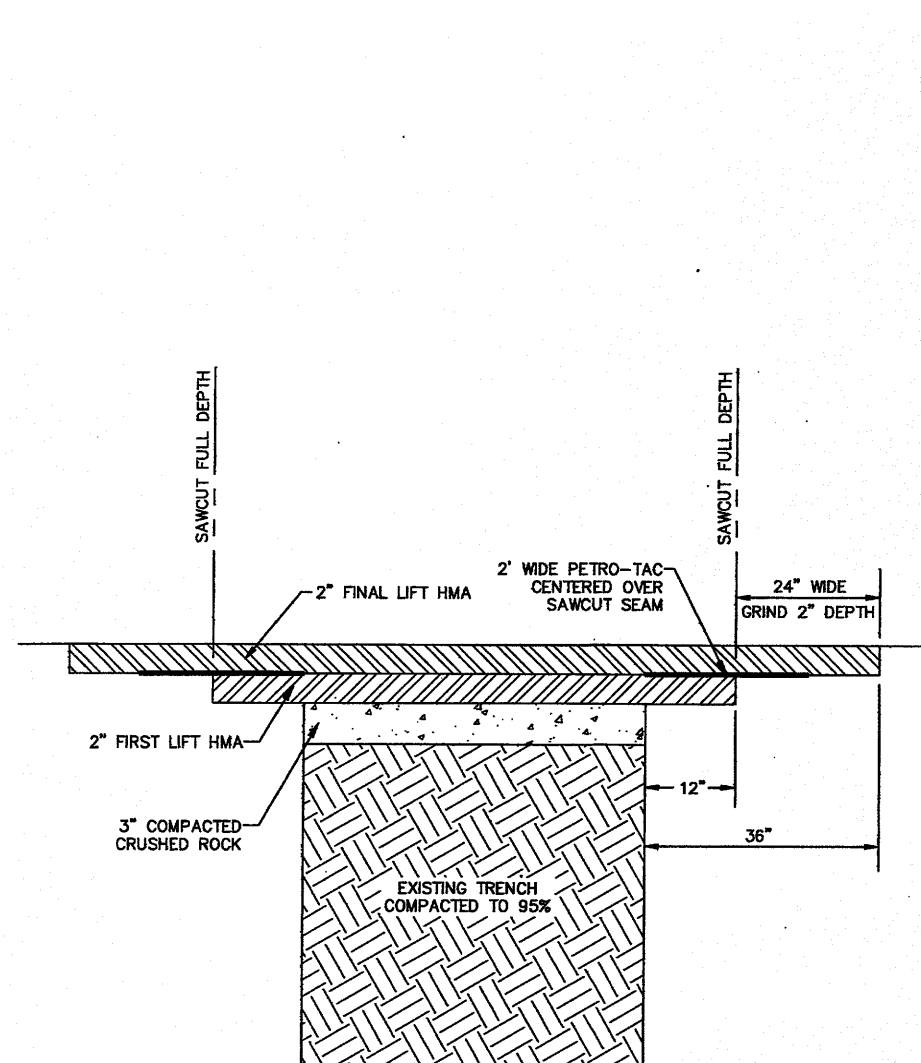


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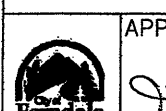
Public Works Director

