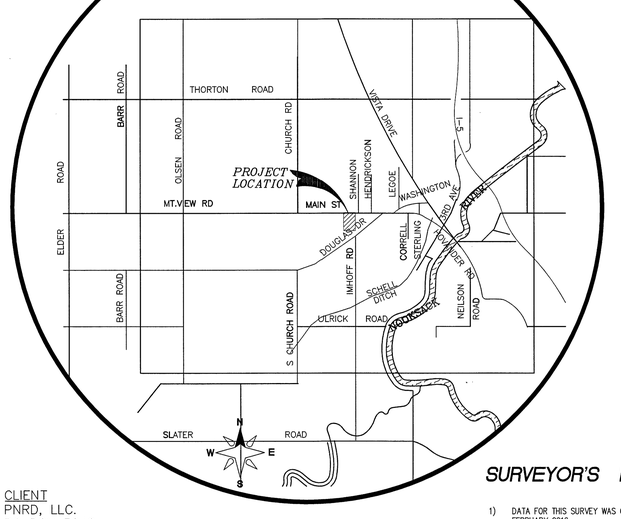
A PORTION OF THE NE 1/4 OF SECTION 30, TOWNSHIP 39 N., RANGE 2 E. OF THE W.M.
CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

MAIN STREET VILLAGE

RECORD DRAWING

VICINITY MAP FERNDALE, WA



TOTAL PARCEL AREA: 167,046 SF
ROW AREA: 29,254 SF
LOT AREA: 137,792 SF

LOT TOTAL AS PROPOSED
11 LOTS

CLIENT
PNRD, LLC.
PO BOX 3249
FERNDALE, WA 98248
CONTACT: SHAHGIR SINGH GILL
(360) 296-2251

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

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

SURVEYOR'S NOTES:

1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON FEBRUARY 2016.

2) EQUIPMENT USED: LEICA TCRA1203: 00"3" ± 2 PPM, ±2 MM

3) HORIZONTAL DATUM: COF NAD83/91
VERTICAL DATUM: NGVD29

4) PURPOSE OF SURVEY: TOPOGRAPHIC SURVEY

5) IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WAC CHAPTER 332-130, THIS RECORD OF SURVEY DEPICTS OCCUPATIONAL INDICATORS, SUCH AS FENCES. THESE INDICATORS REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT RESOLVE ANY OF THE LEGAL OWNERSHIP ISSUES THAT MAY ARISE FROM THESE UNWRITTEN TITLE CLAIMS.

6) CONTOUR INTERVALS ARE 1 FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.

7) UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON FIELD LOCATION OF THE SURFACE EVIDENCE OF EXISTING STRUCTURES. UNDERGROUND UTILITY LOCATION SERVICES WERE NOT PROVIDED FOR THIS TOPOGRAPHIC SURVEY AND THE UNDERGROUND ROUTING OF REPORTED BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED WITH THE UTILITY PURVEYOR. ADDITIONAL UTILITY LOCATIONS AND UNDERGROUND UTILITY LOCATION PAINT MAPPING WILL BE REQUIRED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION
(PER WLT ORDER No. W-130884)

LOTS A AND B, LOT LINE ADJUSTMENT TO LOTS 1 AND 2, LA ROSE SHORT PLATS, ACCORDING TO THE PLAT THEREOF, RECORDED ON MARCH 28, 1991, IN VOLUME 23 OF SHORT PLAT, PAGE 62, UNDER AUDITOR'S FILE NUMBER 9103328143, RECORDS OF WHATCOM COUNTY, WASHINGTON; EXCEPT THAT PORTION OF LOT B CONVEYED TO THE CITY OF FERNDALE BY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2120102782.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SHEET INDEX

1. COVER SHEET
2. CITY OF FERNDALE GENERAL NOTES
3. EXISTING CONDITIONS PLAN
4. TEMPORARY EROSION CONTROL - PLAN
5. PLAT
6. COMPOSITE UTILITY PLAN
7. ROAD & STORMWATER PLAN & PROFILE 1
8. ROAD & STORMWATER PLAN & PROFILE 2
9. ROAD & STORMWATER PLAN & PROFILE 3
9A. ROAD & STORMWATER PLAN & PROFILE 4 - EAST LOT
10. ROAD & STORMWATER PLAN & DETAILS - STORMWATER VAULT
11. ROAD & STORMWATER PLAN & PROFILE - MAIN STREET
12. GRADING PLAN
13. ROAD & STORM TYPICAL DETAILS 1
14. ROAD & STORM TYPICAL DETAILS 2
14A. ROAD & STORM TYPICAL DETAILS 3
15. CROSS SECTIONS
16. WATER PLAN & PROFILE - ONSITE CENTERLINE
17. WATER TYPICAL DETAILS
18. SEWER PLAN & PROFILE 1
19. SEWER PLAN & PROFILE 2 & SERVICE CROSS-SECTIONS
19A. SEWER SADDLE MANHOLE INSTALLATION DETAILS
20. SEWER TYPICAL DETAILS

BURIED UTILITIES NOTE:

ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS ONLY AND THERE IS NO GUARANTEE THAT ALL UTILITIES ON THIS SITE ARE SHOWN. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTACT THE WASHINGTON STATE UTILITY LOCATED CENTER AT LEAST 48 HOURS BEFORE CONSTRUCTION

LEGEND:

- = FND REBAR AND CAP
- = FND PK NAIL
- = FND BRASS MON
- = CALCULATED POSITION
- = EXIST SANITARY SEWER MANHOLE
- = EXIST POWER/AND OR UTILITY POLE
- = EXIST GUY WIRE
- = EXISTING TEELPHONE PEDESTAL
- = EXISTING WATER VALVE
- = EXISTING FIRE HYDRANT
- = EXISTING WATER BLOW-OFF VALVE
- = EXIST SD CATCH BASIN (TYPE I)
- = EXIST SD CATCH BASIN (TYPE 2)
- = EXIST GAS METER
- = EXIST LANDSCAPING
- = EXIST SIGN
- = EXIST STORM DRAIN LINE
- = EXIST SEWER DRAIN LINE
- = EXIST WATER LINE
- = EXIST GAS LINE
- = EXIST OVERHEAD POWER LINE
- = EXIST GUARDRAIL
- = EXIST BARBWIRE FENCE
- = EXIST WOOD FENCE
- = EXIST TOP OF BANK
- = EXIST BOTTOM OF BANK
- = EXIST DITCH
- = EXIST PATH
- = EXIST TREE LIN (BRUSH)
- = EXIST ORD:'ARY HIGH WATER MARK

PROPOSED LEGEND:

- = PROPOSED STORMDRAIN CATCHBASIN
- = PROPOSED STORMDRAIN FILTER
- = PROPOSED STORM DRAIN SERVICE
- = PROPOSED STORM DRAIN CLEANOUT
- = PROPOSED STORM DRAIN ROOF STUB
- = PROPOSED SANITARY SEWER MANHOLE
- = PROPOSED SANITARY SEWER SERVICE
- = PROPOSED WATER METER
- = PROPOSED FIRE HYDRANT
- = PROPOSED POST INDICATOR VALVE (PIV)
- = PROPOSED FIRE DEPARTMENT CONNECITON (FDC)
- = PROPOSED VALVE
- = PROPOSED BLOW-OFF
- = PROPOSED REDUCER
- = PROPOSED ADAPTER (FLXMJ)
- = PROPOSED CAP
- = PROPOSED TEE
- = PROPOSED 45° BEND
- = PROPOSED 22.5° BEND
- = THRUST BLOCK
- = PROPOSED GAS METER
- = PROPOSED BOLLARD
- = PROPOSED STREET LIGHT
- = PROPOSED LANDSCAPE BUSH & TREE
- = PROPOSED GABION BASKET
- = PROPOSED STORMWATER PIPE, 8"ø
- = PROPOSED STORMWATER PIPE, 12"ø
- = PROPOSED CUVLERT
- = PROPOSED DITCH
- = PROPOSED SEWER LINE, 8"ø
- = PROPOSED SEWER LINE, 6"ø
- = PROPOSED WATER LINE, 8"ø
- = PROPOSED WATER LINE, 6"ø
- = PROPOSED WATER LINE, 4"ø
- = PROPOSED CUT LINE
- = PROPOSED FILL LINE
- = PROPOSED TOP OF BANK
- = PROPOSED BOTTOM OF BANK
- = PROPOSED DITCH LINE
- = PROPOSED PERFORATED PIPE
- = PROPOSED ROOF & YARD DRAIN
- = PROPOSED COMMON UTILITIES
- = PROPOSED CONTOUR (INDEX)
- = PROPOSED CONTOUR (NORMAL)
- = EXST CHAIN LINK FENCE
- = PROPOSED ASPHALT
- = PROPOSED CONCRETE
- = PROPOSED GRAVEL
- = PROPOSED STRIPING
- = WETLAND
- = PERMANENT BUFFER IMPACT 771 SF
- = TEMPORARY BUFFER IMPACT 2429 SF
- = NEW BUFFER AREA 4569 SF

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
3				9			
4				10			
5				11			

RAMON LLANOS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

COVER

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 01 OF 20

RECORD DRAWING

\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNDR\dwg\1602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:09 PM

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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" (WSDOT SPECS.), THE CITY OF FERNDALE DEVELOPMENT STANDARDS (COFDS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOE 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 ONSITE 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 FERNDALE AND/OR WHATCOM COUNTY 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 FERNDALE 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 FERNDALE PUBLIC WORKS DEPARTMENT, REPRESENTATIVES FROM THE CITY OF FERNDALE 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 FERNDALE.
   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 FERNDALE, 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 PRIVATE & PUBLIC PROPERTY IN CONNECTION WITH THE PERFORMANCE AND WORK BY THE CONTRACTOR. 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 WSDOT STANDARD SPECIFICATIONS 1-07.23- TRAFFIC CONTROL, SHALL APPLY.
13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
14. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDALE DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

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 FERNDALE DEVELOPMENT STANDARDS.
D. ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH ?-INCH MINUS OR 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 FERNDALE 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.
I. A MINIMUM OF 5-FOOT SEPARATION IS REQUIRED BETWEEN THE WET UTILITIES (WATER, SEWER, STORM) SHOWN ON THE PLANS AND THE DRY UTILITIES (GAS, POWER, CABLE AND POWER) THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.

EARTHWORK:

A. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
B. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
C. UNSUITABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
D. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES AND SURFACING:

A. GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET WSDOT STANDARD SPECIFICATIONS.
B. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
C. THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN ½ INCH OF FINISHED GRADE.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CRUSHED SURFACING TOP COURSE THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

STORM DRAINGAGE:

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:

CATCH BASINS TYPE 1, 1L OR 2	WSDOT STD. DETAILS B-5.20, B-5.40 OR B-10.20
"RESIDENTIAL SERVICE LINE"	COFSD ST-7 (CITY OF FERNDALE STD DETAIL)
CATCH BASINS	COFSD ST-16 (CITY OF FERNDALE STD DETAIL)

2. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP); ALL OTHER STORM SEWER PIPE SHALL BE PVC.
3. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
4. CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 18" OF COVER IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION), AS SHOWN IN THE PLANS. DUCTILE IRON PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.
5. COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOADS TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.
6. AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREAMS OR OFF-SITE STORMWATER SYSTEMS.
7. POSITIVE LOT DRAINS PER STANDARD DETAIL ST-16.
8. CONDITIONAL USE LEVEL DESIGNATION (CULD) TREATMENT TECHNOLOGY: THE FOLLOWING MUST BE SUBMITTED AND APPROVED BY THE CITY OF FERNDALE PRIOR TO INSTALLATION OF THE CULD TREATMENT TECHNOLOGY:
   -CONFIRMATION LETTER FROM THE TREATMENT TECHNOLOGY MANUFACTURER IDENTIFYING THAT THE PROJECT QUALIFIES AS ONE OF THE ALLOWED NUMBER OF INSTALLS.
   -CONTINGENCY MEMO FROM APPLICANT STATING:
      1. UNTIL GENERAL USE LEVEL DESIGNATION (GULD) STATUS IS OBTAINED, OWNER SHALL SUBMIT ANNUAL SAMPLING RESULTS TO THE CITY (DUE BY DECEMBER 31 BEGINNING YEAR OF INSTALLATION) THAT PROVE THAT THE TECHNOLOGY IS MEETING ECOLOGY WATER QUALITY STANDARDS.
      2. IF THE QUALITY STANDARDS ARE NOT BEING MET, OR IF THE TREATMENT TECHNOLOGY REPLACEMENT PARTS, FILTERS, ETC. ARE NO LONGER AVAILABLE, THE OWNER SHALL INSTALL AN EQUIVALENT TREATMENT TECHNOLOGY AT THEIR EXPENSE.
      3. IF AT ANY TIME, THE TREATMENT TECHNOLOGY IS NOT MEETING WATER QUALITY STANDARDS, THE CITY HAD THE RIGHT TO IMPLEMENT A NOTICE OF VIOLATION, AS THE OPERATION AND MAINTENANCE OF THE TREATMENT TECHNOLOGY IS THE RESPONSIBILITY OF THE OWNER.
      4. THIS MEMO SHALL ALSO BE INCLUDED IN THE STORMWATER MAINTENANCE MANUAL TO BE SUBMITTED AT THE COMPLETION OF THE PROJECT.

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
FIRE HYDRANT ASSEMBLY	COFSD W-1
THRUST BLOCKING	COFSD W-2, W-3 & W-4
WATER SERVICE	COFSD W-5

2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF WSDOT STANDARD SPECIFICATIONS.
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 FERNDALE 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 FERNDALE 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 FERNDALE REQUIREMENTS. THE CITY OF FERNDALE 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 COFDS W-5.
12. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFDS- SD W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
   A. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" ST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE M&H 929T HYDRANTS.
   B. FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
   C. IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2' OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
   D. UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
   E. FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD:

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:

TYPICAL STREET SECTION	PER THESE PLANS
PCC CURB AND GUTTER	COFSD R-9
PCC SIDEWALKS	COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
PCC CURB RAMPS	WSDOT STD. DETAIL F-40.

2. ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.10-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
3. THE OWNER SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE UNDER ALL PAVING AREAS.
4. ASPHALT CONCRETE PAVEMENT SHALL BE CLASS "B" MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 5-04, EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.
5. CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).
6. CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 6-02.3(2)B.
7. CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH CITY STANDARDS, DRAWING NO. R-12.
8. CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE CITY STANDARDS, DRAWING NO. R-15. A 2- INCH LATER OF 3/4 INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.
9. CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT STANDARDS SPECIFICATIONS, SECTION 8-04 AND CITY OF FERNDALE STANDARDS, DRAWING R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD PLANS F-40. WHERE NEW CEMENT CONCRETE CURB AND GUTTER IS CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPEDE FLOW IN THE GUTTER LINE.
10. PAVEMENT:
   A. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
   B. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
   C. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROTAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
11. THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND CITY STANDARDS, DRAWING NO. R-8.
12. TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-08.
13. STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 7-04. MATERIAL SHALL BE HANCOR SURE-LOK F477 PIPE OR CITY APPROVED EQUAL. LOTS' STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT STANDARD SPECIFICATION, SECTION 9-05.1(5)
14. PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT STANDARD SPECIFICATION 7-01.3(2) .

SANITARY SEWER SYSTEMS:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATIONS AND DETAILS, A.P.W.A. STANDARD SPECIFICATIONS, AND WSDOT STANDARD SPECIFICATIONS, MOST RECENT EDITIONS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.
2. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 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 FERNDALE 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 FERNDALE STANDARD DETAILS AND SHALL BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
6. ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE 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.
8. 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 STENCILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

DESIGN INFORMATION ONLY

RECORD DRAWING

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
3				9			
4				10			
5				11			

RAMON LLANOS — STATE OF WASHINGTON — 33213 — REGISTERED PROFESSIONAL ENGINEER — 4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

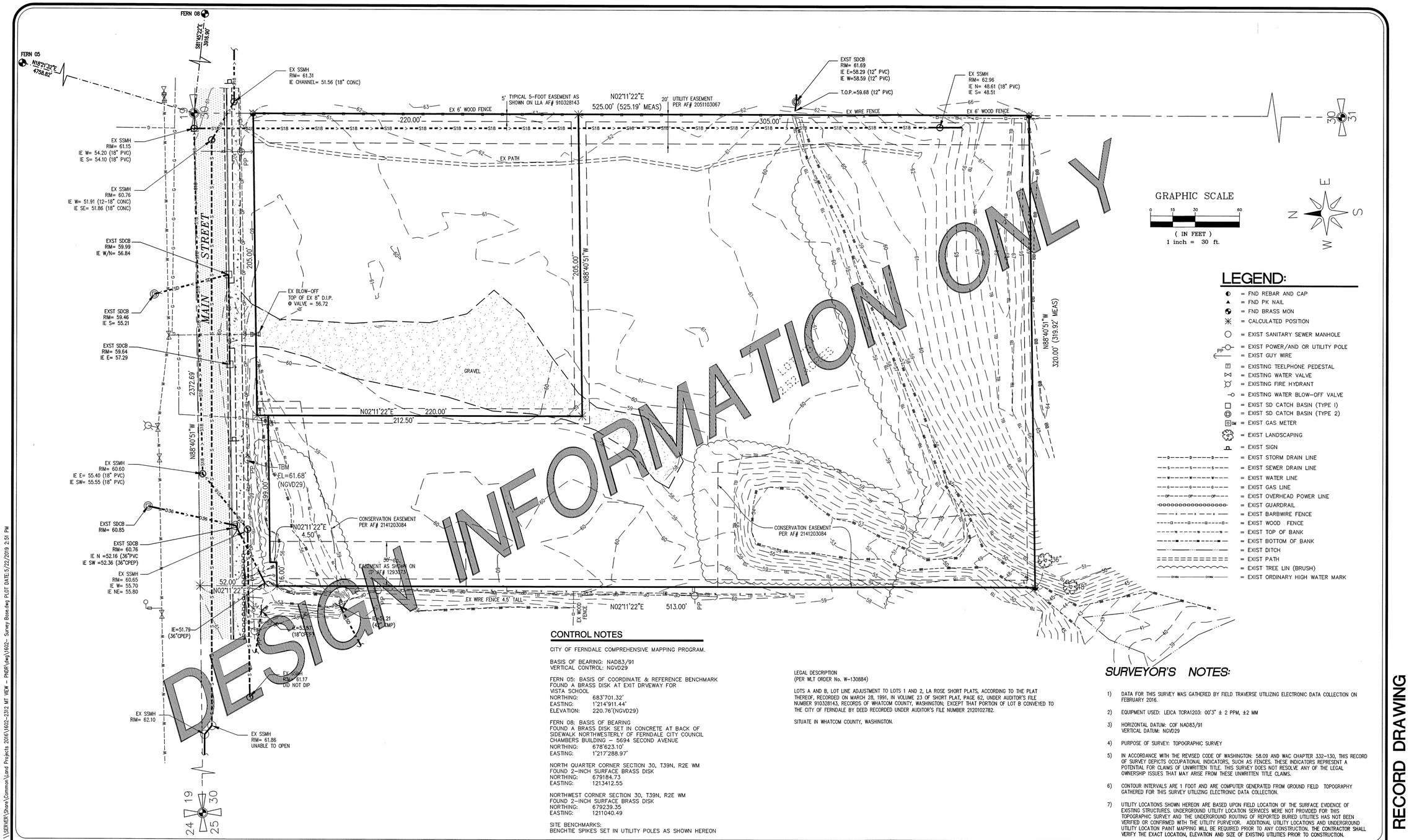
PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY ______
CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

CITY OF FERNDALE GENERAL NOTES

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 02 OF 20



LEGEND:

- = FND REBAR AND CAP
- = FND PK NAIL
- = FND BRASS MON
- = CALCULATED POSITION
- = EXIST SANITARY SEWER MANHOLE
- = EXIST POWER/AND OR UTILITY POLE
- = EXIST GUY WIRE
- = EXISTING TEELPHONE PEDESTAL
- = EXISTING WATER VALVE
- = EXISTING FIRE HYDRANT
- = EXISTING WATER BLOW-OFF VALVE
- = EXIST SD CATCH BASIN (TYPE I)
- = EXIST SD CATCH BASIN (TYPE 2)
- = EXIST GAS METER
- = EXIST LANDSCAPING
- = EXIST SIGN
- = EXIST STORM DRAIN LINE
- = EXIST SEWER DRAIN LINE
- = EXIST WATER LINE
- = EXIST GAS LINE
- = EXIST OVERHEAD POWER LINE
- = EXIST GUARDRAIL
- = EXIST BARBWIRE FENCE
- = EXIST WOOD FENCE
- = EXIST TOP OF BANK
- = EXIST BOTTOM OF BANK
- = EXIST DITCH
- = EXIST PATH
- = EXIST TREE LIN (BRUSH)
- = EXIST ORDINARY HIGH WATER MARK

CONTROL NOTES

CITY OF FERNDALE COMPREHENSIVE MAPPING PROGRAM.

BASIS OF BEARING: NAD83/91
VERTICAL CONTROL: NGVD29

FERN 05: BASIS OF COORDINATE & REFERENCE BENCHMARK
FOUND A BRASS DISK AT EXIT DRVEWAY FOR
VISTA SCHOOL
NORTHING: 683°701.32'
EASTING: 1'214°911.44'
ELEVATION: 220.76'(NGVD29)

FERN 08: BASIS OF BEARING
FOUND A BRASS DISK SET IN CONCRETE AT BACK OF
SIDEWALK NORTHWESTERLY OF FERNDALE CITY COUNCIL
CHAMBERS BUILDING – 5694 SECOND AVENUE
NORTHING: 678°623.10'
EASTING: 1'217°288.97'

NORTH QUARTER CORNER SECTION 30, T39N, R2E WM
FOUND 2-INCH SURFACE BRASS DISK
NORTHING: 679184.73
EASTING: 1213412.55

NORTHWEST CORNER SECTION 30, T39N, R2E WM
FOUND 2-INCH SURFACE BRASS DISK
NORTHING: 679239.35
EASTING: 1211040.49

SITE BENCHMARKS:
BENCHTIE SPIKES SET IN UTILITY POLES AS SHOWN HEREON

LEGAL DESCRIPTION
(PER WLT ORDER No. W-130884)

LOTS A AND B, LOT LINE ADJUSTMENT TO LOTS 1 AND 2, LA ROSE SHORT PLATS, ACCORDING TO THE PLAT THEREOF, RECORDED ON MARCH 28, 1991, IN VOLUME 23 OF SHORT PLAT, PAGE 62, UNDER AUDITOR'S FILE NUMBER 910328143, RECORDS OF WHATCOM COUNTY, WASHINGTON; EXCEPT THAT PORTION OF LOT B CONVEYED TO THE CITY OF FERNDALE BY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2120102782.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SURVEYOR'S NOTES:

1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON FEBRUARY 2016.

2) EQUIPMENT USED: LEICA TCRA1203: 00"3" ± 2 PPM, ±2 MM

3) HORIZONTAL DATUM: COF NAD83/91
VERTICAL DATUM: NGVD29

4) PURPOSE OF SURVEY: TOPOGRAPHIC SURVEY

5) IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WAC CHAPTER 332-130, THIS RECORD OF SURVEY DEPICTS OCCUPATIONAL INDICATORS, SUCH AS FENCES. THESE INDICATORS REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT RESOLVE ANY OF THE LEGAL OWNERSHIP ISSUES THAT MAY ARISE FROM THESE UNWRITTEN TITLE CLAIMS.

6) CONTOUR INTERVALS ARE 1 FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.

7) UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON FIELD LOCATION OF THE SURFACE EVIDENCE OF EXISTING STRUCTURES. UNDERGROUND UTILITY LOCATION SERVICES WERE NOT PROVIDED FOR THIS TOPOGRAPHIC SURVEY AND THE UNDERGROUND ROUTING OF REPORTED BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED WITH THE UTILITY PURVEYOR. ADDITIONAL UTILITY LOCATIONS AND UNDERGROUND UTILITY LOCATION PAINT MAPPING WILL BE REQUIRED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

NO.	REVISION	BY	DATE
0	SUBMITTAL 1	RL	04/23/19
1			
2			
3			
4			
5			

RICHARD T. HAGGITT
STATE OF WASHINGTON
36218
REGISTERED PROFESSIONAL LAND SURVEYOR
6/12/19

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

JOB NO.:	1602
DWG. NAME:	1602- Survey Base.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY _____
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

EXISTING CONDITIONS

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 03 OF 20

RECORD DRAWING

\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNRP\dwg\1602- Survey Base.dwg PLOT DATE:5/22/2019 2:51 PM

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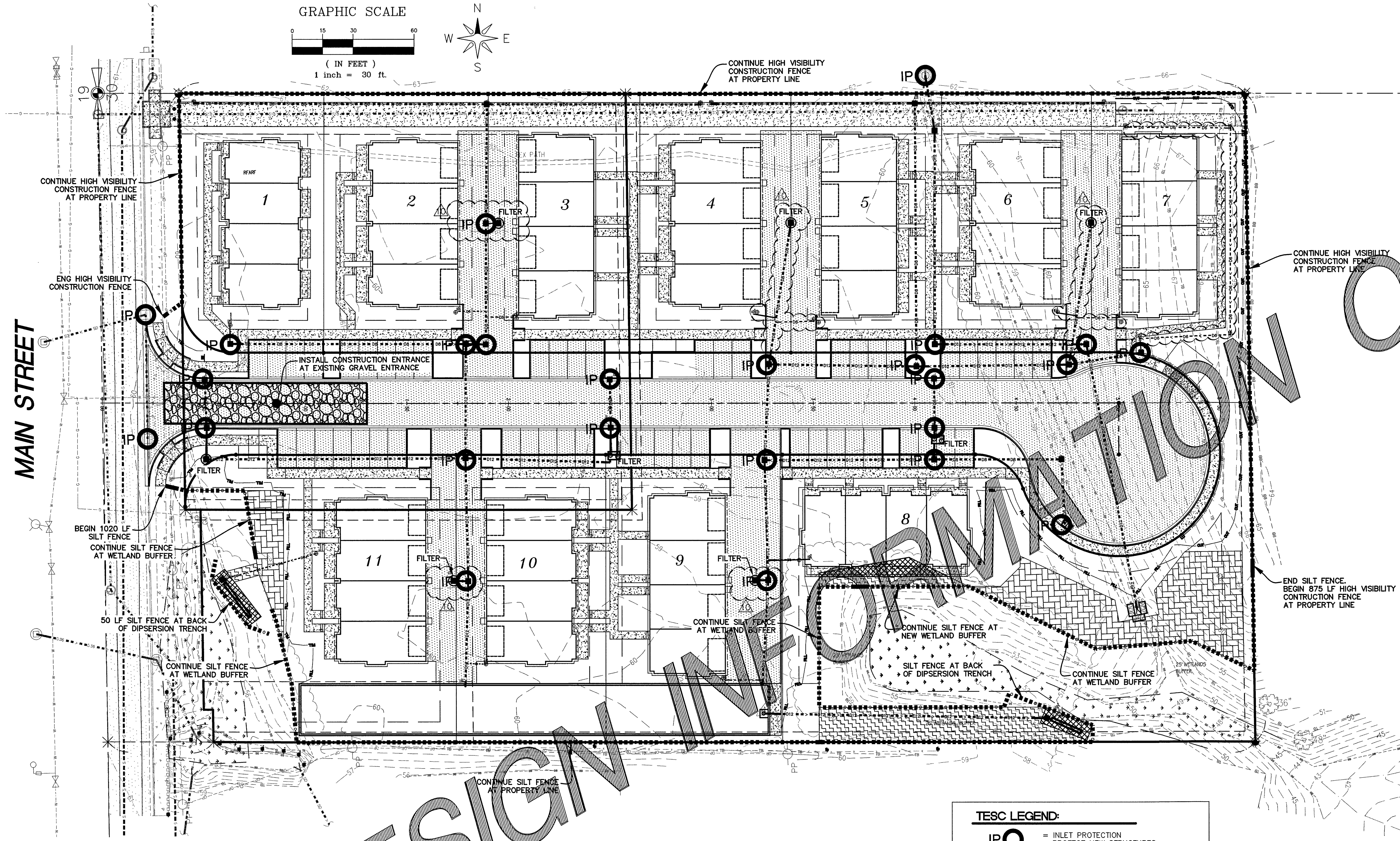
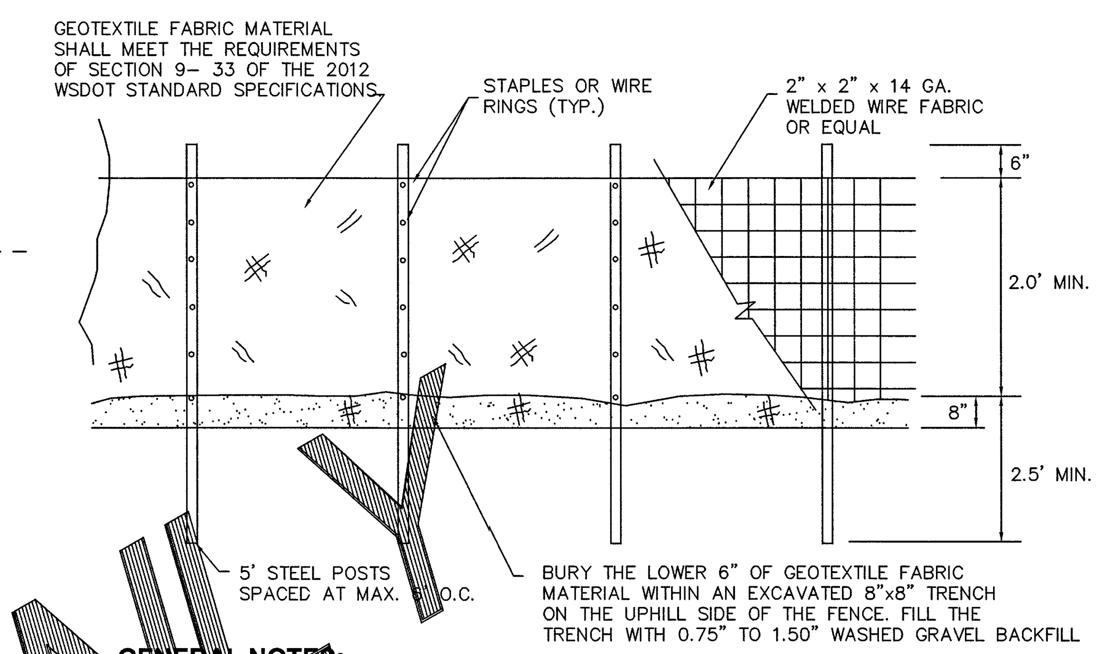
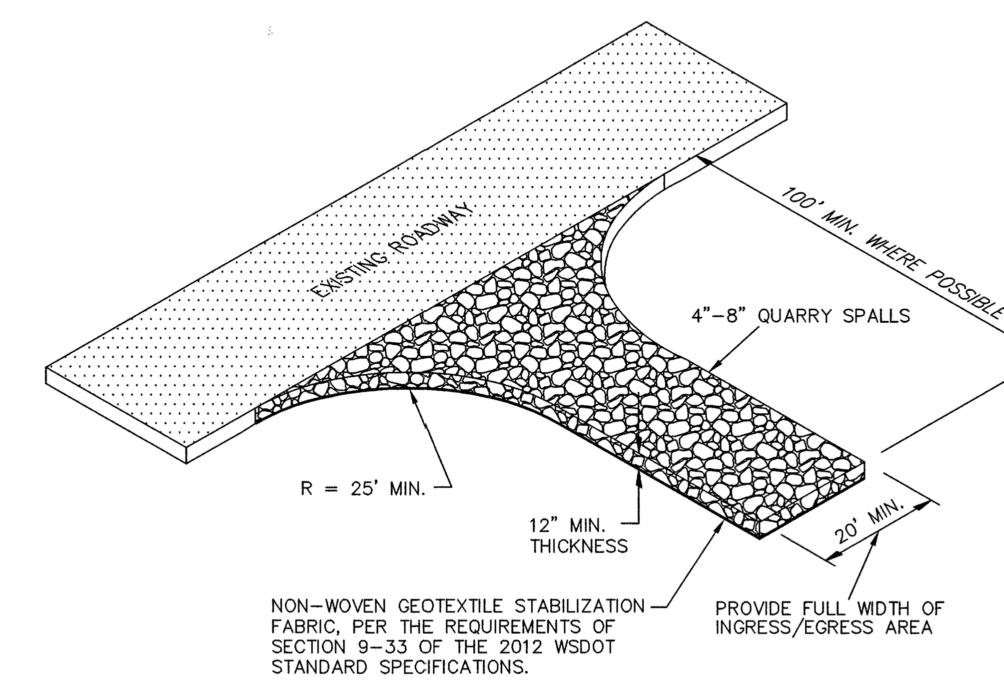




GENERAL NOTES:

1. ANY DAMAGE TO FENCING SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEN THE WATER MUST BE INTERCEPTED AND CONVEYED TO A FULLY-FUNCTIONING SEDIMENT TRAP, POND, OR CONVEYANCE SYSTEM.
3. IT IS IMPORTANT TO PERIODICALLY CHECK THE UPHILL SIDE OF FENCING FOR SIGNS OF CLOGGING. IF CLOGGING OCCURS, THE FENCE WILL ACT AS A BARRIER TO FLOW AND WILL CAUSE CHANNELIZATION PARALLEL TO THE FENCE. TO REMEDY THIS, THE CONTRACTOR SHALL REPLACE THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
4. SILT FENCING SHALL BE CONSTRUCTED DIRECTLY AFTER CLEARING AND GRUBBING IS COMPLETE. THE FENCE SHALL ONLY BE REMOVED WHEN CONSTRUCTION OF UTILITIES DEEMS IT ABSOLUTELY NECESSARY. IMMEDIATELY AFTER UTILITIES ARE IN-PLACE, THE SILT FENCING SHALL BE RECONSTRUCTED.

① SILT FENCE DETAIL (BASED ON FERNDALE ST-10)
not to scale



GENERAL NOTES:

1. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO SURROUNDING FACILITIES, THEN ALTERNATIVE MEASURES TO KEEP THE FACILITIES FREE OF SEDIMENT SHALL TO USED. THIS MAY INCLUDE STREET SWEEPING OR UPSIZING THE DIMENSIONS OF THE ENTRANCE.
2. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH PAVEMENT, A SMALL SUMP OR POND SHALL BE CONSTRUCTED AND THE SEDIMENT SHALL BE CONVEYED INTO THE SUMP OR POND.

② QUARRY SPALL CONSTRUCTION ENTRANCE DETAIL
not to scale

= WETLAND

= PERMANENT BUFFER IMPACT
771 SF

= TEMPORARY BUFFER IMPACT
2429 SF

= NEW BUFFER AREA
4569 SF

CITY OF FERNDALE TESC NOTES:

1. STABILIZATION & SEDIMENT TRAPPING. ALL EXPOSED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF BMP'S. FROM OCTOBER 1 TO APRIL 30, NO SOILS SHALL REMAIN UNEXPOSED FOR MORE THAN 2 DAYS. FROM MAY 1 TO SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN 7 DAYS. PRIOR TO LEAVING THE SITE, STORMWATER RUNOFF SHALL PASS THROUGH A SEDIMENT POND, TRAP OR OTHER APPROPRIATE BMP.
2. DELINEATE CLEARING & EASEMENT LIMITS. IN THE FIELD, STAKE AND FLAG CLEARING LIMITS AND/OR ANY EASEMENTS, SETBACKS, SENSITIVE/CRITICAL AREAS AND THIER BUFFERS, TREES AND DRAINAGE COURSES.
3. PROTECTION OF ADJACENT PROPERTIES. PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION.
4. TIMING & STABILIZATION OF SEDIMENT TRAPPING MEASURES. SEDIMENT PONDS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS, AND OTHER BMP'S INTENDED TO TRAP SEDIMENT ON-SITE SHALL BE CONSTRUCTED AS A FIRST STEP IN GRADING. THESE BMP'S SHALL BE FUNCTIONAL BEFORE LAND DISTURBING ACTIVITIES TAKE PLACE. EARTH STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS SHALL BE SEEDED AND MULCHED ACCORDING TO THE TIMING INDICATED IN NO. 1 ABOVE.
5. CUT & FILL SLOPES. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. IN ADDITION, SLOPES SHALL BE STABILIZED IN ACCORDANCE WITH NO. 1 ABOVE.
6. CONTROLLING OFF-SITE EROSION. PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITES SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.
7. STABILIZATION OF TEMPORARY CONVEYANCE CHANNELS & OUTLETS. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED VELOCITY OF FLOW FROM A 2-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. STABILIZATION ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAMBANKS, SLOPES AND DOWNSTREAM REACHES SHALL BE PROVIDED AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.
8. STORM DRAIN INLET PROTECTION. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
9. UNDERGROUND UTILITY CONSTRUCTION. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA; WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME; WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES; AND TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND.
10. CONSTRUCTION ACCESS ROUTES. WHEREVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED ROADS, PROVISIONS MUST BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) ONTO THE PAVED ROAD. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE ROADS SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
11. REMOVAL OF TEMPORARY BMP'S. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.
12. DEWATERING CONSTRUCTION SITES. DEWATERING DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND.
13. CONTROL OF POLLUTANTS OTHER THAN SEDIMENT ON CONSTRUCTION SITES. ALL POLLUTANTS OTHER THAN SEDIMENT THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
14. MAINTENANCE. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMP'S SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
15. FINANCIAL LIABILITY. PERFORMANCE BONDING, OR OTHER APPROPRIATE FINANCIAL INSTRUMENTS, SHALL BE REQUIRED FOR ALL PROJECTS TO ENSURE COMPLIANCE WITH THE APPROVED TESC PLAN.
16. ALL SITE GRADING SHALL BE COMPLETED IN ACCORDANCE WITH APPENDIX J OF THE 2012, INTERNATIONAL BUILDING CODE.
17. SITE GRADING SHALL BE MONITORED BY GEOTEST SERVICES TO ENSURE THE FILLS WERE PERFORMED AND RECORDED PER APPENDIX J NOTED IN THE ABOVE COMMENT.
18. WORK PERFORMED OUTSIDE CITY RIGHT-OF-WAY ON PRIVATE PROPERTY REQUIRES PROJECT CERTIFICATION BY THE ENGINEER OF RECORD. THE ENGINEER OR RECORD SHALL DETERMINE AN INSPECTION SCHEDULE TO BE CARRIED OUT BY HIMSELF OR HERSELF AND/OR QUALIFIED DESIGNEE INCLUDING GEOTECHNICAL INSPECTIONS AND DOCUMENTATION SUPPORT.
19. FOR PROJECT ACCEPTANCE THE ENGINEER OF RECORD IS REQUIRED TO SUBMIT A FINAL AS-BUILT GRADING PLAN FOR CITY REVIEW AND APPROVAL THAT INCLUDES THE FOLLOWING STATEMENT:
    AS THE ENGINEER OF RECORD, I HEREBY CERTIFY THAT THE IMPROVEMENTS COMPLETED AT 5445 PORTAL WAY FOR FLAX 4-LIFE AND 6407 PORTAL WAY FOR ALPINE INVESTMENTS HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE PLANS APPROVED BY THE PUBLIC WORKS DIRECTOR AND IN ACCORDANCE WITH THE SPECIFICATIONS ADOPTED BY THE CITY OF FERNDALE.
20. A STORMWATER MAINTENANCE PLAN MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL AT PROJECT COMPLETION INCLUDING AN 11X17 AS-BUILT DRAWING OF THE STORMWATER FACILITIES IN CONFORMANCE WITH THE ATTACHED STORMWATER MAINTENANCE MANUAL CHECKLIST FOR THE CONVEYANCE SYSTEM LOCATED OUTSIDE CITY R/W THAT MUST BE PRIVATELY MAINTAINED.

TESC LEGEND:

IP = INLET PROTECTION
PROTECT NEW STRUCTURES AS THEY ARE INSTALLED

= SEDIMENT FENCE
(DETAIL 1, THIS SHEET)

= HIGH VISIBILITY CONSTRUCTION FENCE

= CONSTRUCTION ENTRANCE
(DETAIL 2, THIS SHEET)

EROSION AND SEDIMENT CONTROL GENERAL NOTES:

EROSION CONTROL METHODS AND MATERIALS SHALL MEET THE REQUIREMENTS OF SECTION 8-01 OF THE 2012 WSDOT/APWA STANDARD SPECIFICATIONS, THE REQUIREMENTS SET FORTH IN VOLUME II OF THE "STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, CURRENT EDITION, THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE PROJECT SWPPP AND THIS PLAN, WITH THE MOST EFFECTIVE REQUIREMENTS TAKING PRECEDENCE. THE CONTRACTOR SHALL FOLLOW RECOMMENDATIONS MADE BY SUPPLIERS AND MANUFACTURERS FOR ALL MATERIALS AND EQUIPMENT USED.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT SILTY STORMWATER FROM EXITING THE SITE. IF SILT LADEN STORMWATER EXITS THE SITE, THE ENGINEER SHALL STOP WORK ON THE JOB. IT IS THE CONTRACTOR'S RESPONSIBILITY TO WORK WITH THE PROJECT ENGINEER OR LOCAL JURISDICTION TO COORDINATE FURTHER EROSION CONTROL MEASURES, NOT SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN, THAT MAY BE NECESSARY TO CONTROL SITE RUNOFF. THE EXISTING AND PROPOSED STORM SYSTEMS SHALL BE CLEANED AND MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL ALL ON-SITE SOILS HAVE BEEN STABILIZED.

AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL FLUSH OUT ALL DEBRIS FROM THE STORM SYSTEM INSTALLED ON-SITE. MATERIAL FLUSHED FROM THE STORM SYSTEM SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DISPOSAL SITE.

DESIGN INFORMATION ONLY

RECORD DRAWING

\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNDR\dwg\1602-CIVL-ASB.dwg PLOT DATE:5/22/2019 2:24 PM

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RAMON LLANOS — STATE OF WASHINGTON — 33213 — REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN & DETAILS

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 04 OF 20

LOT	IMPERVIOUS	LANDSCAPE	TOTAL
1	5,375.99	3,494.65	8,870.64
2	7,655.39	2,712.60	10,367.99
3	7,081.45	2,482.95	9,564.40
4	7,215.83	2,291.78	9,507.61
5	7,383.41	2,124.08	9,507.49
6	7,309.65	2,126.86	9,436.51
7	6,145.83	4,512.00	10,657.83

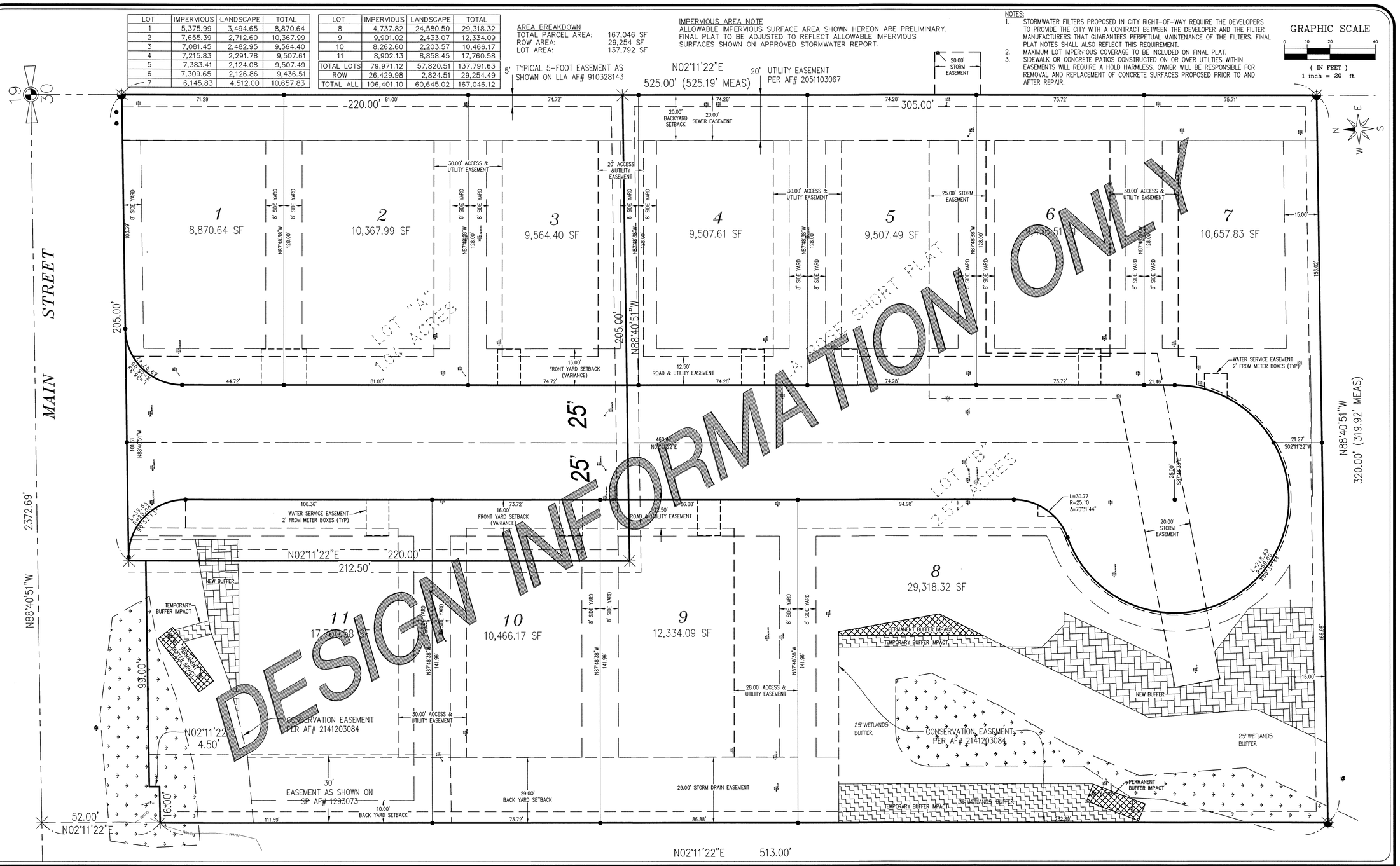
LOT	IMPERVIOUS	LANDSCAPE	TOTAL
8	4,737.82	24,580.50	29,318.32
9	9,901.02	2,433.07	12,334.09
10	8,262.60	2,203.57	10,466.17
11	8,902.13	8,858.45	17,760.58
TOTAL LOTS	79,971.12	57,820.51	137,791.63
ROW	26,429.98	2,824.51	29,254.49
TOTAL ALL	106,401.10	60,645.02	167,046.12

AREA BREAKDOWN
TOTAL PARCEL AREA: 167,046 SF
ROW AREA: 29,254 SF
LOT AREA: 137,792 SF

IMPERVIOUS AREA NOTE
ALLOWABLE IMPERVIOUS SURFACE AREA SHOWN HEREON ARE PRELIMINARY. FINAL PLAT TO BE ADJUSTED TO REFLECT ALLOWABLE IMPERVIOUS SURFACES SHOWN ON APPROVED STORMWATER REPORT.

NOTES:
1. STORMWATER FILTERS PROPOSED IN CITY RIGHT-OF-WAY REQUIRE THE DEVELOPERS TO PROVIDE THE CITY WITH A CONTRACT BETWEEN THE DEVELOPER AND THE FILTER MANUFACTURERS THAT GUARANTEES PERPETUAL MAINTENANCE OF THE FILTERS. FINAL PLAT NOTES SHALL ALSO REFLECT THIS REQUIREMENT.
2. MAXIMUM LOT IMPERVIOUS COVERAGE TO BE INCLUDED ON FINAL PLAT.
3. SIDEWALK OR CONCRETE PATIOS CONSTRUCTED ON OR OVER UTILITIES WITHIN EASEMENTS WILL REQUIRE A HOLD HARMLESS. OWNER WILL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CONCRETE SURFACES PROPOSED PRIOR TO AND AFTER REPAIR.

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.



