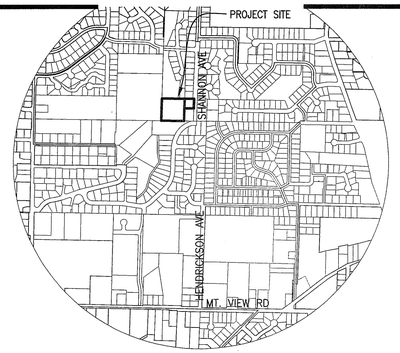
A PORTION OF THE NW 1/4 OF SECTION 19
TOWNSHIP 39 N., RANGE 2 E. OF THE W.M.
CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

RUSNAK LONG PLAT

AS BUILT DRAWINGS



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VICINITY MAP
1"=500'

1. COVER SHEET
2. EXISTING CONDITIONS
3. EROSION CONTROL PLAN
4. PRELIMINARY PLAT
5. COMPOSITE UTILITY PLAN
6. GRADING AND STORM PLAN
7. SANITARY SEWER AND WATER PLAN
8. FERNDALE GENERAL NOTES AND DETAILS
9. DETAILS
10. DETAILS

OWNER/APPLICANT
JM RUSNAK CONSTRUCTION
8951 EDIN FARMS LANE
LYNDEN WA 98264
CONTACT: JOE RUSNAK
(360) 201-2593

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

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

SURVEY NOTE:

1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTOR ON OCTOBER 2012
2. EQUIPMENT USED:
   LEICA TCRA1103+: 00'01.5" ± 2 PPM, ± 2 MM
3. HORIZONTAL DATUM:
   WASHINGTON STATE NORTH ZONE NAD 83/91
   CITY OF FERNDALE CONTROL NETWORK
4. VERTICAL DATUM
   CITY OF FERNDALE DATUM – NGVD 29
   BENCHMARKS: FERN 04 AND FERN 07
5. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WASHINGTON AUTHORITY CODE 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. THIS SURVEY DISCLOSES FACTORS OF RECORD AND ON THE GROUND AFFECTING THE SUBJECT PROPERTY BOUNDARY, BUT IT DOES NOT PURPORT TO LEGALLY RESOLVE RELATED PROPERTY LINE DISPUTES. WHERE AMBIGUITIES ARE NOTED, LDES RECOMMENDS THAT THE OWNER CONSULT WITH LEGAL COUNSEL TO DETERMINE HOW BEST TO INTERPRET THEIR PROPERTY RIGHTS AND ADDRESS ANY POTENTIAL PROPERTY LINE DISPUTES.
8. UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON FIELD LOCATION OF THE SURFACE EVIDENCE OF EXISTING STRUCTURES. UNDERGROUND UTILITY LOCATION SERVICES WERE 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.

ENGINEER'S CERTIFICATION
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN "RUSNAK LONG PLAT" HAVE BEEN INSPECTED BY LDES AND TO THE BEST OF MY KNOWLEDGE, HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

12/13/13
RAMON LLANOS, P.E.

RAMON LLANOS — STATE OF WASHINGTON — 36910 — REGISTERED PROFESSIONAL ENGINEER
12/13/13

SURVEYOR'S CERTIFICATION
I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS, AND AS-BUILT COMMENTS REFLECTING MATERIALS ACTUALLY USED DURING CONSTRUCTION ACCURATELY REFLECT EXISTING FIELD CONDITIONS AS DETERMINED BY ME OR UNDER MY DIRECT SUPERVISION ON THIS DATE: 12/16/2013

KYLE HAGGITH, P.L.S.

KYLE T. HAGGITH — STATE OF WASHINGTON — 36910 — REGISTERED PROFESSIONAL LAND SURVEYOR
12/16/2013

LEGEND:

= FND BRASS MON	= EXIST OVERHEAD POWER
= FND CONC MON	= EXIST UNDERGROUND POWER
= FND SQARE CONC MON	= EXIST OVERHEAD PHONE
= FND REBAR AND CAP	= EXIST UNDERGROUND PHONE
= FND IRON PIPE	= EXIST UNDERGROUND TV CABLE
= FND HUB AND TACK	= EXIST GAS MAIN
= FND PIN	= EXIST WATER LINE
= CENTER SECTION 19	= EXIST SANITARY SEWER LINE
= CALCULATED POSITION	= EXIST STORM DRAIN LINE
= EXISTING/SET TEMPORARY BENCHMARK/BENCHMARK	= EXIST TOP OF BANK
= EXIST SD CATCH BASIN (TYPE I)	= EXIST TOE OF BANK
= STORM DRAIN CATCH BASIN	= EXIST TREE LINE
= EXIST SANITARY SEWER MANHOLE	= EXST DITCH CENTER-LINE
= EXIST SANITARY SEWER CLEANOUT	= EXISTING ROAD CENTERLINE
= EXIST SANITARY SEWER SERVICE	= EXST BARBED WIRE FENCE
= SANITARY SEWER SERVICE	= EXST WOOD POST FENCE
= SEWER CLEANOUT	= EXIST CONC. FENCE OR RET. WALL
= SEWER MANHOLE	= EXIST ROCK WALL
= WATER SERVICE	= EXIST CONTOUR (INDEX)
= EXISTING WATER METER BOX	= EXIST CONTOUR (NORMAL)
= EXISTING WATER VALVE	= STORM DRAIN LINE
= EXISTING FIRE HYDRANT	= SAN. SEWER LINE
= EXIST POWER/AND OR UTILITY POLE	= WATER LINE
= EXIST GUY POLE	= GAS LINE
= EXIST GUY WIRE	= POWER TRENCH
= EXIST POWER TRANSFORMER	= ROOF DRAIN
= EXIST POWER VAULT	= SERVICE POLE
= EXIST POWER JBOX/HANDHOLD	= POWER VAULT
= EXIST LIGHT POLE	
= EXIST UTILITY POLE	[ ] = DESIGN INFORMATION
= EXIST TV BOX	BOLD TEXT = AS-BUILT INFORMATION
= EXIST TELEPHONE PEDESTAL	AB = AS-BUILT
= EXIST TELEPHONE MANHOLE	
= EXIST TEL VAULT	
= EXIST MAIL BOX	
= EXIST SIGN	
= EXIST FLAG POLE	
= EXIST LANDSCAPING	
= EXIST CONC SIDEWALK	
= EXIST ASPHALT	
= EXIST GRAVEL DRIVEWAY	
= EXIST STRUCTURE	
= NO EXCAVATION ALLOWED WITHIN STORMWATER FACILITY (HATCHED AREA) UNLESS APPROVED BY HOMEOWNER'S ASSOCIATION	

APPROVED
JAN 24 2014
BY _____, P.E.
CITY OF FERNDALE

005160.001 2/3/14 SH

R:\Common\Land Projects 2012\12042-Rusnak\dwg\12042-asbuilt.dwg PLOT DATE:12/13/2013 11:13 AM

	RUSNAK LONG PLAT			LDES, INC. 5160 INDUSTRIAL PL. #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	*RUSNAK LONG PLAT* COVER SHEET AS BUILT	REVISIONS - COMMENTS: SR 10/17/13 SUBMITTAL 1; SR 12/13/13 SUBMITTAL 2
JOB # 12042	FOR: JM RUSNAK CONSTRUCTION					SHEET 01 OF 10

LEGEND:

- = FND BRASS MON
- = FND CONC MON
- = FND SQARE CONC MON
- = FND REBAR AND CAP
- = FND IRON PIPE
- = FND HUB AND TACK
- = FND PIN
- (19) = CENTER SECTION 19

SURVEY NOTE:

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2. EQUIPMENT USED: LEICA TCRA1103+: 00'01.5" ± 2 PPM, ± 2 MM
3. HORIZONTAL DATUM:
   WASHINGTON STATE NORTH ZONE NAD 83/91
   CITY OF FERNDALE CONTROL NETWORK
   BASIS OF BEARING:
   CITY OF FERNDALE EXISTING MONUMENT LOCATION SURVEY WASHINGTON STATE NORTH ZONE NAD 83/91
   MONUMENT NUMBERS 7, 4, BEARING= N16°21'24"W
4. VERTICAL DATUM
   CITY OF FERNDALE DATUM – NGVD 29
   BENCHMARKS: FERN 04 AND FERN 07 (EL=147.17)
5. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WASHINGTON AUTHORITY CODE 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.
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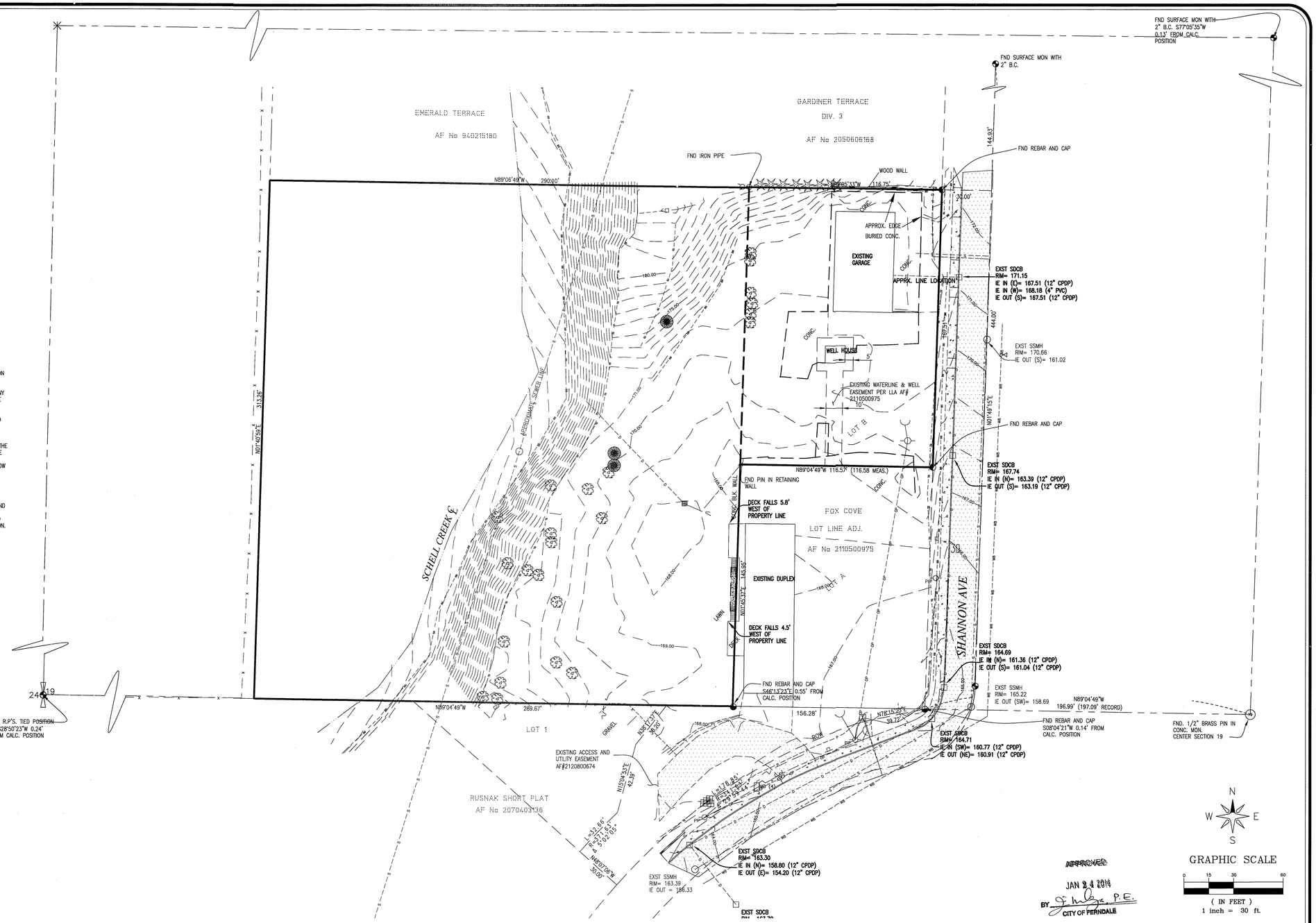

APPROVED
JAN 24 2014
BY _____ P.E.
CITY OF FERNDALE

DRAWN BY SR DATE 11/21/13 CHECKED BY RL DATE 11/21/13	RUSNAK LONG PLAT		LDES, INC. 5160 INDUSTRIAL PL. #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	*RUSNAK LONG PLAT* EXISTING CONDITIONS AS BUILT	SHEET 2 OF 10
JOB # 12042	FOR: RUSNAK CONSTRUCTION				