Date

TYPICAL 3/4" AND 1" WATER SERVICE  
STANDARD DETAIL W-5  
NOT TO SCALE



JANUARY 30, 2014

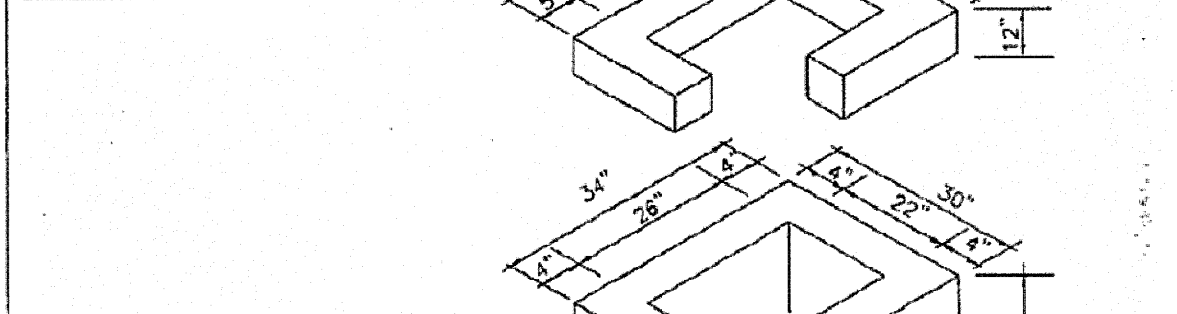
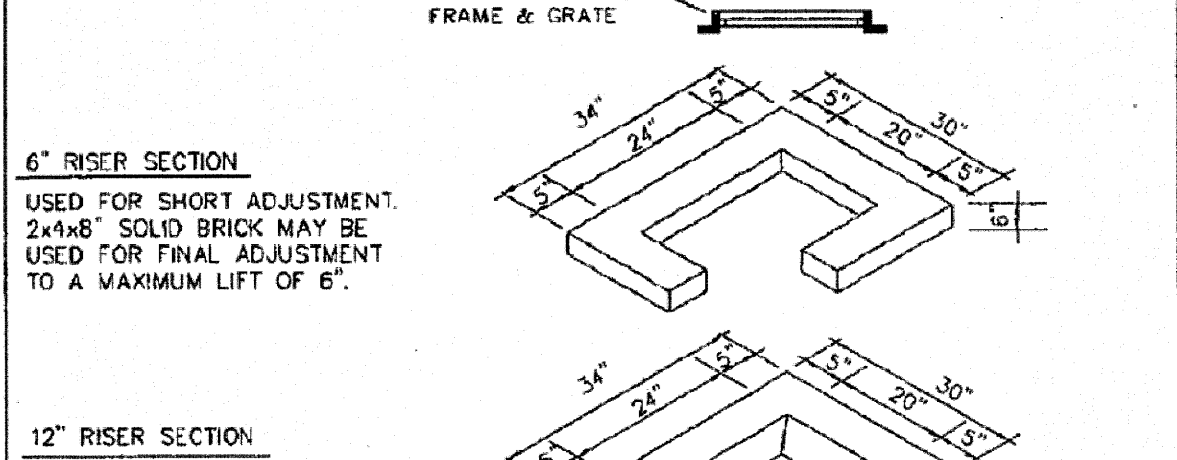


APPROVED

Public Works Director

Date

PETRO-TAC PLACEMENT  
STANDARD DETAIL R-16  
NOT TO SCALE



NOTES:

- 1) CAST IN PLACE OR MASONRY CONSTRUCTION UNITS MAY BE SUBSTITUTED AS PER A.P.W.A. STANDARDS OR STATE STANDARDS. (B-1)
- 2) FOR DETAILS OF REINFORCEMENTS AND INSTALLATION, SEE A.P.W.A. STANDARDS OR STATE STANDARDS.