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RAMON LLANOS STATE OF WASHINGTON 22001 REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

PROPOSED PLAT

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 05 OF 20

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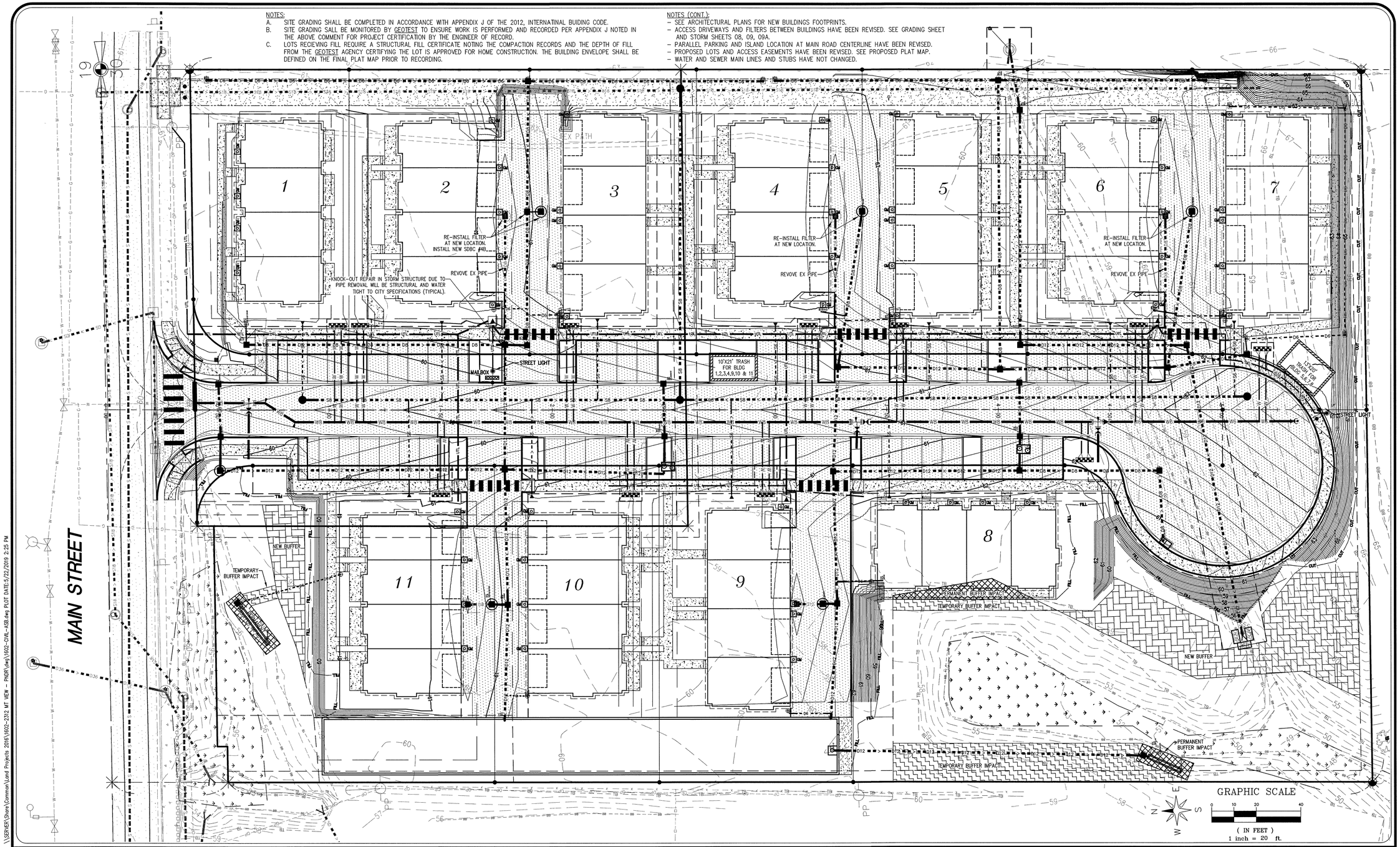
NOTES:

A. SITE GRADING SHALL BE COMPLETED IN ACCORDANCE WITH APPENDIX J OF THE 2012, INTERNATINAL BUIDING CODE.
B. SITE GRADING SALL BE MONITORED BY GEOTEST TO ENSURE WORK IS PERFORMED AND RECORDED PER APPENDIX J NOTED IN THE ABOVE COMMENT FOR PROJECT CERTIFICATION BY THE ENGINEER OF RECORD.
C. LOTS RECIEVING FILL REQUIRE A STRUCTURAL FILL CERTIFICATE NOTING THE COMPACTION RECORDS AND THE DEPTH OF FILL FROM THE GEOTEST AGENCY CERTIFYING THE LOT IS APPROVED FOR HOME CONSTRUCTION. THE BUILDING ENVELOPE SHALL BE DEFINED ON THE FINAL PLAT MAP PRIOR TO RECORDING.

NOTES (CONT.):

- SEE ARCHITECTURAL PLANS FOR NEW BUILDINGS FOOTPRINTS.
- ACCESS DRIVEWAYS AND FILTERS BETWEEN BUILDINGS HAVE BEEN REVISED. SEE GRADING SHEET AND STORM SHEETS 08, 09, 09A.
- PARALLEL PARKING AND ISLAND LOCATION AT MAIN ROAD CENTERLINE HAVE BEEN REVISED.
- PROPOSED LOTS AND ACCESS EASEMENTS HAVE BEEN REVISED. SEE PROPOSED PLAT MAP.
- WATER AND SEWER MAIN LINES AND STUBS HAVE NOT CHANGED.



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RANON L. LANGE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 4-23-19

LDES, INC.
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JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY _____
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

COMPOSITE PLAN

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 06 OF 20

RECORD DRAWING

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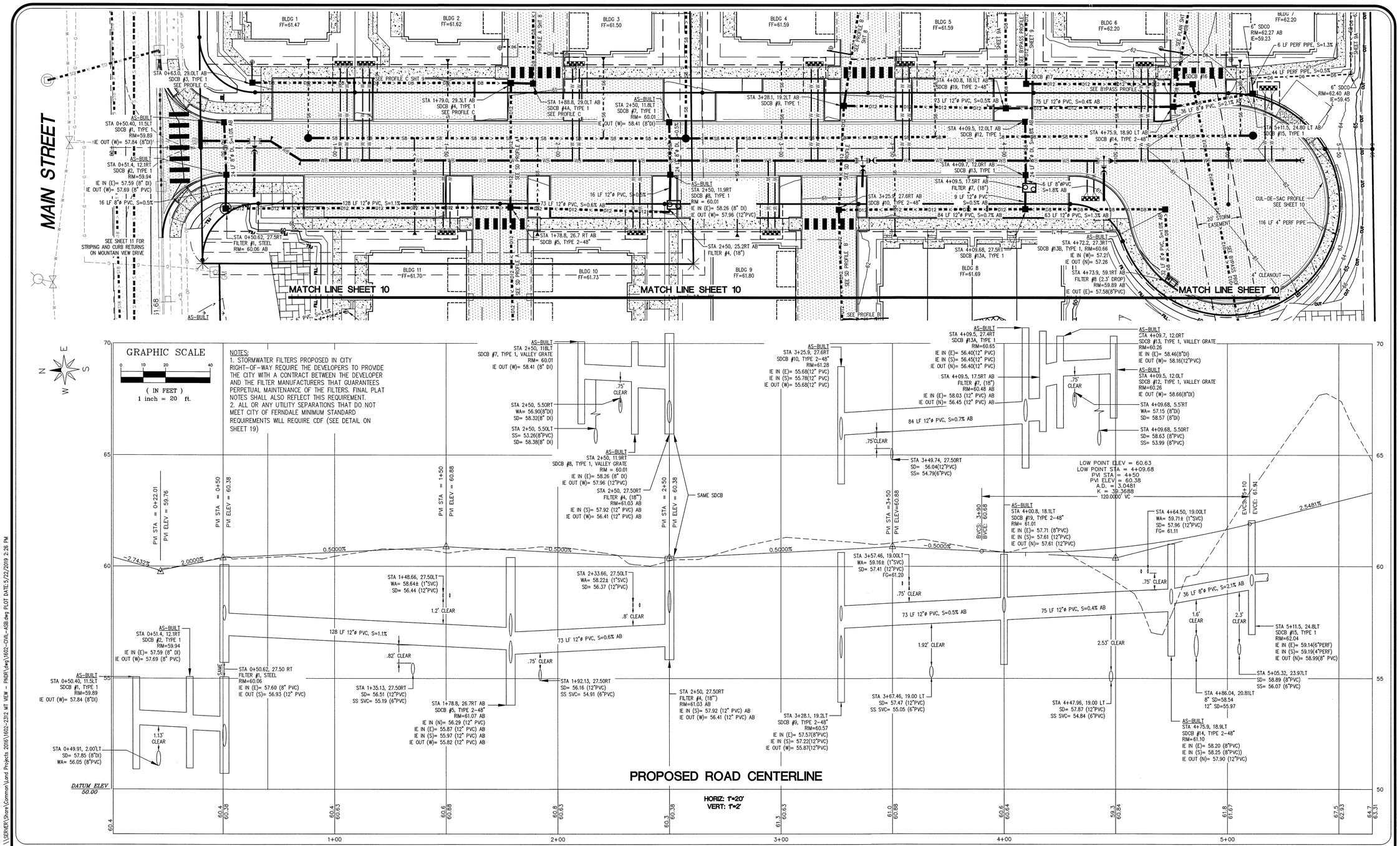

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RANDY LLANOS STATE OF WASHINGTON 38220 PROFESSIONAL ENGINEER
6-23-19

LDES, INC.
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FAX 360-383-0639

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

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FERNDALE, WA 98248

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JUN 13 2019
BY _____
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

ROAD & STORMWATER PLAN & PROFILE 1

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 07 OF 20

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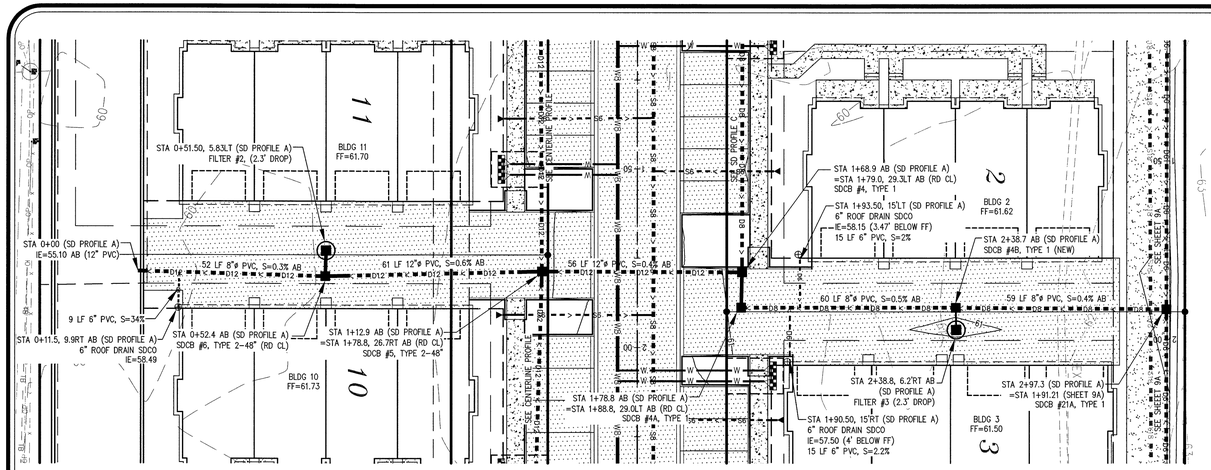
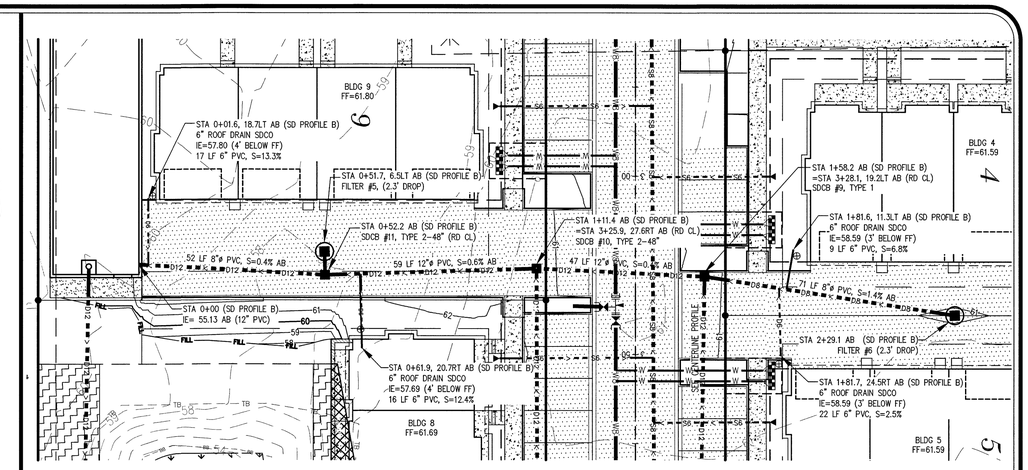


NOTES:
1. STORMWATER FILTERS PROPOSED IN CITY RIGHT-OF-WAY REQUIRE THE DEVELOPERS TO PROVIDE THE CITY WITH A CONTRACT BETWEEN THE DEVELOPER AND THE FILTER MANUFACTURERS THAT GUARANTEES PERPETUAL MAINTENANCE OF THE FILTERS. FINAL PLAT NOTES SHALL ALSO REFLECT THIS REQUIREMENT.
2. ALL OR ANY UTILITY SEPARATIONS THAT DO NOT MEET CITY OF FERNDALE MINIMUM STANDARD REQUIREMENTS WILL REQUIRE CDF (SEE DETAIL ON SHEET 19)

N W E S

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.



N W E S

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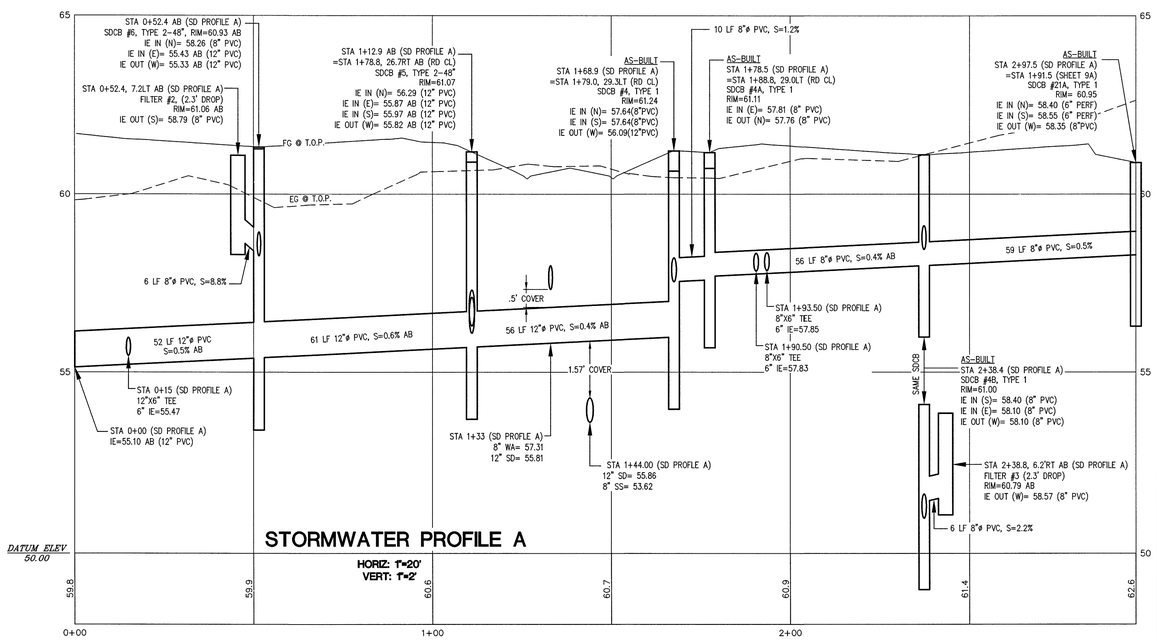
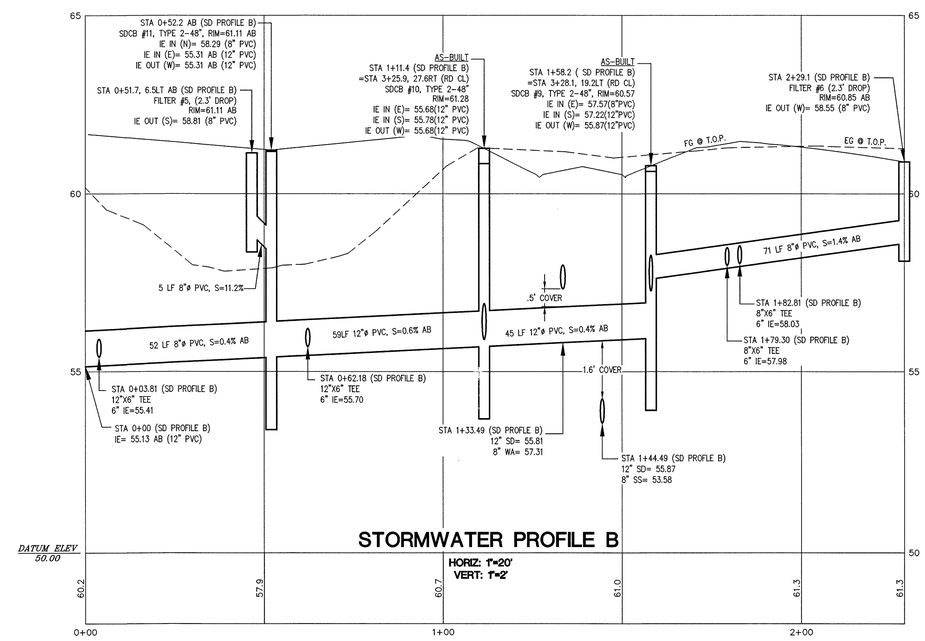


STORMWATER PROFILE A



STORMWATER PROFILE B

NO.	REVISION	BY	DATE	NO.		BY	DATE
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RANDY LLANOS STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
4-23-19

LDES, INC.
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JOB NO.:	1602
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PUBLIC WORKS DEPARTMENT

ROAD & STORMWATER PLAN & PROFILE 2

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 08 OF 20

RECORD DRAWING

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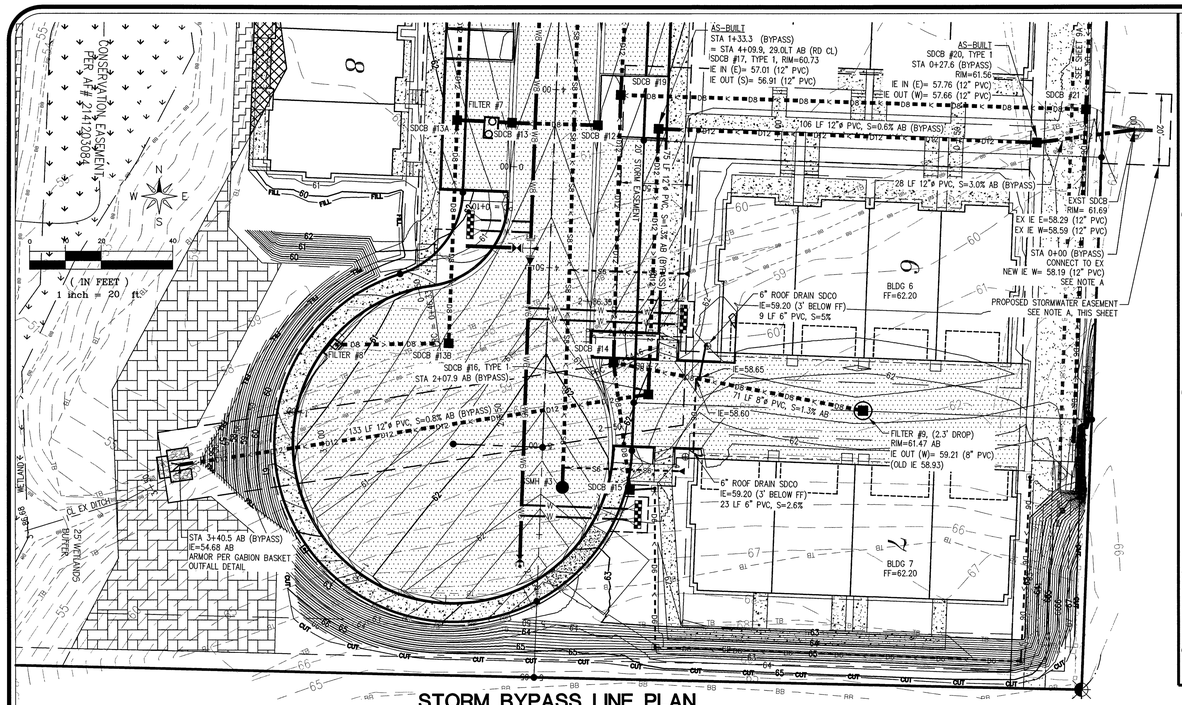
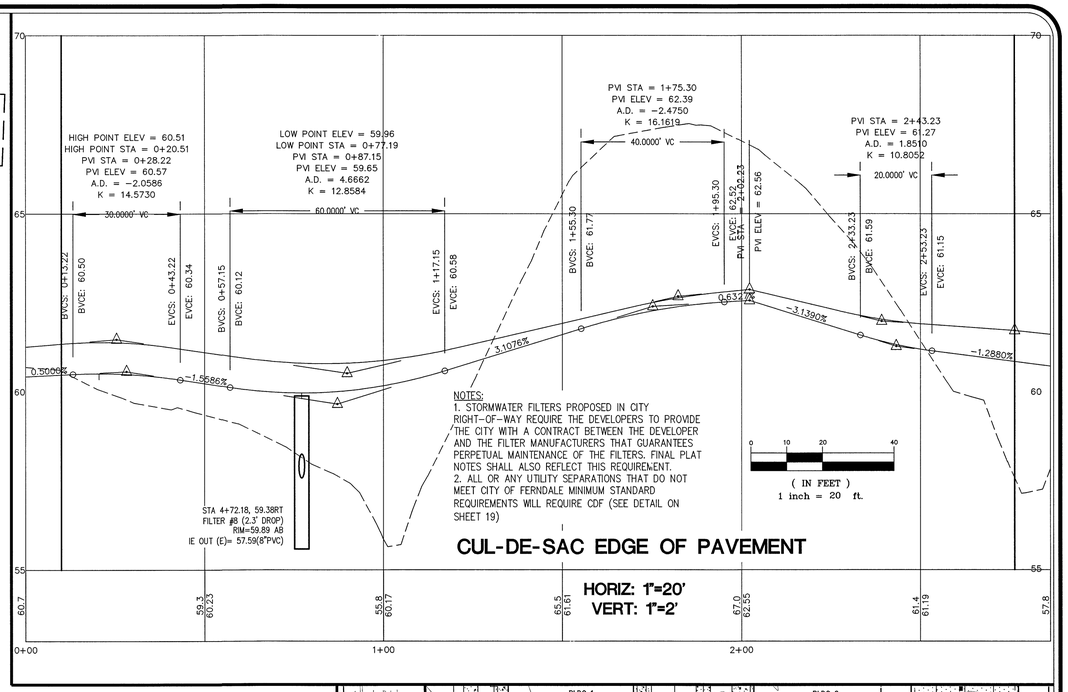


STORM BYPASS LINE PLAN



NOTES:
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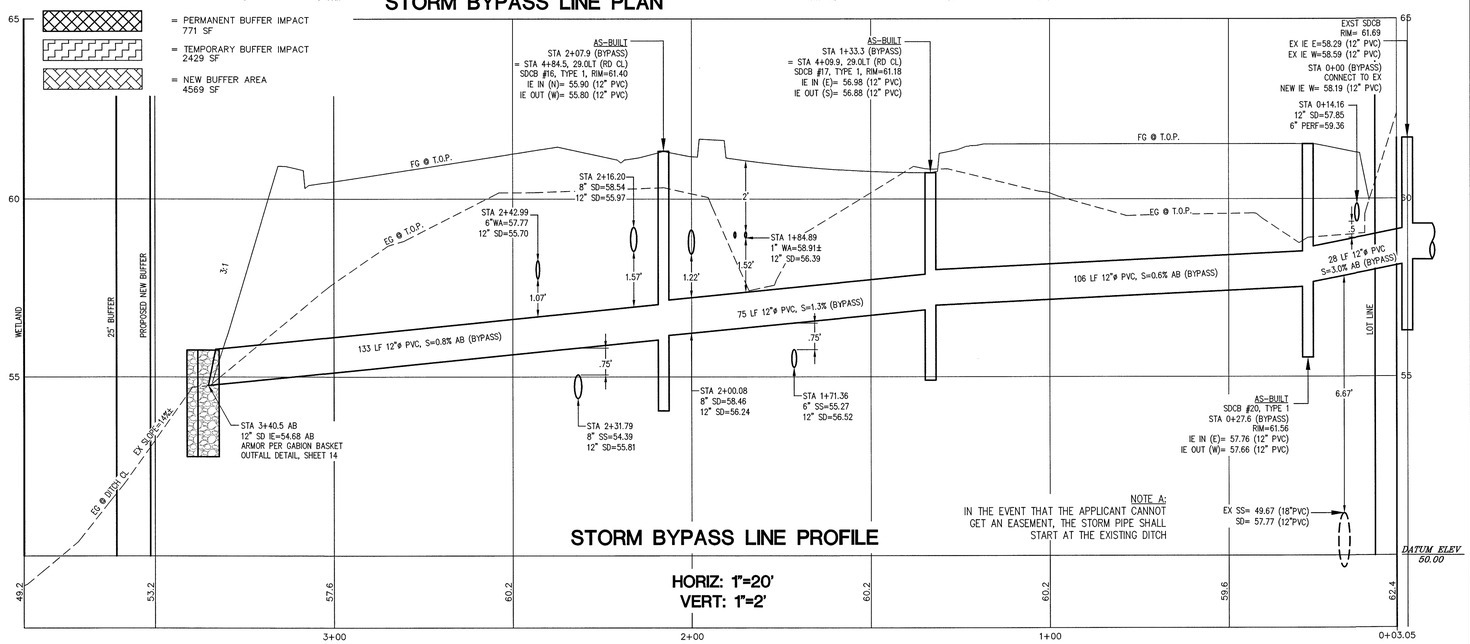
2. ALL OR ANY UTILITY SEPARATIONS THAT DO NOT MEET CITY OF FERNDALE MINIMUM STANDARD REQUIREMENTS WILL REQUIRE CDF (SEE DETAIL ON SHEET 19)

CUL-DE-SAC EDGE OF PAVEMENT

= PERMANENT BUFFER IMPACT 771 SF

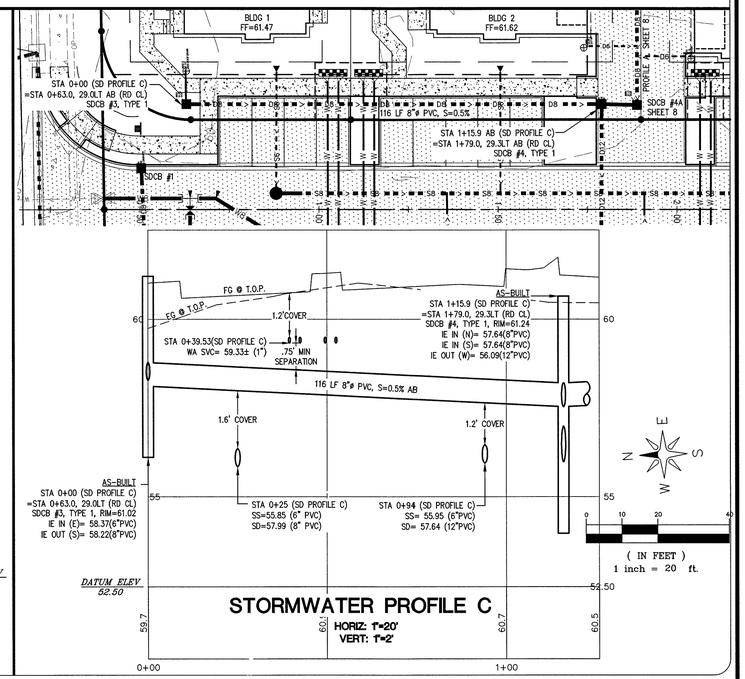
= TEMPORARY BUFFER IMPACT 2429 SF

= NEW BUFFER AREA 4569 SF



NOTE A:
IN THE EVENT THAT THE APPLICANT CANNOT GET AN EASEMENT, THE STORM PIPE SHALL START AT THE EXISTING DITCH

STORM BYPASS LINE PROFILE



STORMWATER PROFILE C

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RAMON L. LANDO — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 4-23-19

LDES, INC.
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PHONE 360-383-0620
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JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
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DRAWN BY:	EH
CHECKED BY:	RL

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PO BOX 3249
FERNDALE, WA 98248

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JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

ROAD & STORMWATER PLAN & PROFILE 3

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 09 OF 20

RECORD DRAWING

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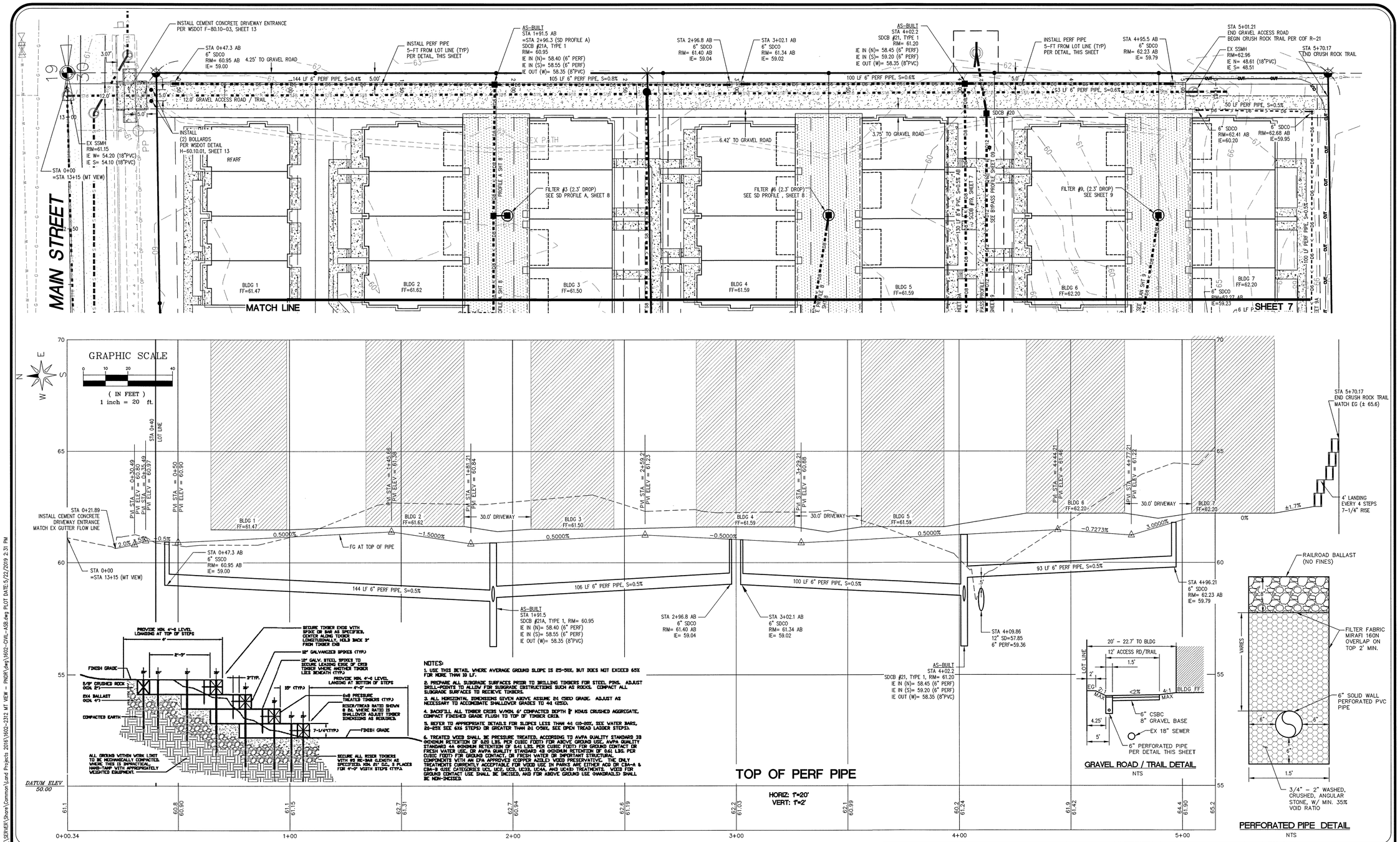

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RANDY LANOIS REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON 22222 — 4-23-19

LDES, INC.
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FERNDALE, WA 98248
PHONE 360-383-0620
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JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
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PO BOX 3249
FERNDALE, WA 98248

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JUN 13 2019
BY _____ CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

STORMWATER AT EAST LOT
PLAN & PROFILE 4
MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 09A OF 20

RECORD DRAWING

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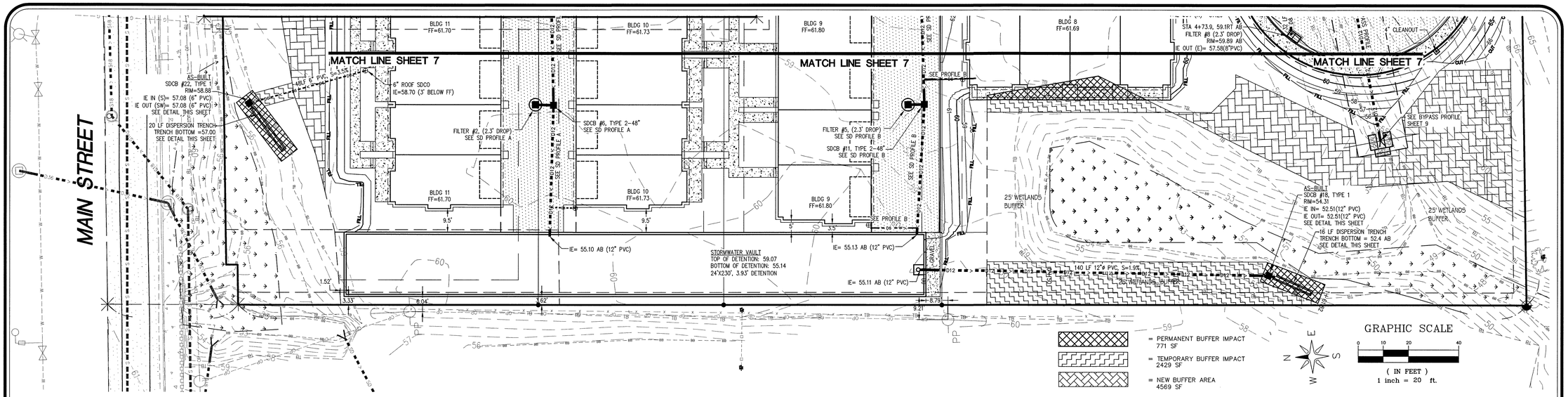

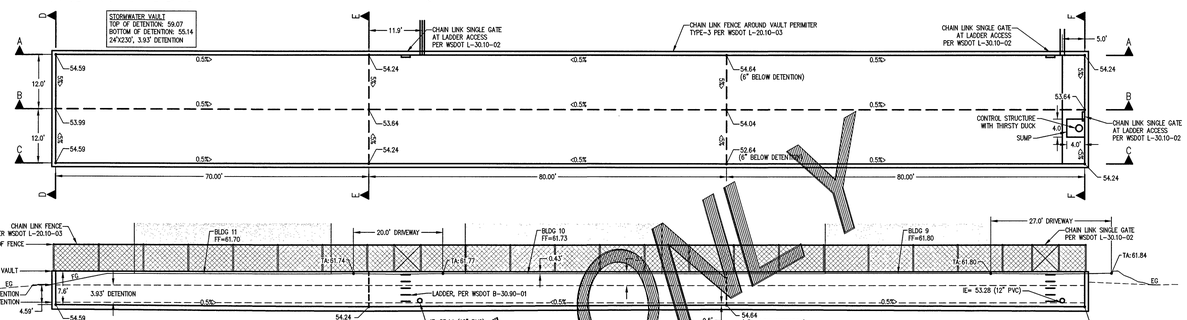

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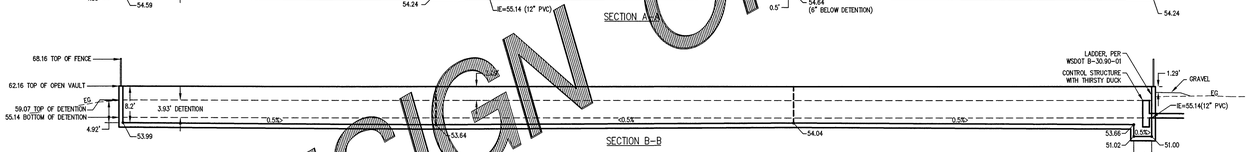

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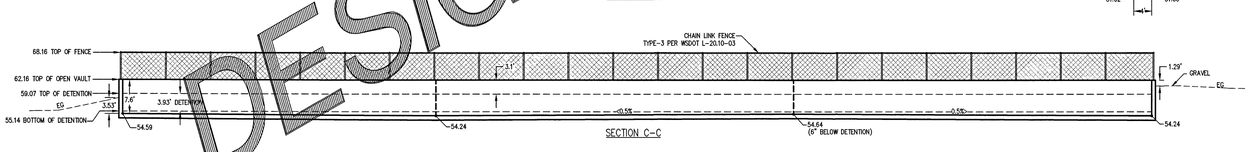

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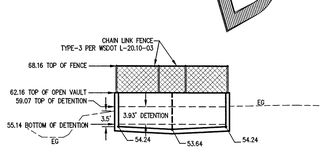

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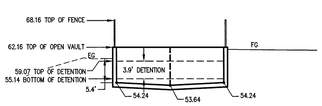

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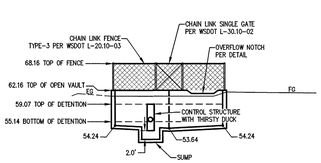

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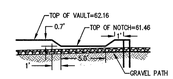


OVERFLOW NOTCH DETAIL
WEST WALL

VAULT GENERAL NOTES:

1. A COF BUILDING PERMIT IS REQUIRED FOR CONSTRUCTING THE VAULT.
2. THE ENGINEER OF RECORD IS REQUIRED TO CERTIFY THE STORMWATER FACILITY IS CONSTRUCTED IN CONFORMANCE WITH THE STRUCTURAL DESIGN AND THE 2005 STORMWATER MANAGEMENT MANUAL.

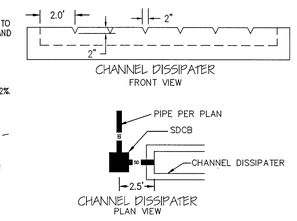
VAULT STRUCTURAL NOTES:

A. THE DETENTION FACILITY MUST BE DESIGNED BY A STRUCTURAL ENGINEER. STRUCTURAL CALCULATION SHALL DEMONSTRATE THE VAULT IS DESIGNED TO SUPPORT THE BUILDINGS PROPOSED WITHIN 5-FT OF THE VAULT. ADDITIONALLY, SINCE THE LOCATION OF THE PROPOSED VAULT IS LESS THAN 20-FT FROM PROPERTY LINES THE STRUCTURAL ENGINEER WOULD NEED TO PROVIDE DESIGN CALCULATIONS EQUAL TO THE 20-FT PROPERTY LINE SETBACK PER VOLUME III, PAGE 3-26 OF THE 2005 STORMWATER MAINTENANCE MANUAL (SWMM).
B. STRUCTURAL CALCULATION MUST DEMONSTRATE THE COVERED SECTION OF THE VAULT WILL SUPPORT LOADS IN EXCESS OF 70,000 POUNDS IN ORDER TO FACILITATE MAINTENANCE VEHICLE ACCESS.
C. STRUCTURAL CALCULATIONS SHALL ADDRESS CONCRETE VAULT BUOYANCY, SPECIFICALLY BUOYANCY WHEN THE VAULT IS EMPTY. FOR BOUYANCY CALCULATIONS ASSUME THAT THE HIGH GROUND WATER ELEVATION (HGWE) IS AT ELEVATION 60-FT, EXISTING GROUND. IN ORDER TO ACCURATELY ESTABLISH THE HGWE, TESTING SHALL BE PERFORMED DURING FEBRUARY, WHICH TYPICALLY HAS THE HIGHEST GROUND WATER ELEVATION.
D. VAULT MUST BE CONSTRUCTED WITHOUT TEMPORARY IMPACTS TO THE ADJACENT PROPERTY.
E. MINIMUM 3000 PSI STRUCTURAL REINFORCED CONCRETE MUST BE USED PER VOLUME III, PAGES 3-46 OF THE SWMM.
F. WATER STOPS MUST BE PROVIDED AT ALL CONSTRUCTION JOINTS IN THE VAULT PER VOLUME III, PAGE 3-46 OF THE SWMM.
G. VAULT MUST MEET STRUCTRUAL REQUIREMENTS FOR OVERBURDEN SUPPORT AND H-20 TRAFFIC LOADING PER VOLUME III, PAGE 3-46 OF THE SWMM.

FENCE NOTE:
PER CITY COUNCIL DIRECTIVE: ALL CHAIN LINK FENCING INCLUDING GATES REQUIRE TOP RAIL IN-LIEU OF TENSION WIRE

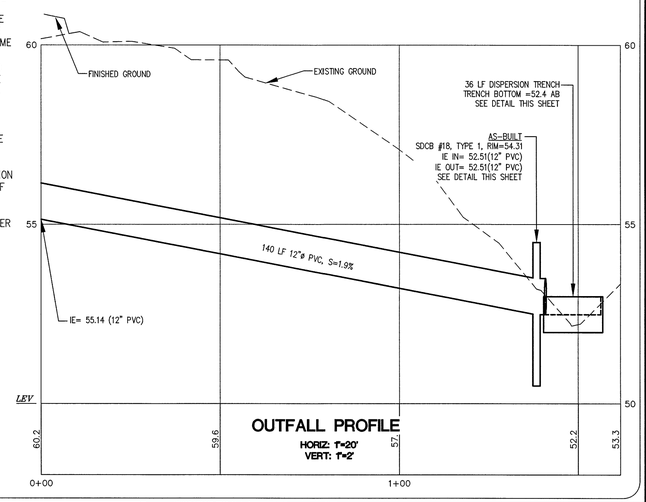
DISPERSION TRENCH NOTES:

1. DISPERSION TRENCH SHALL BE CONSTRUCTED PERPENDICULAR TO GRADE WITH A 0% SLOPE TO ENSURE COMPLETE DISPERSION AND AVOID POINT DISCHARGE.
2. CONTRACTOR SHALL AVOID WORK WITHIN THE BUFFER, DOWNSTREAM OF DISPERSION TRENCH, EXCEPT WHERE NOTED.
3. DISPERSION TRENCH SHALL BE CONSTRUCTED USING 3000 PSI CONCRETE.
4. COMPACT SOIL BENEATH PROPOSED DISPERSION TRENCH TO 92%



DISPERSION TRENCH DETAIL

NTS



OUTFALL PROFILE

HORIZ: 1"=20'
VERT: 1"=2'

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
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4				10			
5				11			

RAMON LLANOS STATE OF WASHINGTON 36228 REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

ROAD & STORMWATER PLAN & DETAIL
STORMWATER VAULT

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

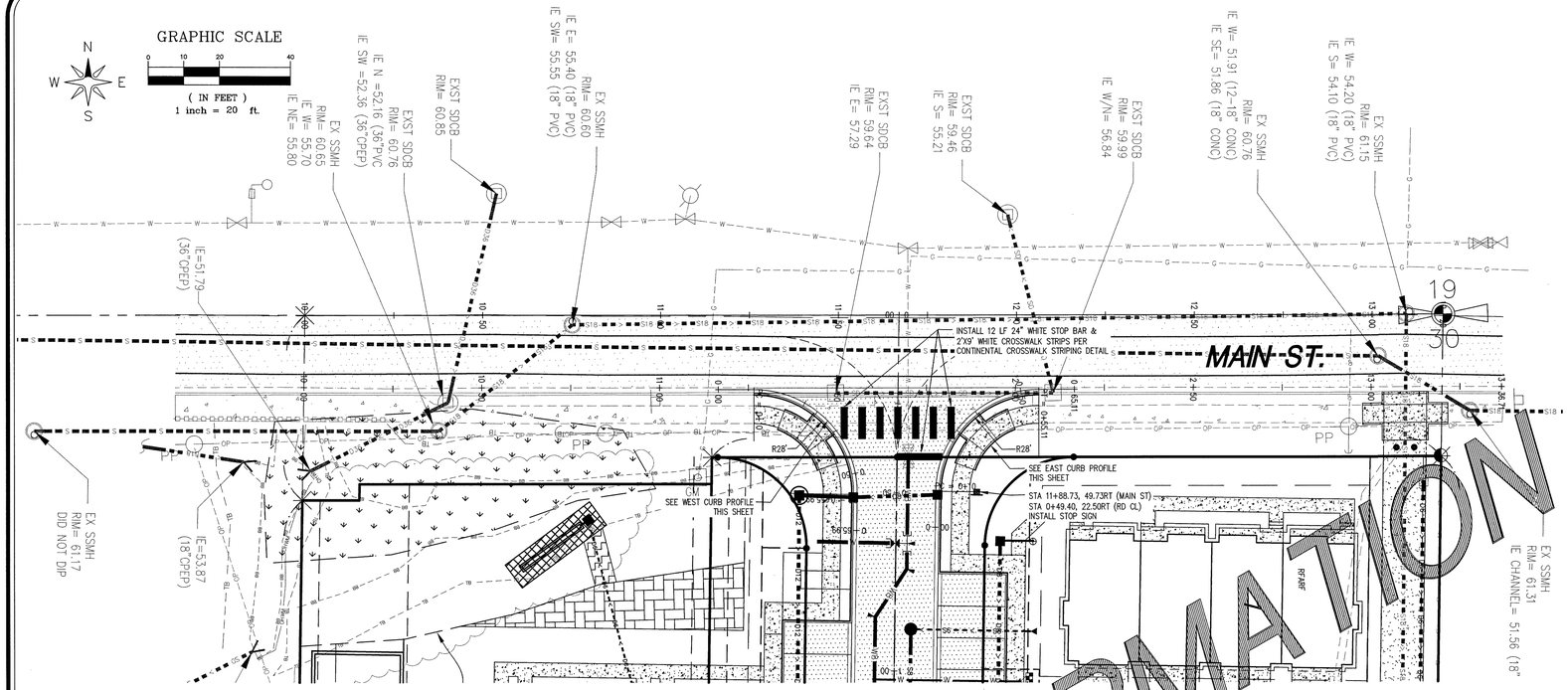
SHEET 10 OF 20

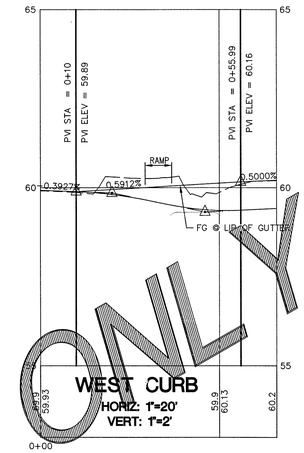
RECORD DRAWING

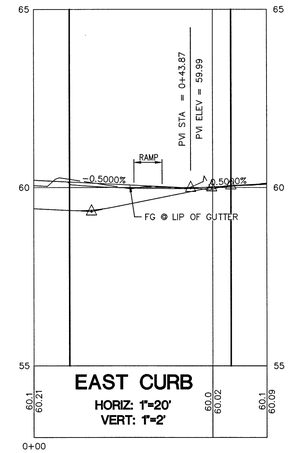
00670.011 6/24/19 KB

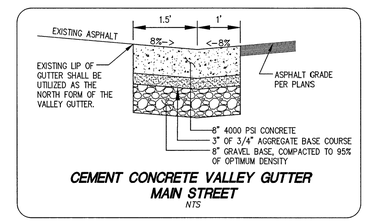
\\SERVER\Share\Common\Land Projects 2016\602-2312 MT VIEW - PNRR\dwg\602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:32 PM

DESIGN ONLY

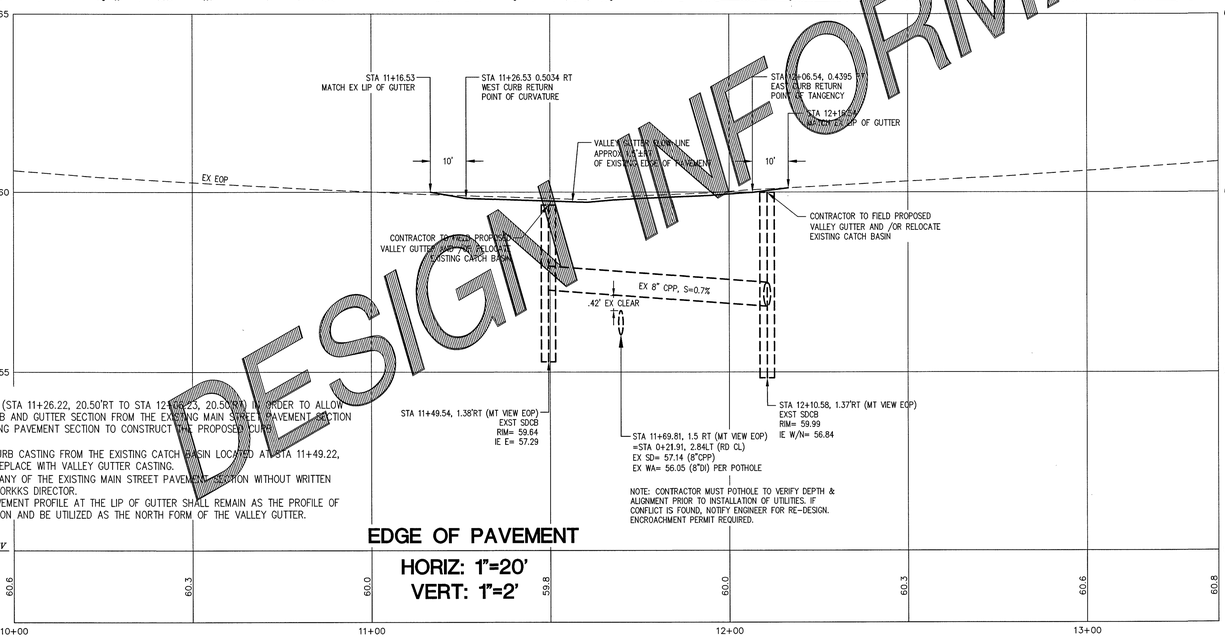








CEMENT CONCRETE VALLEY GUTTER
MAIN STREET
NTS



NOTE: CONTRACTOR MUST POTHOLE TO VERIFY DEPTH & ALIGNMENT PRIOR TO INSTALLATION OF UTILITIES. IF CONFLICT IS FOUND, NOTIFY ENGINEER FOR RE-DESIGN. ENCROACHMENT PERMIT REQUIRED.