NOT TO SCALE

APPROVED

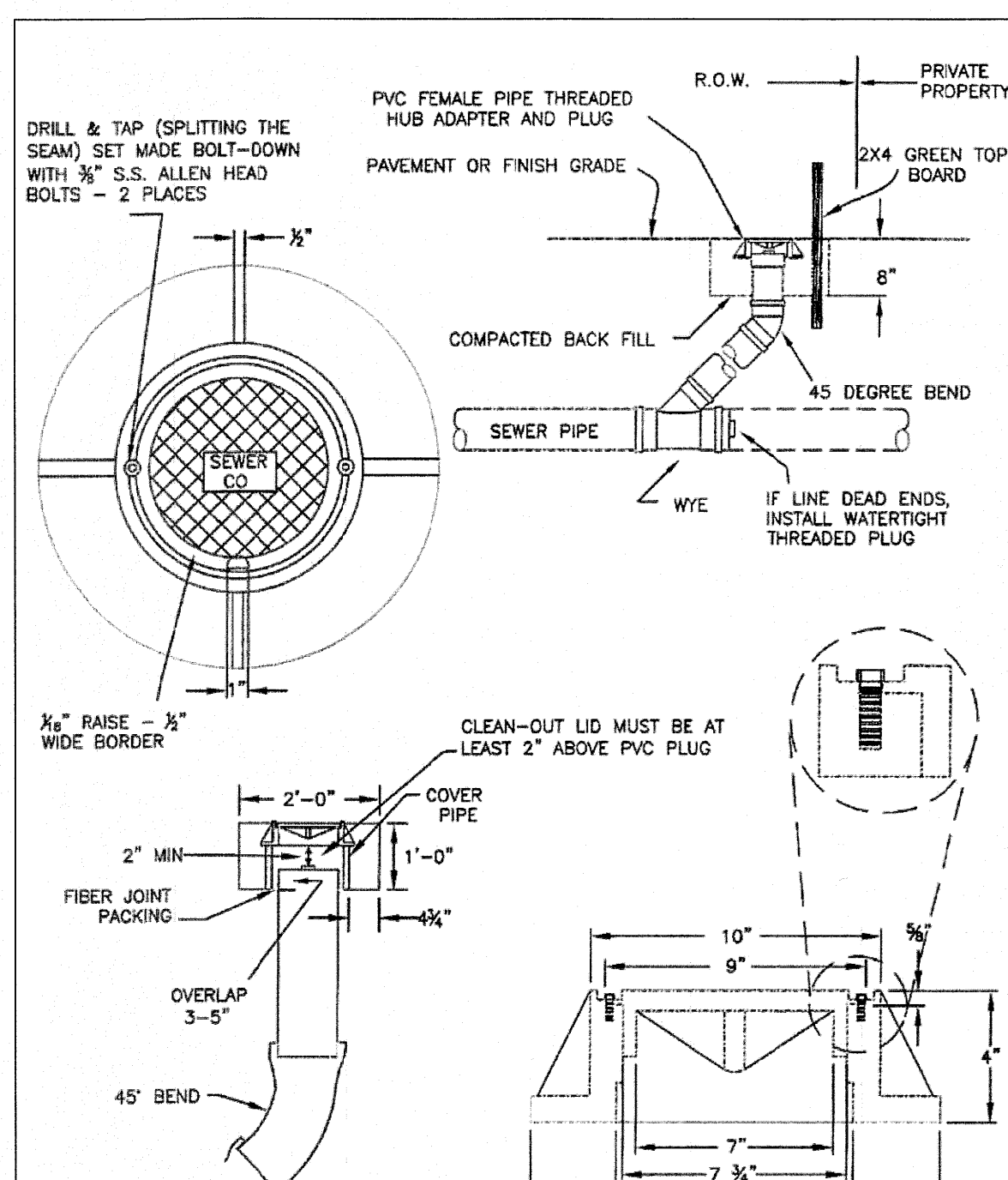
Public Works Director

Date

CITY OF FERNDAL  
CATCH BASIN TYPE I

DRAWING  
ST-1

JUNE 1995

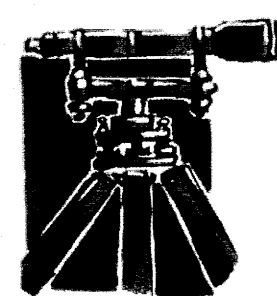
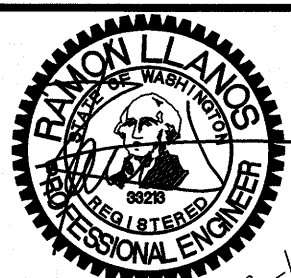


SEWER CLEANOUT DETAIL  
NTS

CALL 2 BUSINESS DAYS BEFORE YOU DIG  
1-800-424-5555  
UTILITIES UNDERGROUND LOCATION CENTER

R:\Common\Land Projects\2017\1724-6165 VISTA\1724-ASBUILT.dwg PLOT DATE: 1/22/2018 2:58 PM

NO.	REVISION	BY	DATE
1	ASBUILT SUBMITTAL	RL	01/22/18
2			
3			
4			
5			



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MEL HANSEN  
PO BOX 1091  
FERNDAL WA

APPROVED  
JAN 23 2018  
BY: [Signature]  
CITY OF FERNDAL  
PUBLIC WORKS DEPARTMENT

CITY OF FERNDAL DETAILS  
HANSEN RENTALS  
6165 VISTA DR, FERNDAL WA  
A PORTION OF SECTION 18, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET  
04  
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