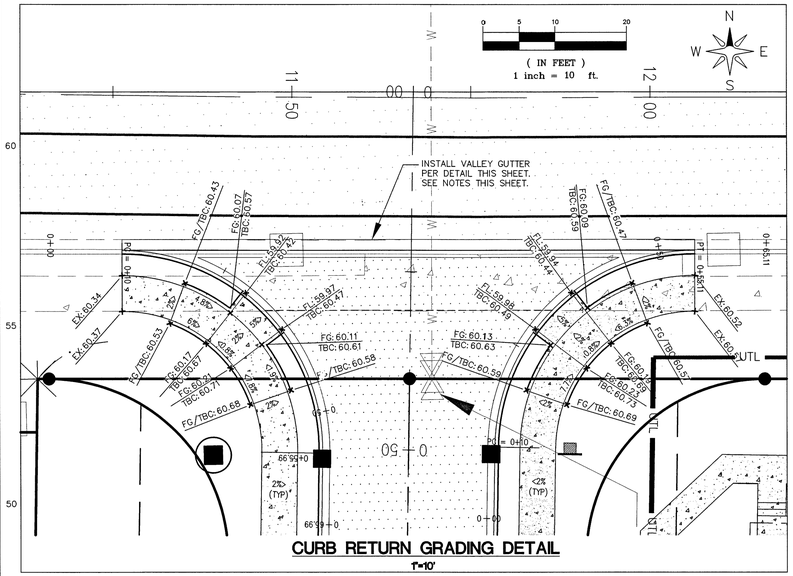
NOTES:

A. PROVIDE A NEATLINE SAW-CUT (STA 11+26.22, 20.50'RT TO STA 12+06.23, 20.50'RT) IN ORDER TO ALLOW REMOVAL OF THE EXISTING CURB AND GUTTER SECTION FROM THE EXISTING MAIN STREET PAVEMENT SECTION WITHOUT DAMAGING THE EXISTING PAVEMENT SECTION TO CONSTRUCT THE PROPOSED CURB RETURN/ENTRANCE.

B. REMOVE THE EXISTING THRU-CURB CASTING FROM THE EXISTING CATCH BASIN LOCATED AT STA 11+49.22, 21.94RT MOUNTAIN VIEW AND REPLACE WITH VALLEY GUTTER CASTING.

C. DO NOT CUT AND/OR REMOVE ANY OF THE EXISTING MAIN STREET PAVEMENT SECTION WITHOUT WRITTEN APPROVAL FROM THE PUBLIC WORKKS DIRECTOR.

D. THE EXISTING MAIN STREET PAVEMENT PROFILE AT THE LIP OF GUTTER SHALL REMAIN AS THE PROFILE OF THE NEW VALLEY GUTTER SECTION AND BE UTILIZED AS THE NORTH FORM OF THE VALLEY GUTTER.



CURB RETURN GRADING DETAIL
1"=10'

DESIGN INFORMATION ONLY

NO.	REVISION	BY	DATE	NO.		BY	DATE
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RAMON LLANAS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

ROAD & STORMWATER PLAN & PROFILE
MAIN STREET

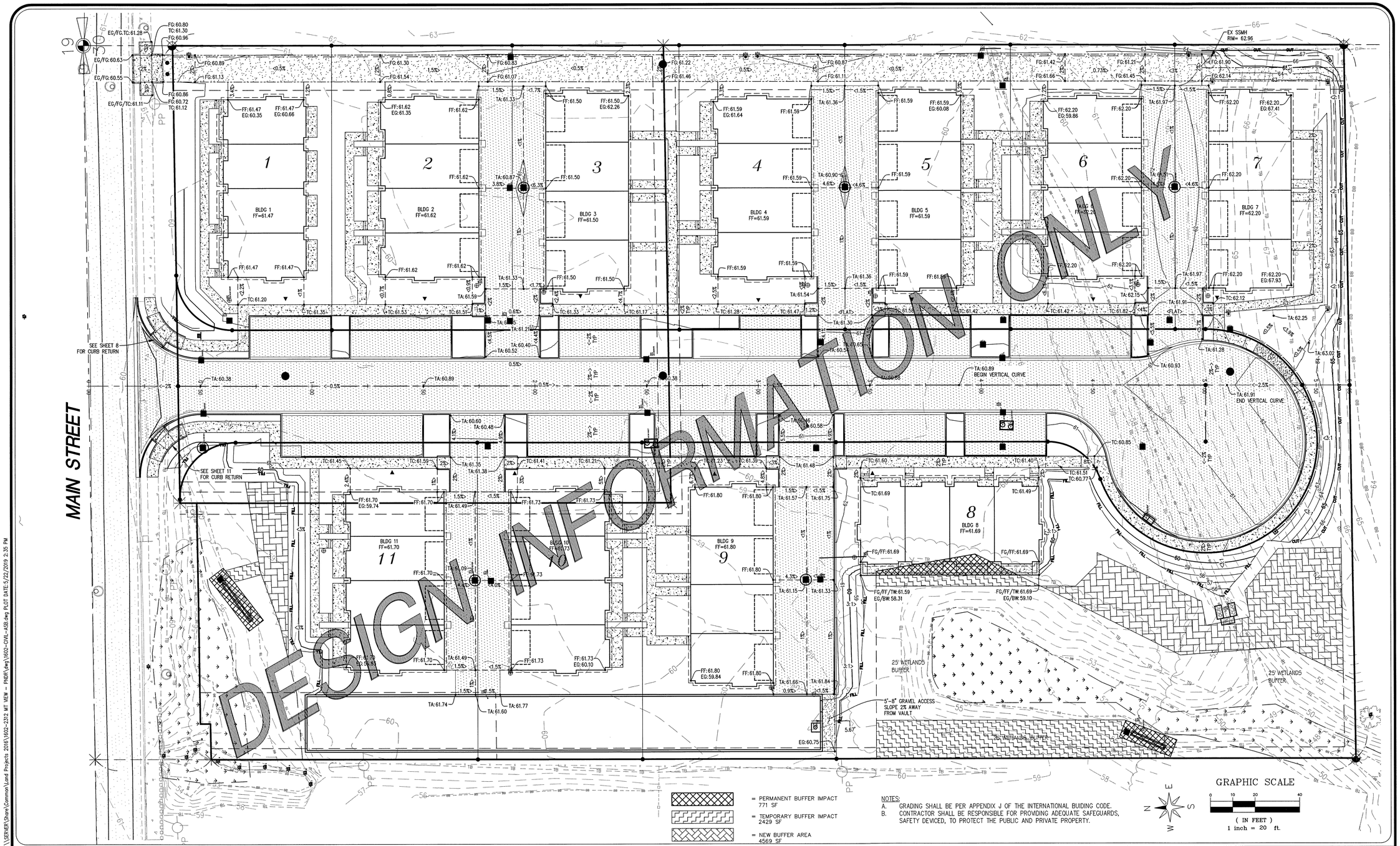
MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 11 OF 20

RECORD DRAWING

00670.012 6/24/19 KB

\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNRR\dwg\1602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:33 PM



NOTES:

A. GRADING SHALL BE PER APPENDIX J OF THE INTERNATIONAL BUIDING CODE.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICED, TO PROTECT THE PUBLIC AND PRIVATE PROPERTY.

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
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RAMON LLANOS STATE OF WASHINGTON 22001 REGISTERED PROFESSIONAL ENGINEER 4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

GRADING PLAN

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 12 OF 20

RECORD DRAWING

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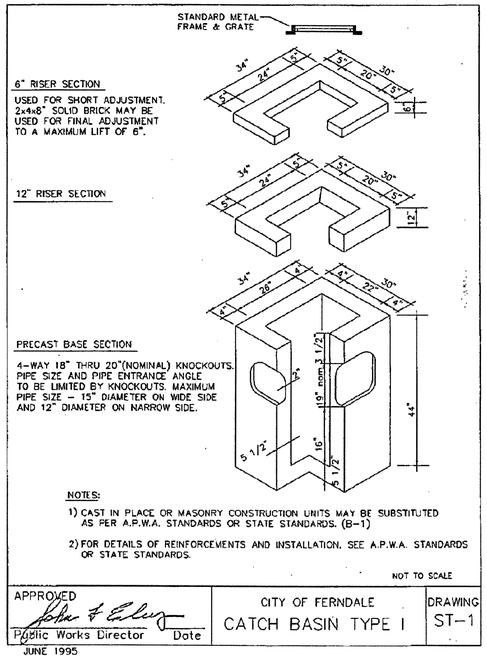
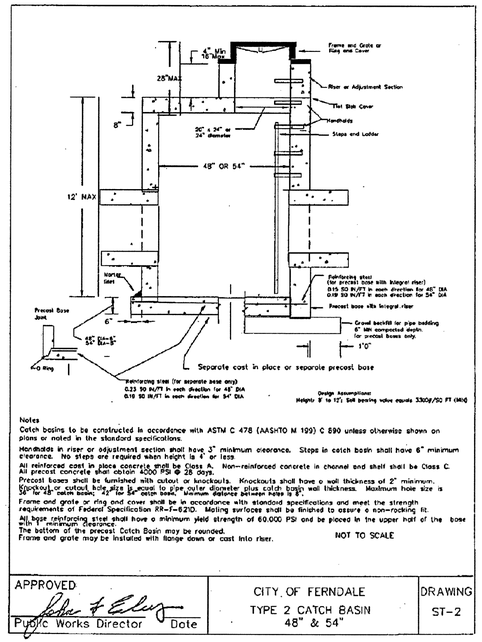
\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNRD\Dwg\1602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:35 PM



APPROVED Public Works Director Date	CITY OF FERNDALE CATCH BASIN TYPE I	DRAWING ST-1

JUNE 1995



APPROVED Public Works Director Date	CITY OF FERNDALE TYPE 2 CATCH BASIN 48" & 54"	DRAWING ST-2

JUNE 1995

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

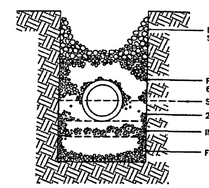
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE-

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:

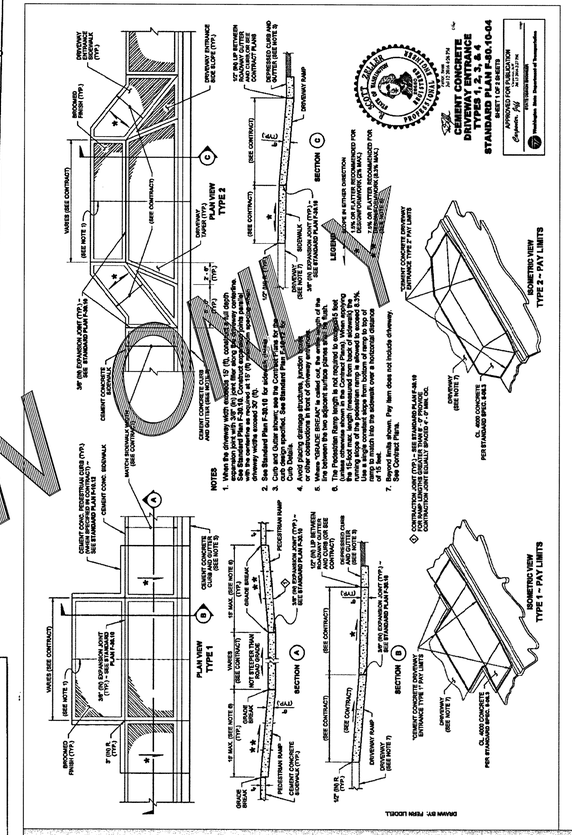
U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING, BY WT.
3/4"	100
3/8"	95-100
#8	0-10
#200	0-3

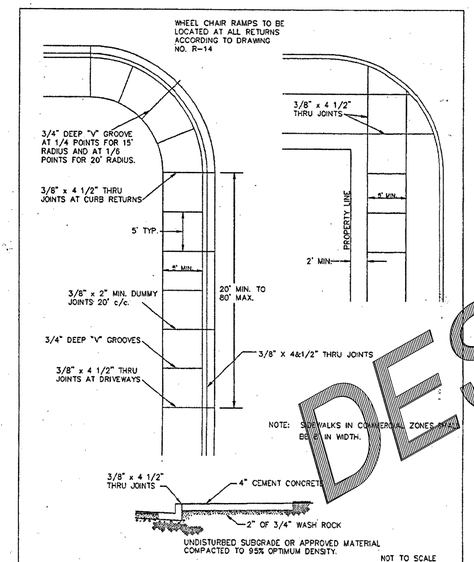
BACKFILL - WHENEVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.



March 13, 2012

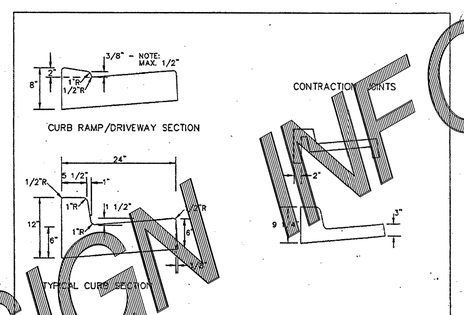
APPROVED Public Works Director Date	BEDDING SPECIFICATIONS FOR PVC PIPE STANDARD DETAIL ST-17





APPROVED Public Works Director Date	CITY OF FERNDALE TYPICAL SIDEWALK PLAN AND CROSS SECTION	DRAWING R-12

JUNE 1995 2091RD2A/R-12



GENERAL NOTES

CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED ON GRADE. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MINIMUM 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.

2" WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION AND A MAXIMUM 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY CITY PUBLIC WORKS DIRECTOR.

3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS AND COLD JOINTS OR A MAXIMUM OF 60' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.

CONCRETE SHALL BE CEMENT CONCRETE CLASS 3000.

FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH 10' STRAIGHT EDGE.

EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER BRUSH.

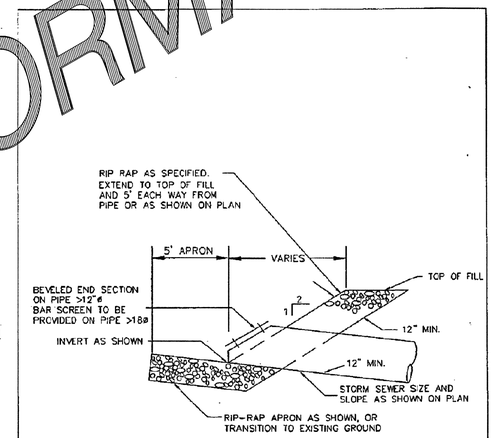
WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.

FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

NOT TO SCALE

APPROVED Public Works Director Date	CITY OF FERNDALE CURB AND GUTTER	DRAWING R-9

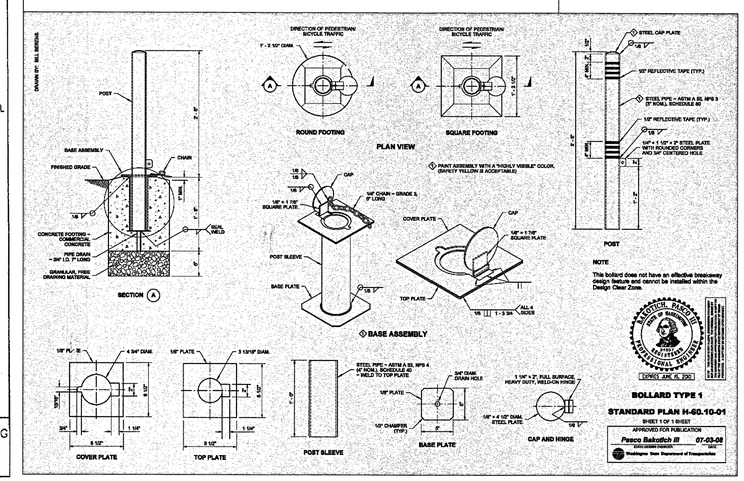
JUNE 1995 2091RD2A/R-9



NOT TO SCALE

APPROVED Public Works Director Date	CITY OF FERNDALE CULVERT INLET/OUTLET DETAIL	DRAWING ST-9

JUNE 1995



NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
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LDES, INC.
5160 INDUSTRIAL PL. #108
FERNDALE, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
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PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

ROAD AND STORMWATER TYPICAL DETAILS 1

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 13 OF 20

DESIGN INFORMATION
RECORD DRAWING
\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNDR\dwg\1602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:35 PM
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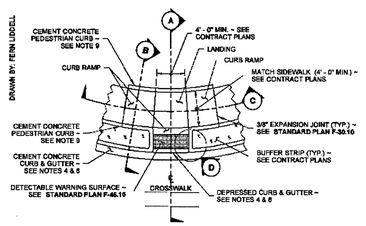
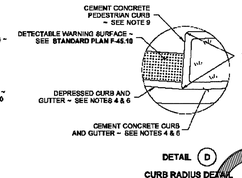


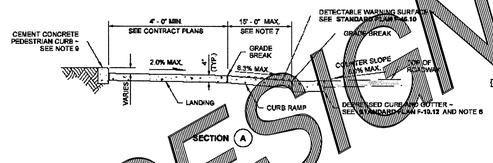


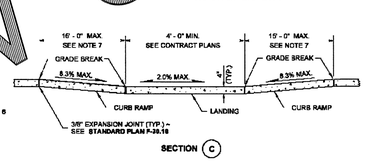
NOTES

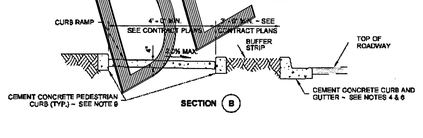
1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk or as shown in the Contract Plans.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances in front of the Curb Ramp or on any part of the Curb Ramp or Landing.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb, Gutter and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type ___" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp maximum running slope shall not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15 foot maximum length, the running slope of the Curb Ramp shall be as flat as feasible.
8. Curb Ramp, Landing and flares shall receive broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.

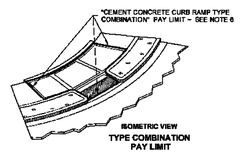
LEGEND

SLOPE IN EITHER DIRECTION









COMBINATION CURB RAMP

STANDARD PLAN F-40.14-02

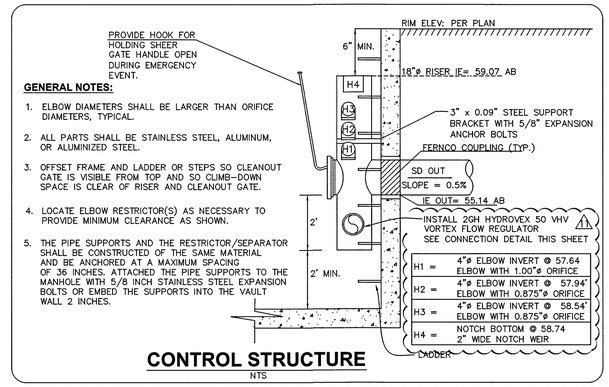
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III 6/20/13

STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

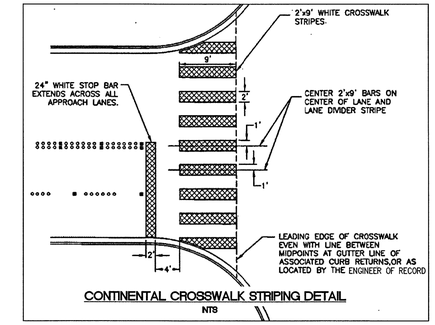


GENERAL NOTES:

1. ELBOW DIAMETERS SHALL BE LARGER THAN ORIFICE DIAMETERS, TYPICAL.
2. ALL PARTS SHALL BE STAINLESS STEEL, ALUMINUM, OR ALUMINIZED STEEL.
3. OFFSET FRAME AND LADDER OR STEPS SO CLEANOUT GATE IS VISIBLE FROM TOP AND SO CLIMB–DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
4. LOCATE ELBOW RESTRICTOR(S) AS NECESSARY TO PROVIDE MINIMUM CLEARANCE AS SHOWN.
5. THE PIPE SUPPORTS AND THE RESTRICTOR/SEPARATOR SHALL BE CONSTRUCTED OF THE SAME MATERIAL AND BE ANCHORED AT A MAXIMUM SPACING OF 36 INCHES. ATTACHED THE PIPE SUPPORTS TO THE MANHOLE WITH 5/8 INCH STAINLESS STEEL EXPANSION BOLTS OR EMBED THE SUPPORTS INTO THE VAULT WALL 2 INCHES.

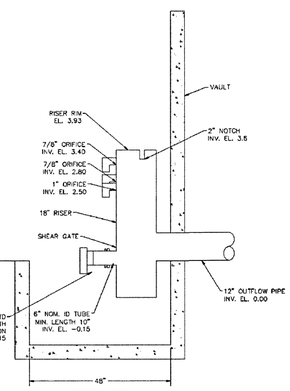
CONTROL STRUCTURE

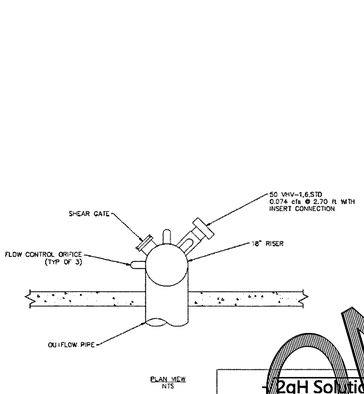
NTS

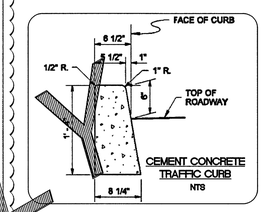


CONTINENTAL CROSSWALK STRIPING DETAIL

NTS

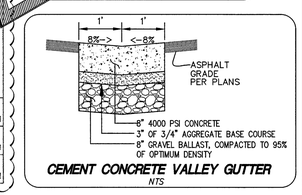






CEMENT CONCRETE TRAFFIC CURB

NTS

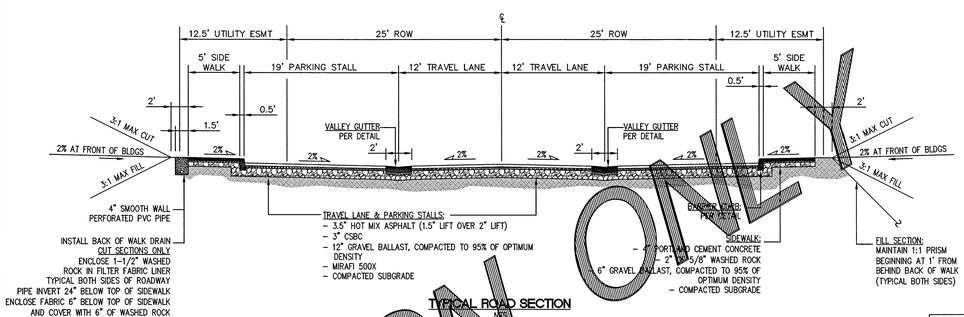


CEMENT CONCRETE VALLEY GUTTER

NTS

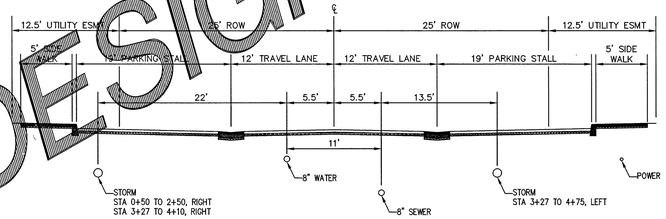
H2gH Solutions LLC
Engineered Water Technology
1282 RIVER ROAD
HUDSON, FL 34669
TEL: 727 378-8180
FL CA# 31553

MAIN STREET VILLAGE CITY OF FERNDALE, WA		SHEET 1 OF 1
		PROJECT NO. 170
ISSUE DATE NOV. 16, 2018	DRAWN BY R.C.B.	CHECKED BY R.C.B.



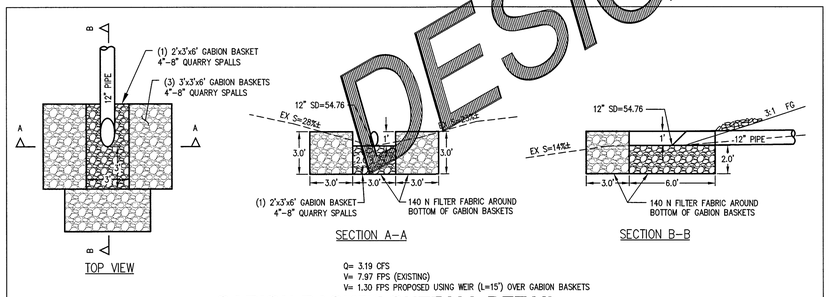
TYPICAL ROAD SECTION

NTS



TYPICAL UTILITIES LOCATIONS

NTS



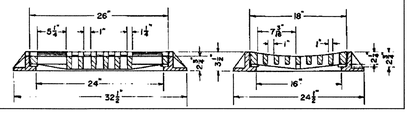
Q= 3.19 CFS
V= 7.97 FPS (EXISTING)
V= 1.30 FPS PROPOSED USING WEIR (L=15') OVER GABION BASKETS

GABION BASKET OUTFALL DETAIL

NTS

R-3359
Concave Gutter Inlet Frame and Grate

Heavy Duty



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1	SUBMITTAL 2	RL	07/20/16	7			
2	SUBMITTAL 3	RL	08/23/16	8			
3	SUBMITTAL 4	RL	09/10/16	9	THIRSY DUCK DETAIL, FILTER LABEL	RL	10/27/17
4				10	SITE REVISION PER ARCH	RL	07/06/18
5	SUBMITTAL 6 – REVISED VAULT & UTILITIES	RL	06/29/17	11	REVISE VAULT CONTROL FLOW REGULATOR	RL	01/28/19

RAMON LLANAS STATE OF WASHINGTON 40360 REGISTERED PROFESSIONAL ENGINEER 4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602–CIVIL–ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY ___ CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

ROAD AND STORMWATER TYPICAL DETAILS 2

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 14 OF 20

DESIGN ONLY
DESIGN ONLY

DRAWN BY: FERN LUDDELL
\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNRD\DWG\1602-CIVIL-ASB.dwg PLOT DATE:6/12/2019 12:05 PM
00670.015 06/24/19 KB

00670.016 6/24/19 KB

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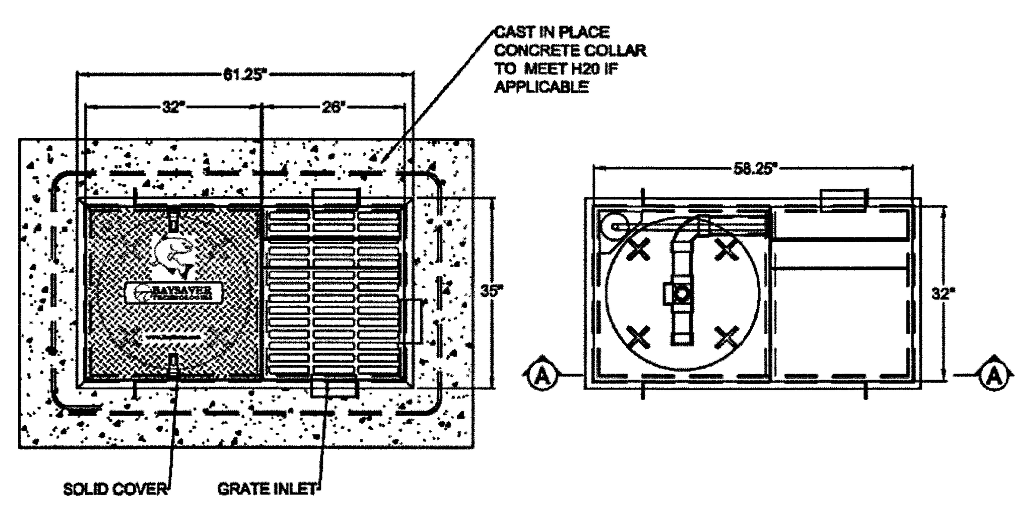
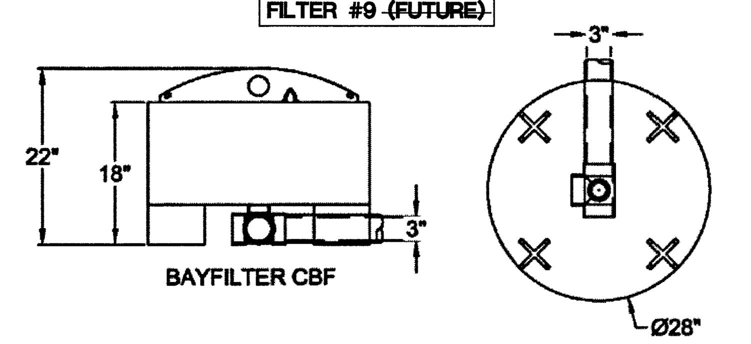


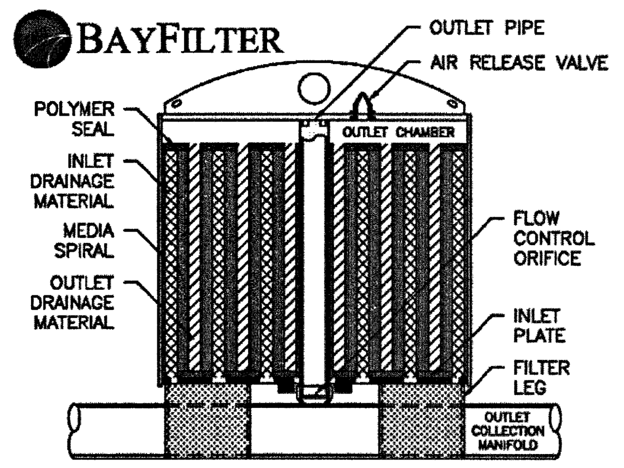
PLAN VIEW

FILTER #1
FILTER #2
FILTER #3 ~~(FUTURE)~~
FILTER #5
FILTER #6 ~~(FUTURE)~~
FILTER #8
FILTER #9 ~~(FUTURE)~~

SEE PLANS FOR INVERT & RIM INFORMATION



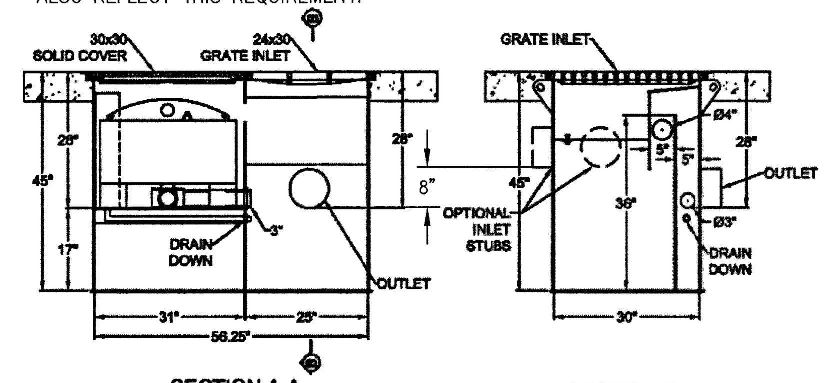
BAYFILTER CBF



BAYFILTER CBF-3	
PROJECT	
LOCATION	
WATER QUALITY FLOW	
DRAINAGE AREA	
CARTRIDGE DESIGN FLOW RATE	22.5 GPM
# BAYFILTER CARTRIDGES	1
TREATED SEDIMENT CAPACITY	175 LBS

THE BAYFILTER STORMWATER MANAGEMENT SYSTEM IS A STORMWATER FILTRATION DEVICE DESIGNED TO REMOVE FINE SEDIMENTS, HEAVY METALS, AND PHOSPORUS. THE BAYFILTER SYSTEM RELIES ON A SPIRAL WOUND MEDIA FILTER CARTRIDGE WITH APPROXIMATELY 45 SQUARE FEET OF FILTRATION AREA. THE FILTER CARTRIDGES REMOVE POLLUTANTS FROM RUNOFF BY FILTRATION (INTERCEPTION/ATTACHMENT) AND ADSORPTION.

NOTE:
STORMWATER FILTERS PROPOSED IN CITY RIGHT-OF-WAY REQUIRE THE DEVELOPERS TO PROVIDE THE CITY WITH A CONTRACT BETWEEN THE DEVELOPER AND THE FILTER MANUFACTURERS THAT GUARANTEES PERPETUAL MAINTENANCE OF THE FILTERS. FINAL PLAT NOTES SHALL ALSO REFLECT THIS REQUIREMENT.



SECTION A-A

SECTION B-B

REV | DRW | CHK | DESCRIPTION | DATE: – | PROJECT #: – | DRAWN: – | CHECKED: –

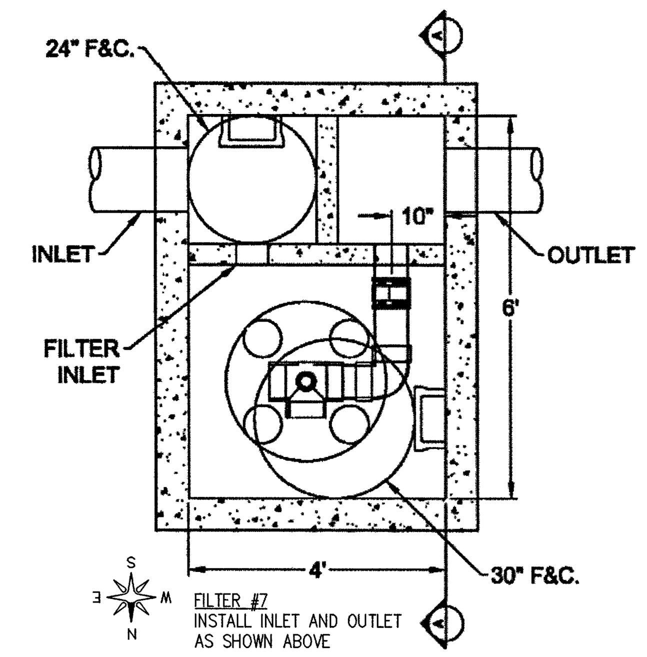
BAYSAVER TECHNOLOGIES
1030 Deer Hollow Drive, Mount Airy, MD 21771 1-800-BAYSAVER 1-800-229-7283

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

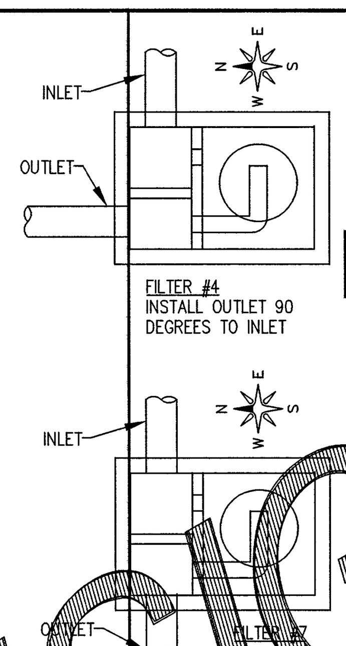
SHEET — OF —

FILTER #4
FILTER #7

SEE PLANS FOR INVERT & RIM INFORMATION



FILTER #7
INSTALL INLET AND OUTLET AS SHOWN ABOVE

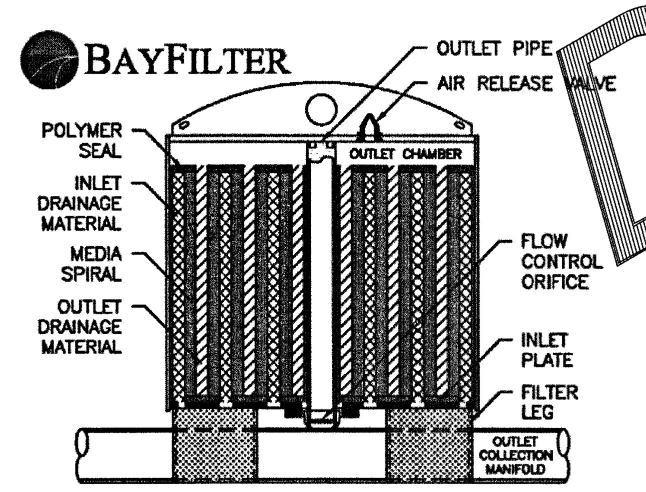


FILTER #4
INSTALL OUTLET 90 DEGREES TO INLET

FILTER #7

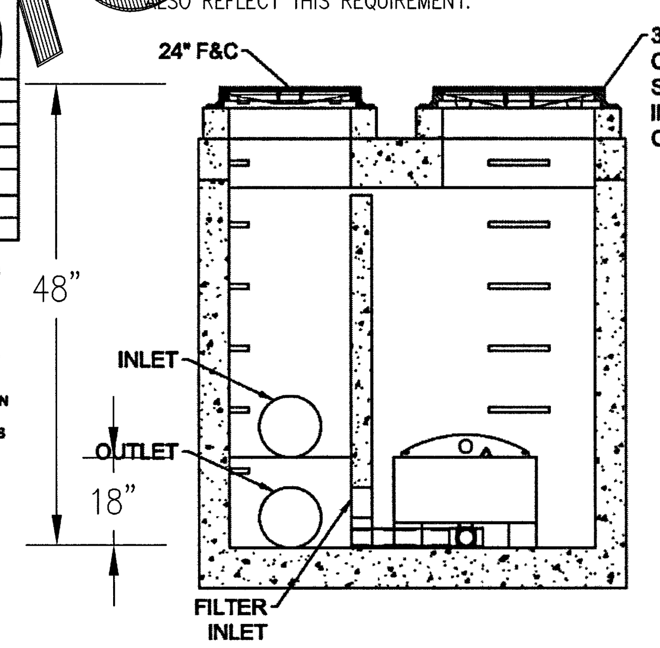
PLANVIEW OVERLAY HERE

NOTE:
STORMWATER FILTERS PROPOSED IN CITY RIGHT-OF-WAY REQUIRE THE DEVELOPERS TO PROVIDE THE CITY WITH A CONTRACT BETWEEN THE DEVELOPER AND THE FILTER MANUFACTURERS THAT GUARANTEES PERPETUAL MAINTENANCE OF THE FILTERS. FINAL PLAT NOTES SHALL ALSO REFLECT THIS REQUIREMENT.



BAYFILTER 545L 4-6-1 VAULT	
PROJECT	
LOCATION	
WATER QUALITY FLOW	
DRAINAGE AREA	
CARTRIDGE DESIGN FLOW RATE	22.5 GPM
# BAYFILTER CARTRIDGES	1
TREATED SEDIMENT CAPACITY	175 LBS

THE BAYFILTER STORMWATER MANAGEMENT SYSTEM IS A STORMWATER FILTRATION DEVICE DESIGNED TO REMOVE FINE SEDIMENTS, HEAVY METALS, AND PHOSPORUS. THE BAYFILTER SYSTEM RELIES ON A SPIRAL WOUND MEDIA FILTER CARTRIDGE WITH APPROXIMATELY 45 SQUARE FEET OF FILTRATION AREA. THE FILTER CARTRIDGES ARE HOUSED IN A CONCRETE STRUCTURE THAT EVENLY DISTRIBUTES THE FLOW BETWEEN CARTRIDGES. THE SYSTEM IS OFFLINE WITH AN EXTERNAL BYPASS THAT ROUTES HIGH INTENSITY STORMS AROUND THE SYSTEM. THE FILTER CARTRIDGES REMOVE POLLUTANTS FROM RUNOFF BY FILTRATION (INTERCEPTION/ATTACHMENT) AND ADSORPTION.



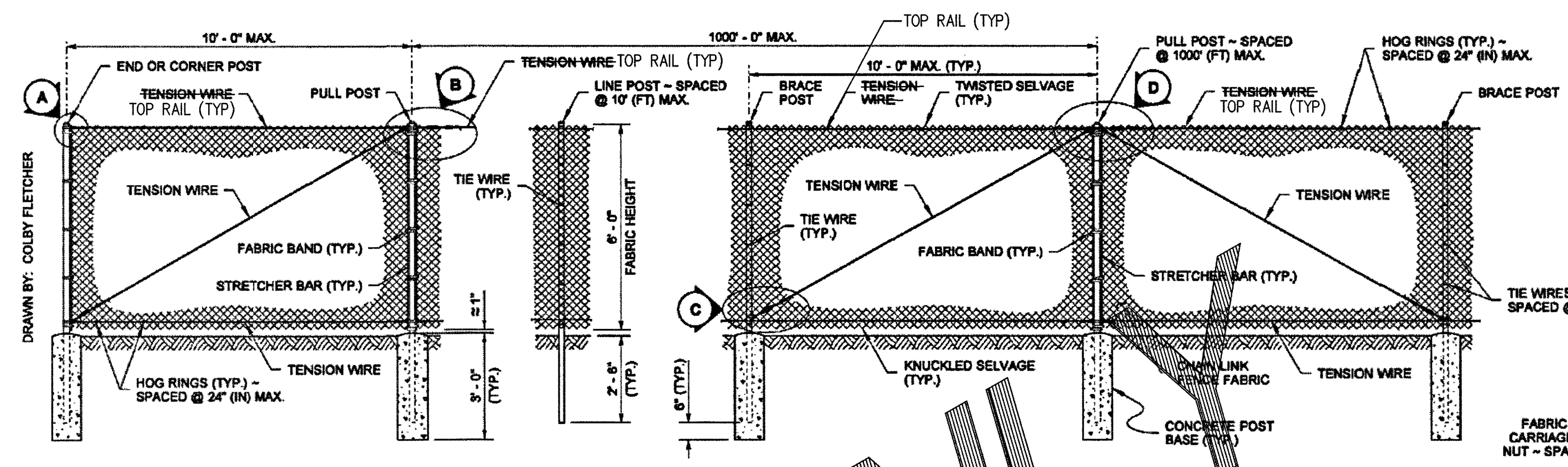
30" MIN. FRAME AND COVER. POSITION SO STEPS DO NOT INTERFERE WITH CARTIDGES.

REV | DRW | CHK | DESCRIPTION | DATE: – | PROJECT #: – | DRAWN: – | CHECKED: –

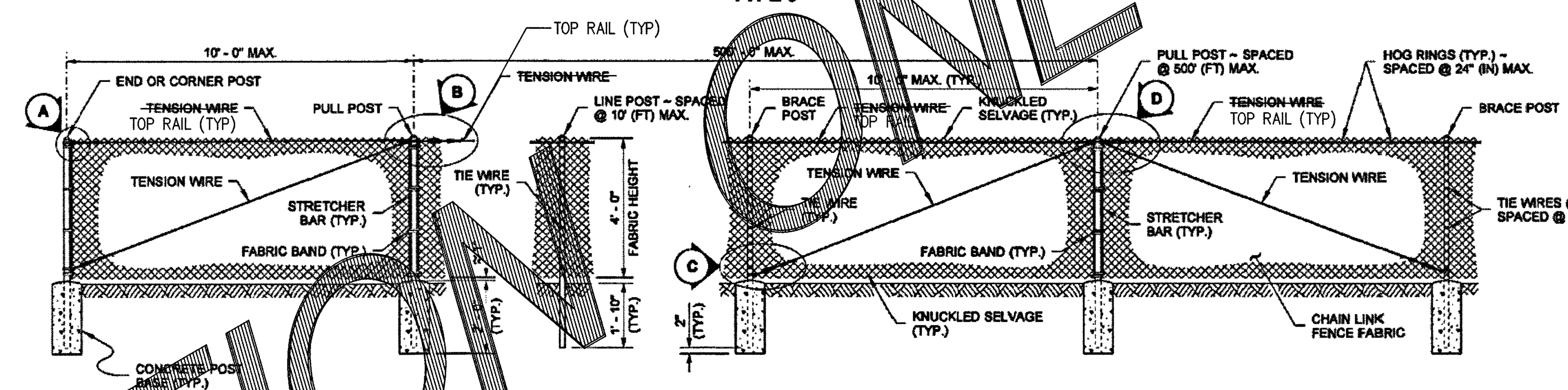
BAYSAVER TECHNOLOGIES
1030 Deer Hollow Drive, Mount Airy, MD 21771 1-800-BAYSAVER 1-800-229-7283

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

SHEET — OF —

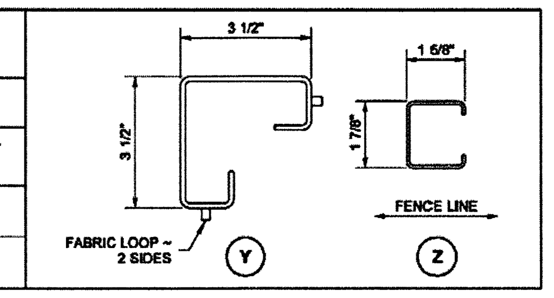


TYPE 3



TYPE 4

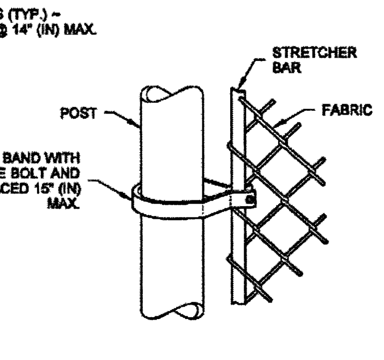
POST AND RAIL SPECIFICATIONS			
POST	PIPE	ROLL FORMED	
	NOM. SIZE (SCH. 40) I.D.	SECTION	WEIGHT (lb/ft)
END, CORNER, OR PULL POST	2 1/2" DIAM.	Y	5.10
LINE OR BRACE POST	2" DIAM.	Z	1.85



FENCE NOTE:
PER CITY COUNCIL DIRECTIVE: ALL CHAIN LINK FENCING INCLUDING GATES REQUIRE TOP RAIL IN-LIEU OF TENSION WIRE

NOTES

1. All concrete post bases shall be 10" (in) minimum diameter.
2. Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
3. Details are illustrative and shall not limit hardware design or post selection of any particular fence type.
4. Fencing shall be used for security and boundary delineation only.



METHOD OF FASTENING STRETCHER BAR TO POST

EDWARD PATRICK BARRY, STATE OF WASHINGTON, 34363, REGISTERED PROFESSIONAL ENGINEER
Barry, Ed
Jul 14 2015 11:14 AM

CHAIN LINK FENCE TYPES 3 AND 4

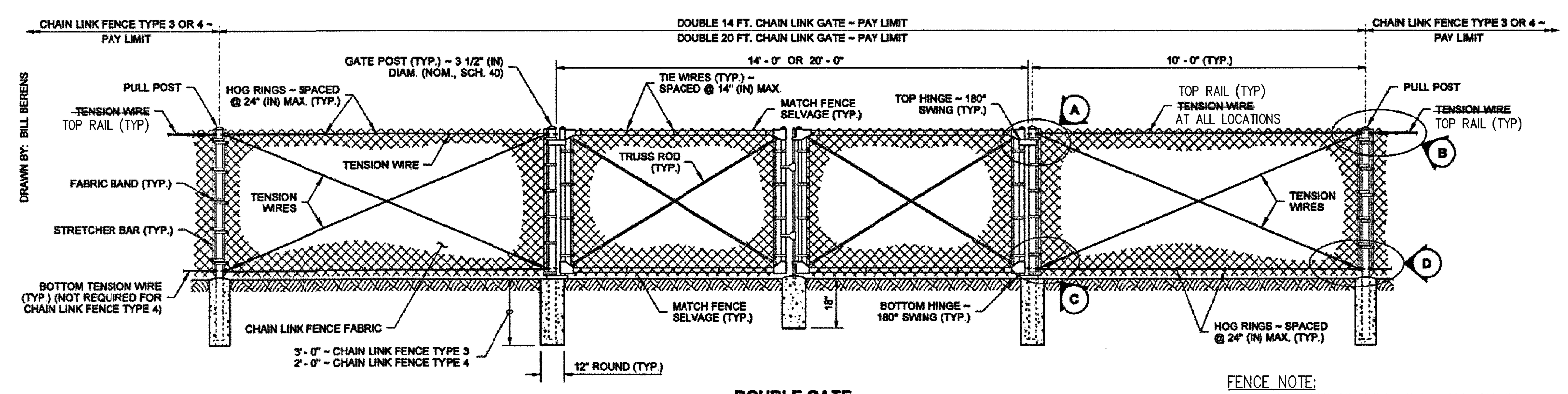
STANDARD PLAN L-20.10-03

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 14 2015 11:24 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

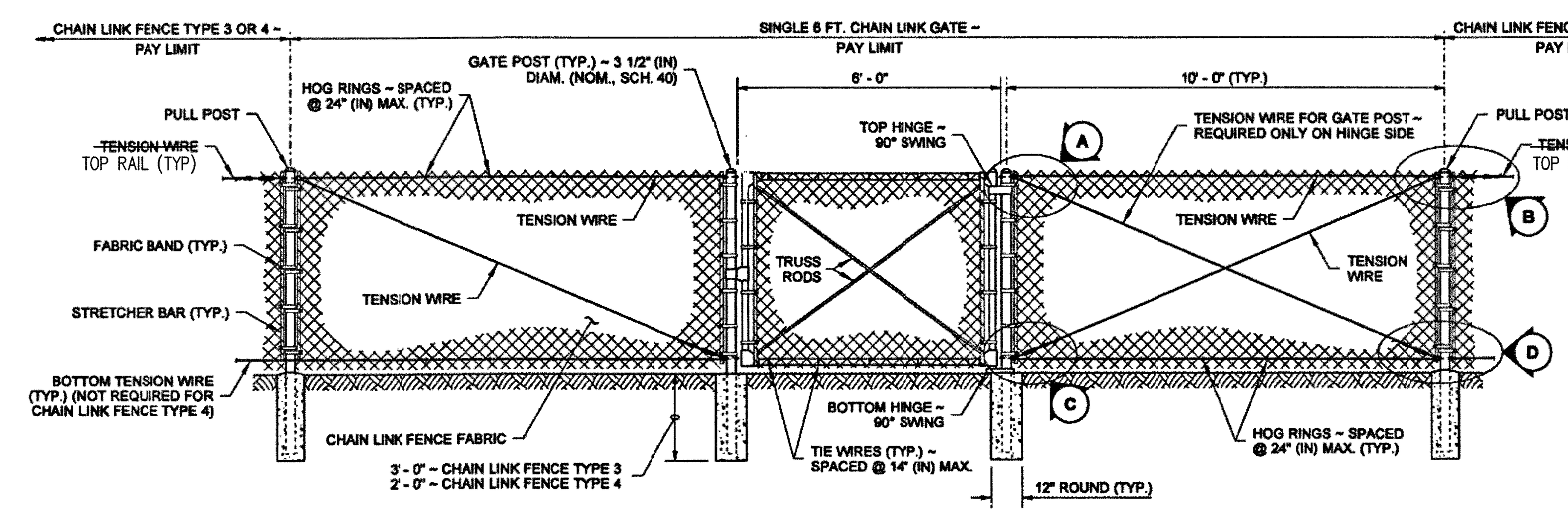
NOTES

1. Materials shall meet the requirements of Standard Specification 9-16.



DOUBLE GATE

FENCE NOTE:
PER CITY COUNCIL DIRECTIVE: ALL CHAIN LINK FENCING INCLUDING GATES REQUIRE TOP RAIL IN-LIEU OF TENSION WIRE



SINGLE GATE

EDWARD PATRICK BARRY, STATE OF WASHINGTON, 34363, REGISTERED PROFESSIONAL ENGINEER
Barry, Ed
May 6 2014 3:57 PM

CHAIN LINK GATE

STANDARD PLAN L-30.10-02

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION
Bakotich, Pasco
Jan 11 2014 1:40 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

RECORD DRAWING

NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE
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2				8			
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4				10			
5				11			

RAMON LLANOS, STATE OF WASHINGTON, 33213, REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602–CIVIL–ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

ROAD AND STORMWATER TYPICAL DETAILS 3

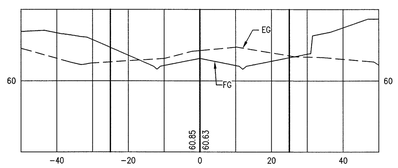
MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 14A OF 20

00670.017 6/24/19 KB

ONSITE ENTERLINE

2+00



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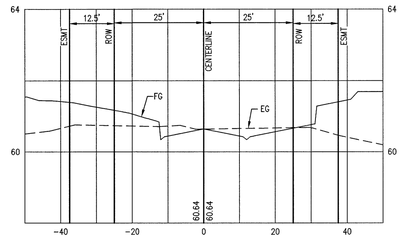

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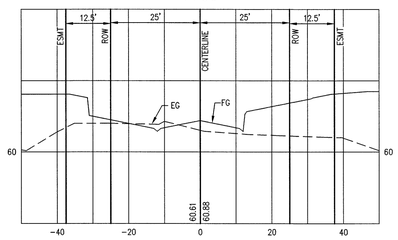

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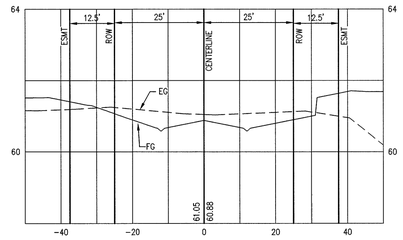

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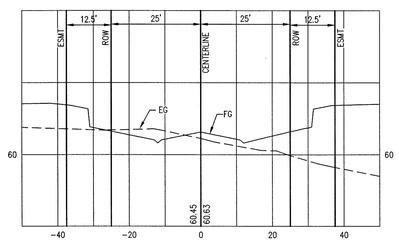

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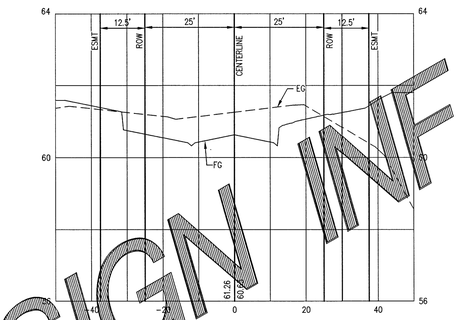

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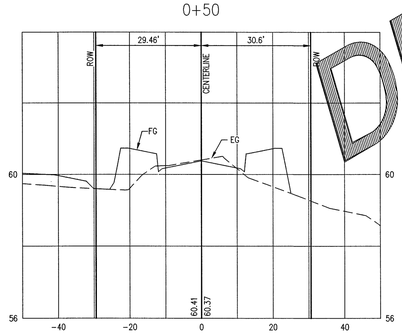

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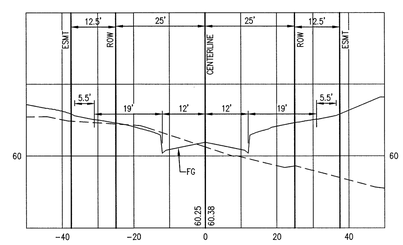

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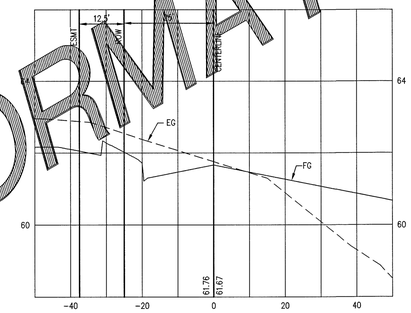

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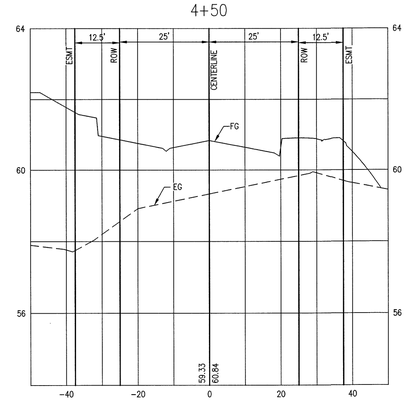
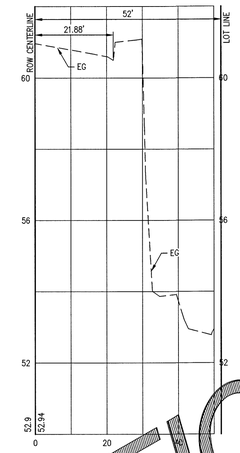


MAIN STREET

10+00



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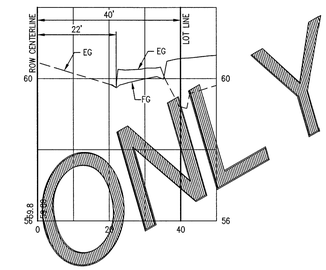

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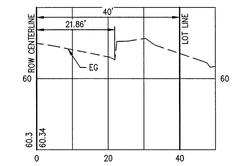

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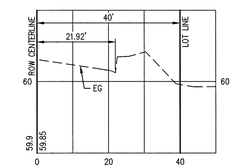

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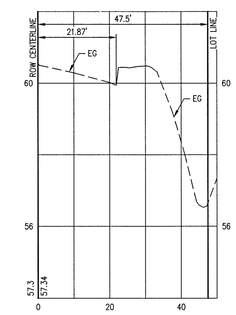

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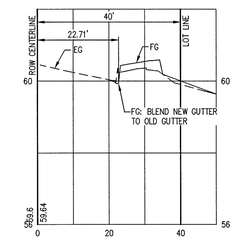

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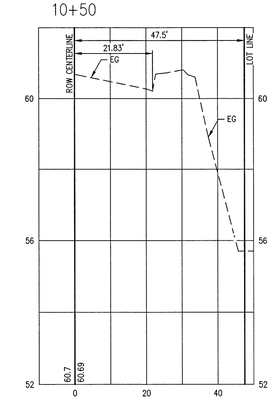

11+66.98 MT VIEW RD
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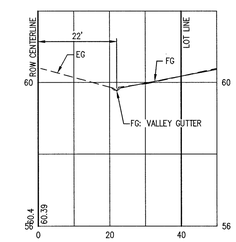

DESIGN INFORMATION ONLY

RECORD DRAWING

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0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
3				9			
4				10			
5				11			

RAMON A. ANDS, STATE OF WASHINGTON, 38818, REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

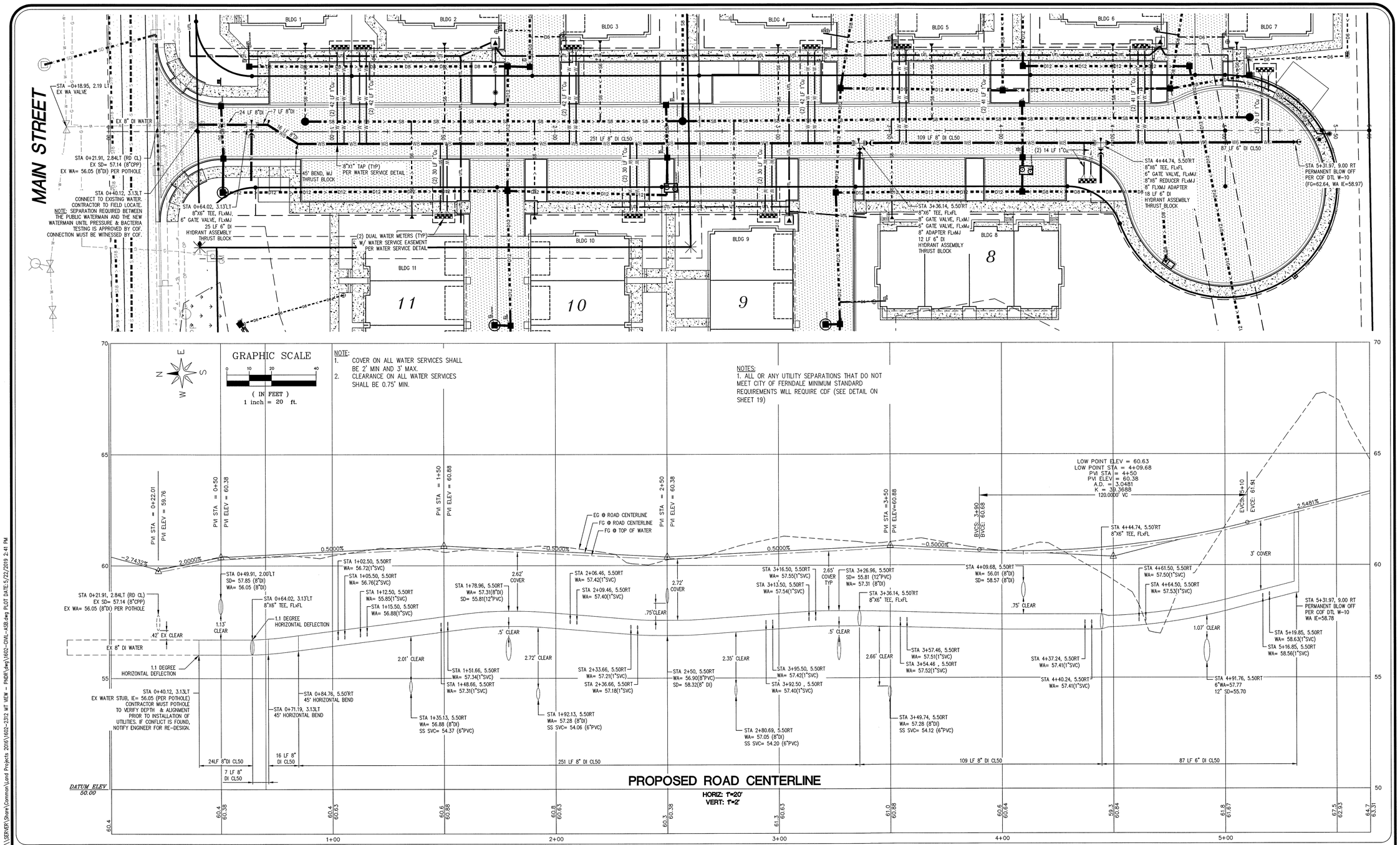
JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

CROSS-SECTIONS

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.



NOTE:
1. COVER ON ALL WATER SERVICES SHALL BE 2' MIN AND 3' MAX.
2. CLEARANCE ON ALL WATER SERVICES SHALL BE 0.75' MIN.

NOTES:
1. ALL OR ANY UTILITY SEPARATIONS THAT DO NOT MEET CITY OF FERNDALE MINIMUM STANDARD REQUIREMENTS WILL REQUIRE CDF (SEE DETAIL ON SHEET 19)

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
3				9			
4				10			
5				11			

RAMON L. LANOS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

WATER PLAN & PROFILE ONSITE CENTERLINE

MAIN STREET VILLAGE
2312 MAIN STREET, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

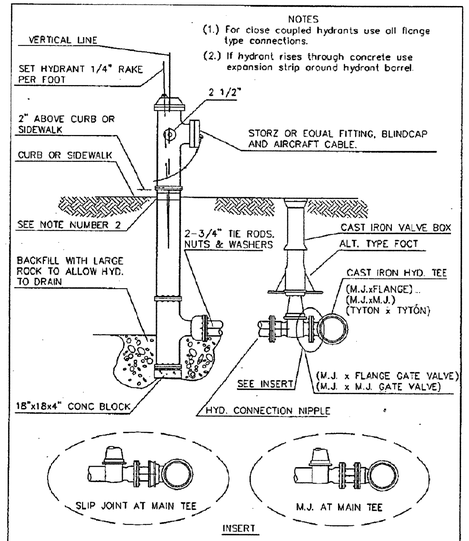
SHEET 16 OF 20

RECORD DRAWING

00670.018 6/24/19 KB

\\SERVER\Share\Common\Land Projects 2016\602-2312 MT VIEW - PNRR\dwg\602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:41 PM

NOTES
(1.) For close coupled hydrants use all flange type connections.
(2.) If hydrant rises through concrete use expansion strip around hydrant barrel.



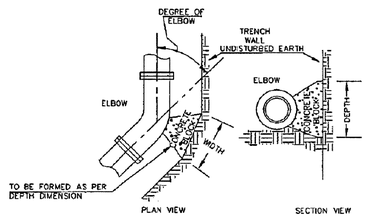
NOT TO SCALE

APPROVED
Public Works Director Date

CITY OF FERNDALE
FIRE HYDRANT ASSEMBLY

DRAWING W-1

JUNE 1995



100 P.S.I. OPERATING PRESSURE

SIZE	11 1/4°		22 1/2°		45°		90°	
	W	D	W	D	W	D	W	D
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	2'-3"	1'-6"
8"	1'-3"	1'-3"	1'-3"	1'-3"	1'-9"	1'-9"	3'-0"	2'-0"
10"	1'-9"	1'-6"	1'-9"	1'-6"	2'-3"	2'-3"	3'-6"	2'-6"
12"	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"	2'-6"	4'-0"	3'-0"
16"	2'-9"	2'-3"	2'-9"	2'-3"	4'-0"	3'-0"	6'-3"	3'-6"
20"	3'-6"	2'-9"	3'-6"	2'-9"	4'-6"	4'-0"	8'-6"	4'-0"
24"	4'-6"	3'-0"	4'-6"	3'-0"	5'-6"	5'-0"	9'-9"	5'-0"

NOTE:
ALL ABOVE DIMENSIONS APPLY TO STABLE TRENCH WALLS, UNDER VARIBLE CONDITIONS SIZE OF THRUST BLOCK SHALL BE DETERMINED BY ENGINEER.

NOT TO SCALE

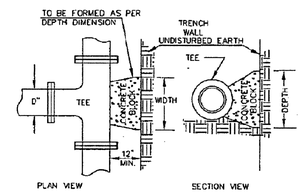
APPROVED
Public Works Director Date

CITY OF FERNDALE
THRUST BLOCKING
ELBOWS

DRAWING W-2

JUNE 1995

2091WA2A/W-2



100 P.S.I. OPERATING PRESSURE

SIZE	WIDTH	DEPTH
6"	1'-6"	1'-6"
8"	2'-0"	2'-0"
10"	2'-6"	2'-6"
12"	3'-0"	3'-0"
16"	4'-6"	3'-6"
20"	6'-0"	4'-0"
24"	7'-0"	5'-0"

NOTE:
ALL ABOVE DIMENSIONS APPLY TO STABLE TRENCH WALLS, UNDER VARIBLE CONDITIONS SIZE OF THRUST BLOCK SHALL BE DETERMINED BY ENGINEER.

NOT TO SCALE

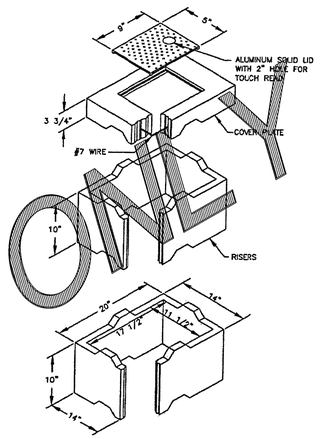
APPROVED
Public Works Director Date

CITY OF FERNDALE
THRUST BLOCKING
TEES

DRAWING W-3

JUNE 1995

2091WA2A/W-3

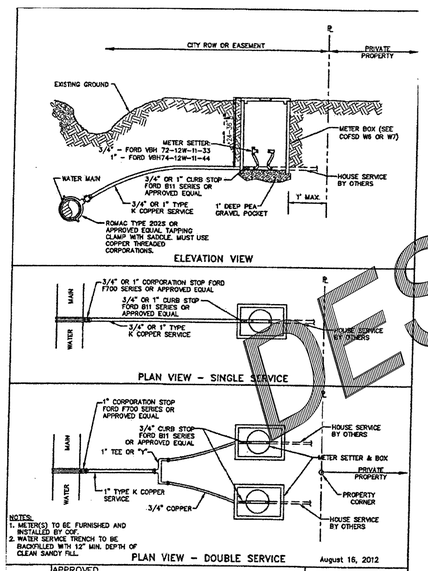


NOTE:
FOR USE WITH 3/4" WATER SERVICE OUTSIDE TRAFFIC AREA

April 16, 2012

APPROVED
Public Works Director Date

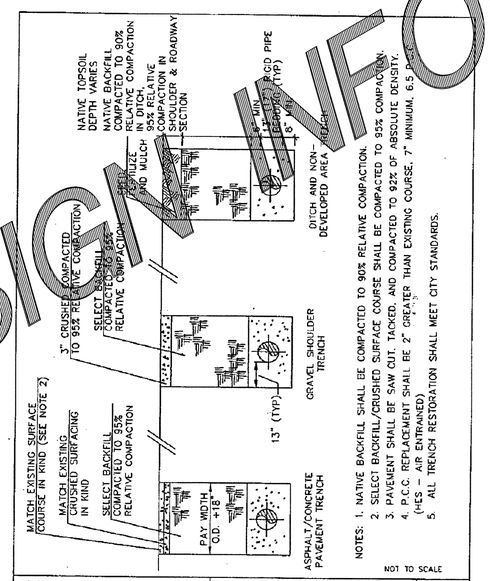
3/4" CONCRETE METER BOX
STANDARD DETAIL W-6
NOT TO SCALE



August 16, 2012

APPROVED
Public Works Director Date

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



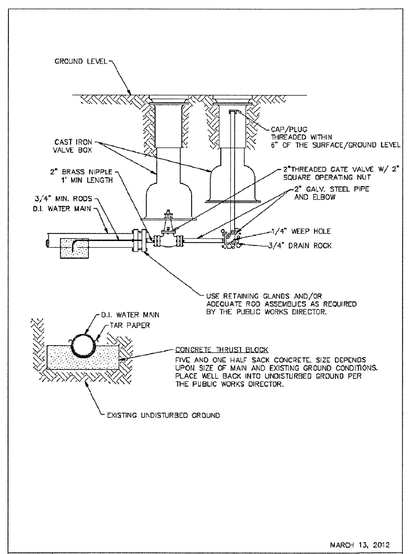
NOT TO SCALE

APPROVED
Public Works Director Date

CITY OF FERNDALE
TRENCHING DETAIL

DRAWING W-11

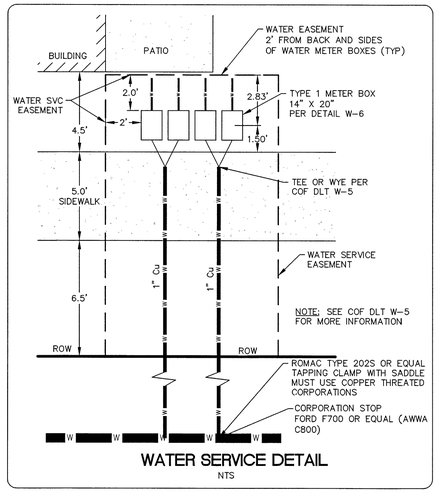
JUNE 1995



MARCH 13, 2012

APPROVED
Public Works Director Date

2" BLOW-OFF (ALTERNATE)
WATER MAIN EXTENSION
STANDARD DETAIL W-10



WATER SERVICE DETAIL
NTS

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
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4				10			
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RAMON LANOS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, 22931, 2020
4-23-19

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

JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

WATER TYPICAL DETAILS

MAIN STREET VILLAGE
2312 MOUNTAIN VIEW ROAD, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 17 OF 20

RECORD DRAWING

DESIGN INFORMATION ONLY

\\SERVER\Share\Common\Land Projects 2016\1602-2312 MT VIEW - PNRR\dwg\1602-CIVIL-ASB.dwg PLOT DATE:5/22/2019 2:42 PM
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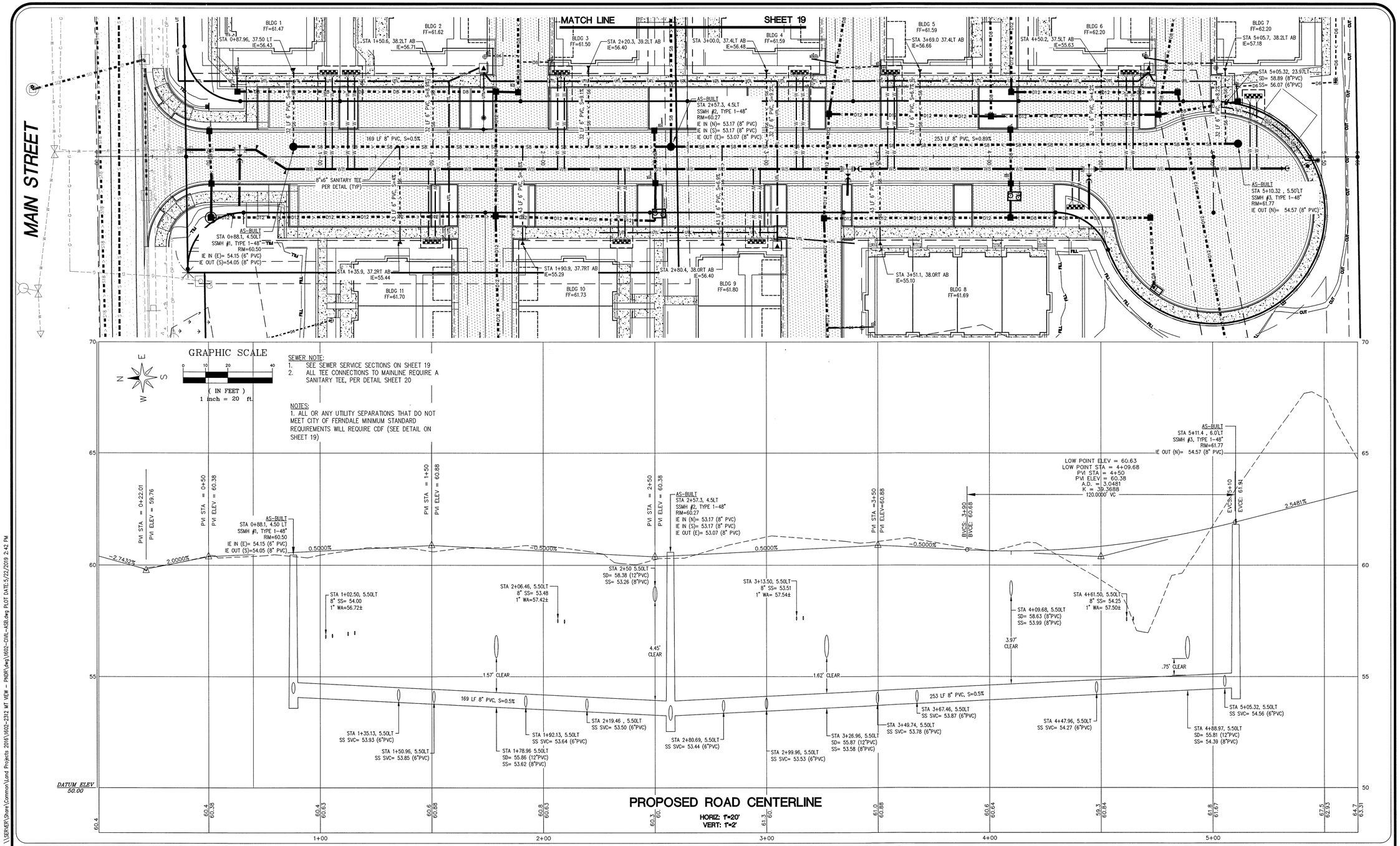

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RAMON L. LANOS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, 22001 — 4-23-19

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

JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY _____
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

SEWER PLAN & PROFILE 1

MAIN STREET VILLAGE
2312 MOUNTAIN VIEW ROAD, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 18 OF 20

RECORD DRAWING

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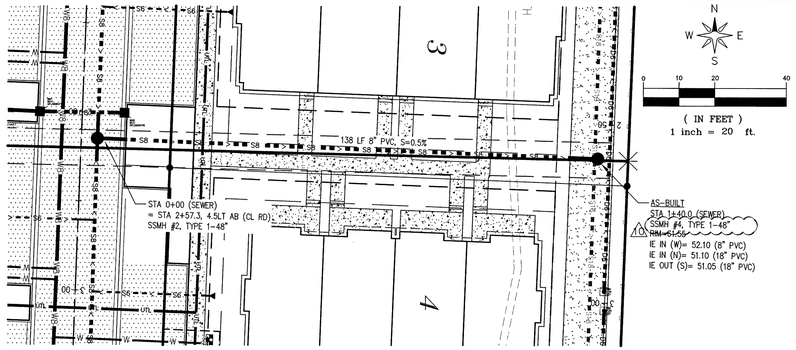
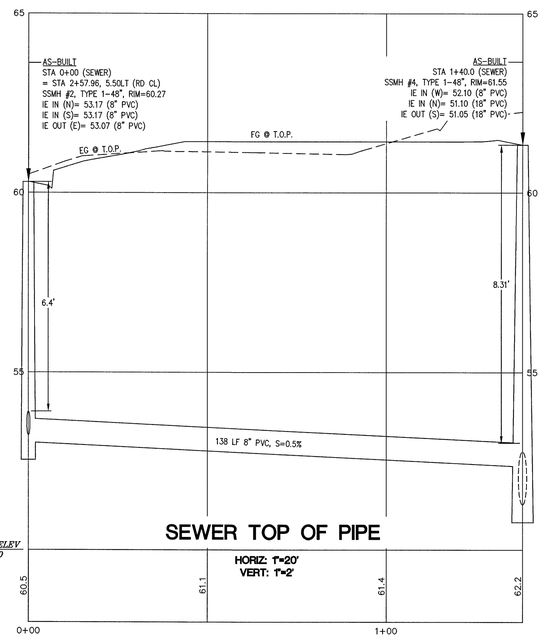
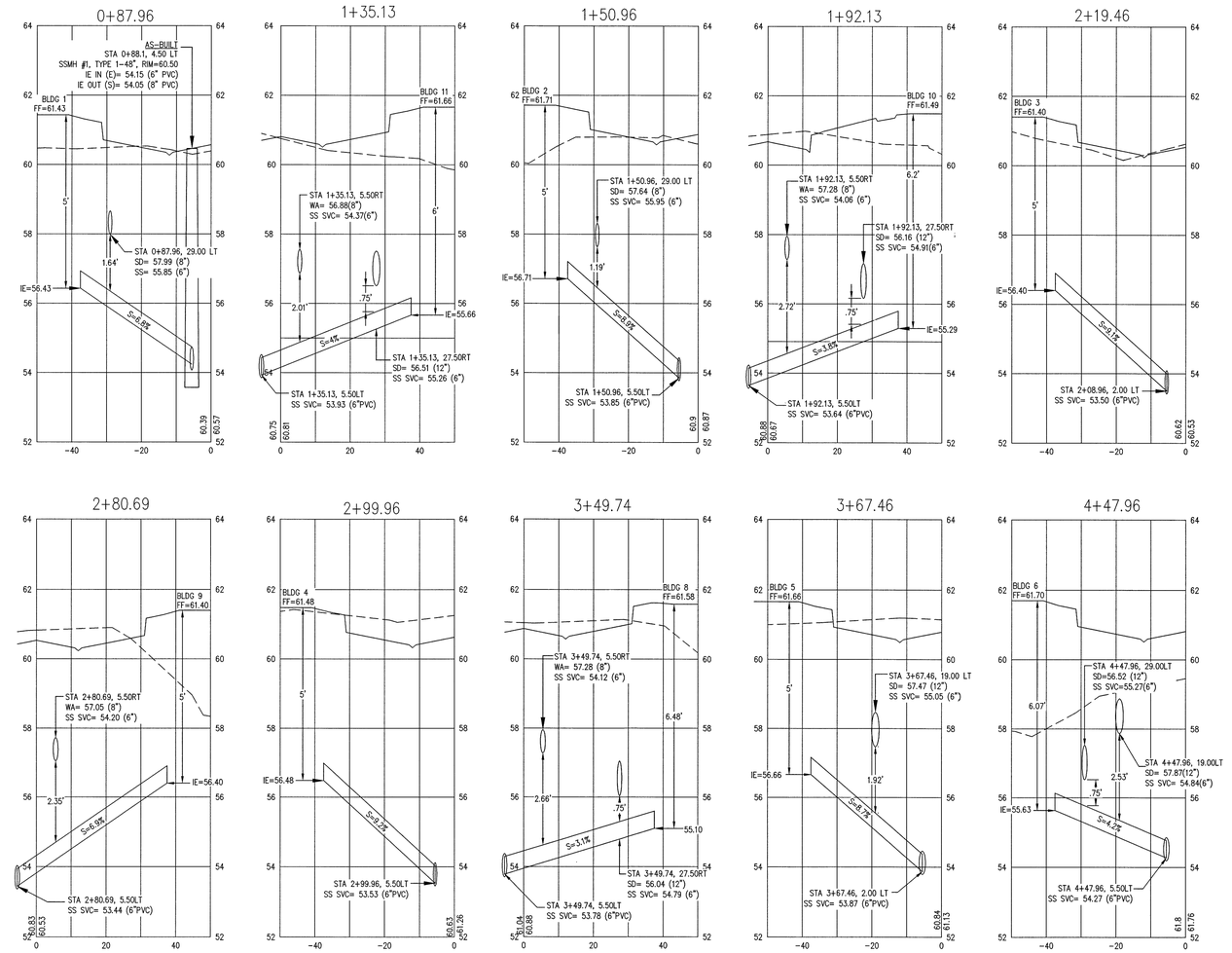




SEWER TOP OF PIPE

HORIZ: 1"=20'
VERT: 1"=2'



SEWER SERVICE SECTIONS

HORIZ: 1"=20'
VERT: 1"=2'

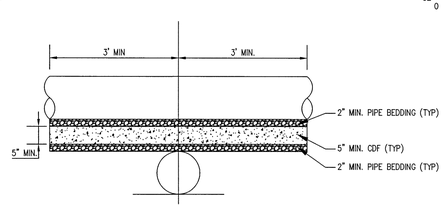
NOTES:

A. SSMH #4 MUST BE PRE-STUBBED, CUT-IN MANHOLE WITH DOUBLE BELL COUPLER CONNECTIONS TO THE EXISTING 18-INCH PVC SEWER MAINLINE.

B. CONTRACTOR MUST SUBMIT A SEWER BYPASS PLAN BEFORE INSTALLING SSMH #4 FOR CITY REVIEW AND APPROVAL.

C. ~~THE ENGINEER OF RECORD SHOULD VERIFY THE FLOW ELEVATION IN THE EXISTING 18-INCH SEWER MAINLINE TO DETERMINE WHETHER THE 0.20-FT ELEVATION DIFFERENCE DESIGN ACROSS SSMH #4 IS ADEQUATE TO ALLOW CONSTRUCTION OF THE PROPOSED 8-INCH SEWER ONCE THE EXISTING SEWER IS BACK IN SERVICE AFTER SSMH #4 IS INSTALLED. CONTRACTOR WILL NEED TO SET UP LASER TO INSTALL NEW 8-INCH SEWER AND IF FLOW IS HIGH IN THE 18-INCH LINE THAT MAY BE DIFFICULT.~~

E. THE CITY OF FERNDALE DOES NOT HAVE A STANDARD OR APPROVED METHOD TO INSTALL A DOG HOUSE STYLE SSMH OVER AN EXISITING PVC SEWER MAIN. DUE TO THE DIFFICULTY ASSOCIATED WITH THIS SITE TO INSTALL A CONVENTIONAL CUT IN SSMH THE CITY HAS AGREED TO ENTRETAIN A PROPOSAL FROM DAHLGREN CONSTRUCTION TO USE ALTERNATIVE METHODS FOR ACHIEVING A WATER TIGHT SEAL AT THE PVC PIPE AND STRUCTURE CONNECTION POINT TO PREVENT OUTSIDE WATER INFILTRATION INTO THE SEWER SYSTEM. DAHLGREN CONSTRUCTION HAS AGREED TO ATTEMPT THESE ALTERNATIVE METHODS AT THEIR OWN RISK. IF INFILTRATION IS OBSERVED WITHIN THE CONSTRUCTION PROCESS OR DURING THE TWO-YEAR BOND PERIOD DAHLGREEN CONSTRUCTION WILL BE HELD FULLY RESPONSIBLE AND AGREES TO DO WHATEVER IS NECESSARY TO SEAL THE SSMH TO THE SATISFACTION OF THE CITY OF FERNDALE.



CDF DETAIL

TO BE USED WHEN CLEARENCE BETWEEN PIPES IS LESS THAN 12"

SEWER NOTE:
ALL TEE CONNECTIONS TO MAINLINE REQUIRE A SANITARY TEE, PER DETAIL SHEET 20

NO.	REVISION	BY	DATE	NO.		BY	DATE
0	SUBMITTAL 1	RL	04/23/19	6			
1				7			
2				8			
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RAMON LLANOS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 36020 — 4-23-19

LDES, INC.
5160 INDUSTRIAL PL. #108
FERNDALE, WA 98248
PHONE 360-383-0620
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JOB NO.: 1602
DWG. NAME: 1602-CIVIL-ASB.dwg
DESIGNED BY: RL
DRAWN BY: EH
CHECKED BY: RL

PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

SEWER PLAN & PROFILE 2 & SERVICE CROSS-SECTIONS

MAIN STREET VILLAGE
2312 MOUNTAIN VIEW ROAD, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 19 OF 20

RECORD DRAWING

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TDS

HYDRO-SWELLING WATERPROOFING SEALANT

SPETEC® WT400

ADVANTAGES

- Single component
- MDI based
- Strong adhesion to concrete and steel even in humid conditions
- High elongation
- Remains elastic after curing
- Solvent free
- High expansion 45%
- Can be applied under water
- Non sagging

FIELD OF APPLICATION

- Waterstop
- Tunnel segment joints
- Pipe penetrations
- Poured wall joints
- Cold joints
- Sheet pile joints
- Manhole joints
- Precast segments

DESCRIPTION

SPETEC® WT400 is a single component hydrophilic sealant designed to swell and/or expand in the presence of water creating a water tight seal around pipe penetrations, cold joints and other waterstop locations. SPETEC® WT400 should be applied onto a dust-free, oil-free surface to maximize bond strength. SPETEC® WT400 should be applied at a minimum bead of 10mm with a minimum concrete cover of 7cm. SPETEC® WT400 must be fully confined to properly expand and seal the surface. This material can be applied underwater on clean surfaces.

APPLICATION

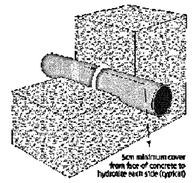
- The SPETEC® WT400 must be applied on a dust-free concrete or metal surface
- Use at temperatures between -5°C and 32°C
- Surface can be rough, smooth, wet or dry
- Should cure for 24 hours before concrete pouring
- Do not pour concrete directly on applied product

For the cartridges of 310ml:
- Break the clip foil at the nozzle
- Remove the stopper of the bottom
- Cut the nozzle diagonally at the appropriate position
- Place the cartridge in the gun and press the lever

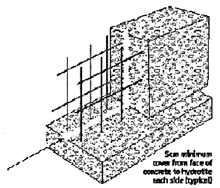
For the 600ml sausages:
- Put the sausage in the empty tube of the caulking gun
- Cut 10mm off the top of the sausage
- Close the tube and install the nozzle
- Cut the nozzle diagonally at the appropriate position

SPETEC® WT400 is applied with a caulking gun in an interrupted bead (minimum 10mm wide and high) in the middle of the joint or profile element.
Concrete cover should be at least 7cm on both sides, in order to avoid cracks from the expansion pressure if swelling SPETEC® WT400.

PIPE PENETRATION



COLD JOINT APPLICATION



NOCKLE JOINTS BETWEEN SHEETPILE ELEMENTS

CHEMICAL RESISTANCE

Good overall chemical resistance.

COMPOSITION

One component MDI polyurethane based, solvent free, hydro swelling mastic.

TECHNICAL DATA

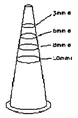
Property	Value	Norm
Base Polyurethane Consistency	Stable Paste	
Curing System	Moisture	
Cure Skin formation (*)	120 minutes	
Hydrostatic Pressure	5 bar	
Curing Rate (*)	1.8mm/24h	
Hardness	15 shore A	
Shrinkage	Max 4%	
Specific Gravity	1.37kg/cm³	
Temperature Resistance	-10°C to +90°C	
Elasticity Modulus in flex	0.34 MPa	DIN 53504
Shore hardness Tear Strength in flex	Ca. 260 MPa	DIN 53504
Elongation at Break in flex	>800%	DIN 53504
Elasticity Modulus in joint	Ca. 0.12 MPa	ISO 8339
Tear Strength in joint	Ca. 0.25 MPa	ISO 8339
Elongation at Break in joint	>450%	ISO 8339
Swelling	45%	
Final Cure (*)	24 hours	
Solids	100%	

(*) These values may vary depending on environmental factors such as temperature, moisture, and type of substrate.

CONSUMPTION

Average coverage depending on quality and roughness of the surface

Nozzle diameter	Length (sausages)	Length (cartridges)
3mm	20-25m	40-50m
6mm	8-10m	16-20m
8mm	4-5m	8-10m
10mm	3m	6m



ACCESSORIES

- Skeleton caulking gun for cartridges.
- Caulking gun for sausages (closed tube).
- Nozzle for caulking gun sausages (closed tube).

PACKAGING

310ml cartridges
- 12 per cardboard box.
- 1 pallet = 75 cardboard boxes.
- Weight per cartridge: 0.5kg net

600ml sausages
- 12 per cardboard box.
- 1 pallet = 40 cardboard boxes.
- Weight per sausage: 0.9kg net

STORAGE & CONSERVATION

In unopened packaging, in dry place between +5°C and +30°C (12 months). Date of Production: see packaging.

HEALTH & SAFETY

Consult the Material Safety Data Sheet.

Spetec

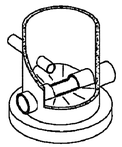
Reinplast NV/SA • Galileïlaan 3 • B-2160 Wommelgem • info@spetec.com • www.spetec.com
Tel. +32 3 320 32 11 • Fax +32 3 322 65 80

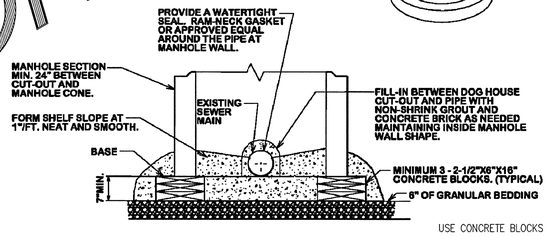
Spetec

Reinplast NV/SA • Galileïlaan 3 • B-2160 Wommelgem • info@spetec.com • www.spetec.com
Tel. +32 3 320 32 11 • Fax +32 3 322 65 80

NOTES:

1. FLOW SHALL BE MAINTAINED DURING CONSTRUCTION.
2. THIS DETAIL TO BE USED WHEN A 6" OR LARGER LATERAL NECESSITATES CONSTRUCTION OF A NEW MANHOLE.
3. FOR ADDITIONAL STANDARDS NOT SHOWN, SEE "STANDARD MANHOLE" SHEET 20
4. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORT OF EXISTING SEWER DURING INSTALLATION OF MANHOLE.
5. DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE; OTHERWISE, THE OPENING MUST BE CAST. SIZE, LOCATION, AND ANGLE OF ENTRY SHALL BE AS REQUIRED BY THE PLANS.
6. EXCAVATE TRENCH TO MIN. 13" BELOW BOTTOM OF EXISTING PIPE, COMPACT SUBGRADE. PLACE AND COMPACT 6" OF GRANULAR BEDDING. MONOLITHIC POUR OF MIN. 7" DEPTH, 6 SACK TOPPING MIX TO BE PLACED INSIDE, UNDER, AND OUTSIDE MANHOLE BARREL FROM SURFACE OF BEDDING, AROUND CONCRETE BLOCK RISERS, TO A POINT APPROXIMATELY AT THE SPRING LINE OF THE EXIST. PIPE.
7. DURING THE SAME POUR, THE FINISH MANHOLE SHELF SHALL BE FORMED AND FINISHED AROUND THE BARREL AND EXISTING PIPE AS SHOWN.
8. AFTER CONCRETE SHELF HAS CURED, THE EXISTING PIPE SHALL BE SAW-CUT ON BOTH SIDES TO THE FINISHED SHELF GRADE AND REMOVED. THE EXISTING PIPE SHALL FORM THE TROUGH OF THE MANHOLE AS SHOWN. FILE CUT PIPE TO GIVE SMOOTH EDGES.





USE CONCRETE BLOCKS IF SADDLE MANHOLE DOES NOT PROVIDE ROOM FOR 7" BASE

SEWER SADDLE MANHOLE INSTLLATION SEQUENCING

1. EXPOSE THE EXISITNG 18" SANTIARY SEWER PIPE AND BUILD A ROCK BASE UNDERNEATH THE PIPE AND FUTURE MANAHOLE LEAVING ROOM TO POUR A CONCRETE BASE.
2. ABRADE THE EXISTING PVC SEWER PIPE WITH A WIREWHEEL AT THE LOCATION WHERE THE FUTURE SADDLE MANHOLE WILL SIT.
3. CLEAN NEWLY PREPARED PIPE SURFACE WITH A SOLVENT.
4. HAND GUN WT400 OR APPROVED EQUAL AT THE MIDWAY POINT WHERE THE PROPOSED CONCRETE MANHOLE WILL SIT.
5. SET THE MANHOLE AND POUR A CONCRETE BASE HALF WAY UP THE EXISITNG SEWER PIPE.
6. GROUT THE VOIDS BETWEEN THE MANHOLE, BASE AND PIPE.
7. LET THE CONCRETE SET FOR 24 HOURS. CUT THE TOP HALF OF THE PIPE WITHIN THE INSIDE OF THE MANHOLE.
8. ALLOW A MINIMUM OF 14 DAYS PRIOR TO APPLYING A COAT OF POLYUREA OVER THE GROUT AND PIPE OUTSIDE THE MANHOLE. THE APPLICATION SHOULD COVER AT LEAST 18" PAST THE PIPE AND GROUT CONNECTING TO THE MANHOLE.
9. THE CONTRATOR SHALL HAVE A BY-PASS PLAN IN CASE OF A SPILL OR NEED OF REPAIR. THE PLAN SHALL BE APPROVED BY THE ITY OF FERNDALE PRIOR TO THE MANHOLE INSTALLATION. ALL MATERIALS NEEDED FOR THE PLAN SHALL REMAIN ON SITE DUIRING THE INSTALLATION OF THE MANHOLE.

DESIGN INFORMATION ONLY

RECORD DRAWING

00670.022 6/24/19 KB

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NO.	REVISION	BY	DATE	NO.		BY	DATE
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5				11			

RAMON LLANOS STATE OF WASHINGTON 22223 REGISTERED PROFESSIONAL ENGINEER
4-23-19

LDES, INC.
5160 INDUSTRIAL PL. #108
FERNDALE, WA 98248
PHONE 360-383-0620
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JOB NO.:	1602
DWG. NAME:	1602-CIVIL-ASB.dwg
DESIGNED BY:	RL
DRAWN BY:	EH
CHECKED BY:	RL

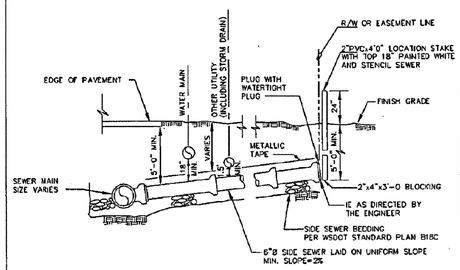
PNRD
PO BOX 3249
FERNDALE, WA 98248

APPROVED
JUN 13 2019
BY _____
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

SEWER SADDLE MANHOLE INSTALLATION DETAILS

MAIN STREET VILLAGE
2312 MOUNTAIN VIEW ROAD, FERNDALE, WA
A PORTION OF SECTION 30, TOWNSHIP 39N, RANGE 2E, W.M.

SHEET 19A OF 20



NORMAL INSTALLATION SIDE SEWER

15" AND SMALLER

NOT TO SCALE

APPROVED	CITY OF FERNDALE	DRAWING
Public Works Director Date	NORMAL INSTALLATION 15" AND SMALLER SEWER MAINS	SS-6

JUNE 1995 — 2091SE3A/SS-6

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

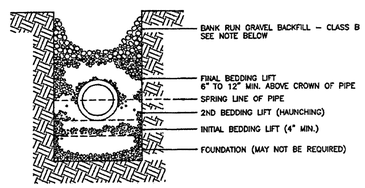
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE–

BEDDING MATERIAL FOR PVC PIPE SHALL BE PEA GRAVEL CONFORMING THE FOLLOWING SPECIFICATIONS:

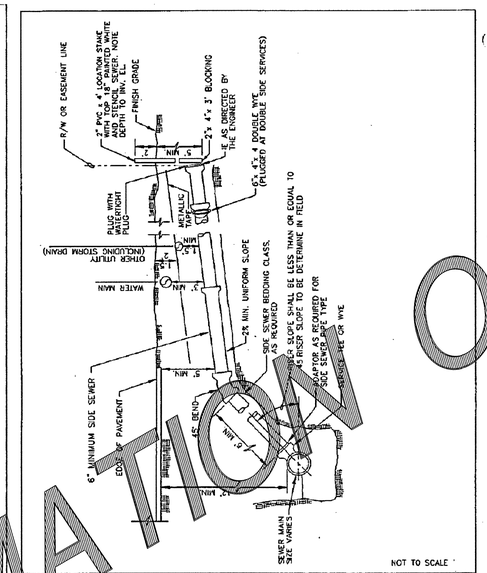
PEA GRAVEL – PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D422:

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

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



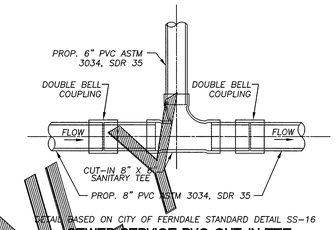
APPROVED	MARCH 13, 2012	BEDDING SPECIFICATIONS FOR PVC PIPE
Public Works Director	Date	STANDARD DETAIL SS-1



NOT TO SCALE

APPROVED	CITY OF FERNDALE	DRAWING
Public Works Director Date	SANITARY SEWER SIDE SERVICE INSTALLATION DEEP MAINS	SS-8

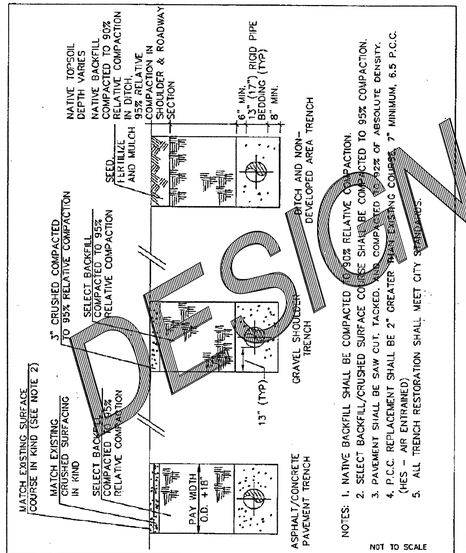
JUNE 1995 — 2091SE4A/SS-8



DETAIL BASED ON CITY OF FERNDALE STANDARD DETAIL SS-16

SEWER SERVICE PVC CUT-IN TEE

NTS

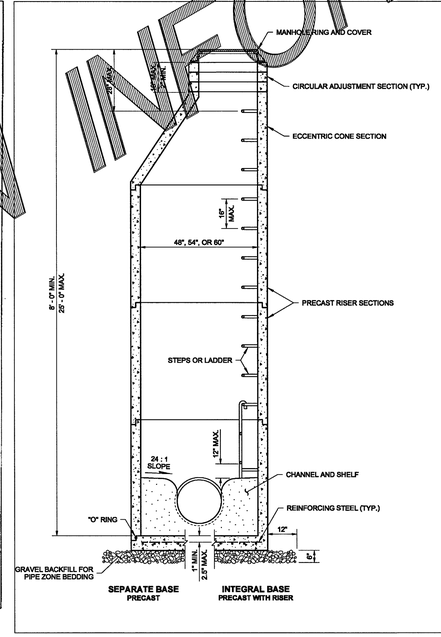


NOTES: 1. NATIVE BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
2. SELECT BACKFILL/CRUSHED SURFACE COURSE SHALL BE COMPACTED TO 95% COMPACTION.
3. PAVEMENT SHALL BE SAW CUT, TACKED, AND COMPACTED TO 92% OF ABSOLUTE DENSITY.
4. P.C.C. REPLACEMENT SHALL BE 2" GREATER THAN EXISTING COURSE, 7" MINIMUM,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

NOT TO SCALE

APPROVED	CITY OF FERNDALE	DRAWING
Public Works Director Date	TRENCHING DETAIL	SS-15

JUNE 1995



NOTES

1. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum.
2. For pipe allowances, see **Standard Plan B-10.20.**

MANHOLE DIMENSION TABLE

DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"

MANHOLE TYPE 1

STANDARD PLAN B-15.20-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III 02-07-12

STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

CASEY M. KRAMER — STATE OF WASHINGTON — 48326 — REGISTERED PROFESSIONAL ENGINEER

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT UNLESS IT BEARS THE ORIGINAL WET SEAL OF THE PROFESSIONAL ENGINEER. PLANS FOR PERMIT PURPOSES ONLY MAY BE ISSUED WITHOUT THE SEAL. A COPY MAY BE OBTAINED UPON REQUEST.

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RAMON LLANOS — STATE OF WASHINGTON — 22020 — REGISTERED PROFESSIONAL ENGINEER — 4-23-19

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SEWER TYPICAL DETAILS

MAIN STREET VILLAGE
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