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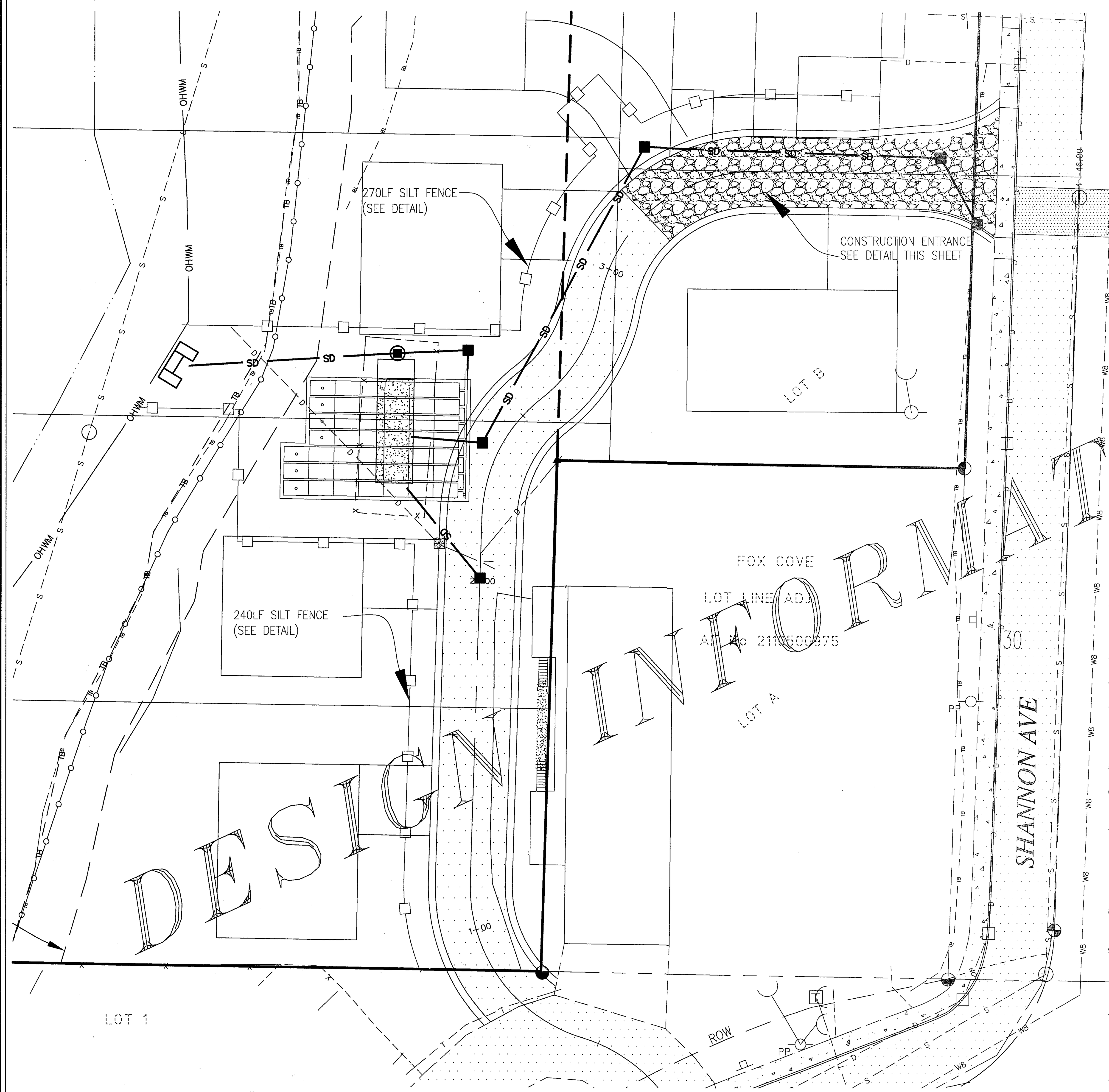
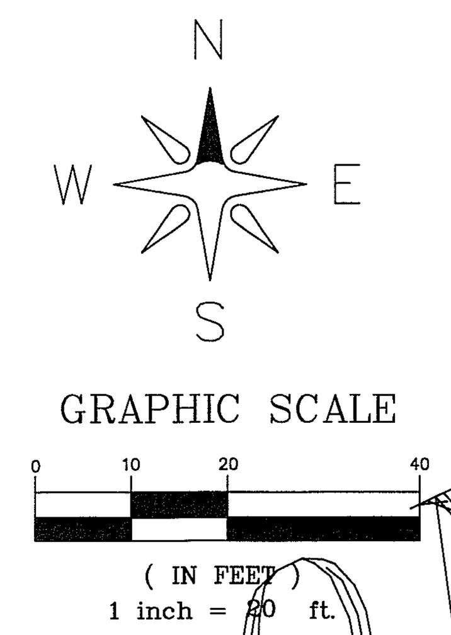
*NOTE: DURING CONSTRUCTION, CONTRACTOR SHALL KEEP SEDIMENT LADEN WATER FROM ENTERING THE SAND FILTER

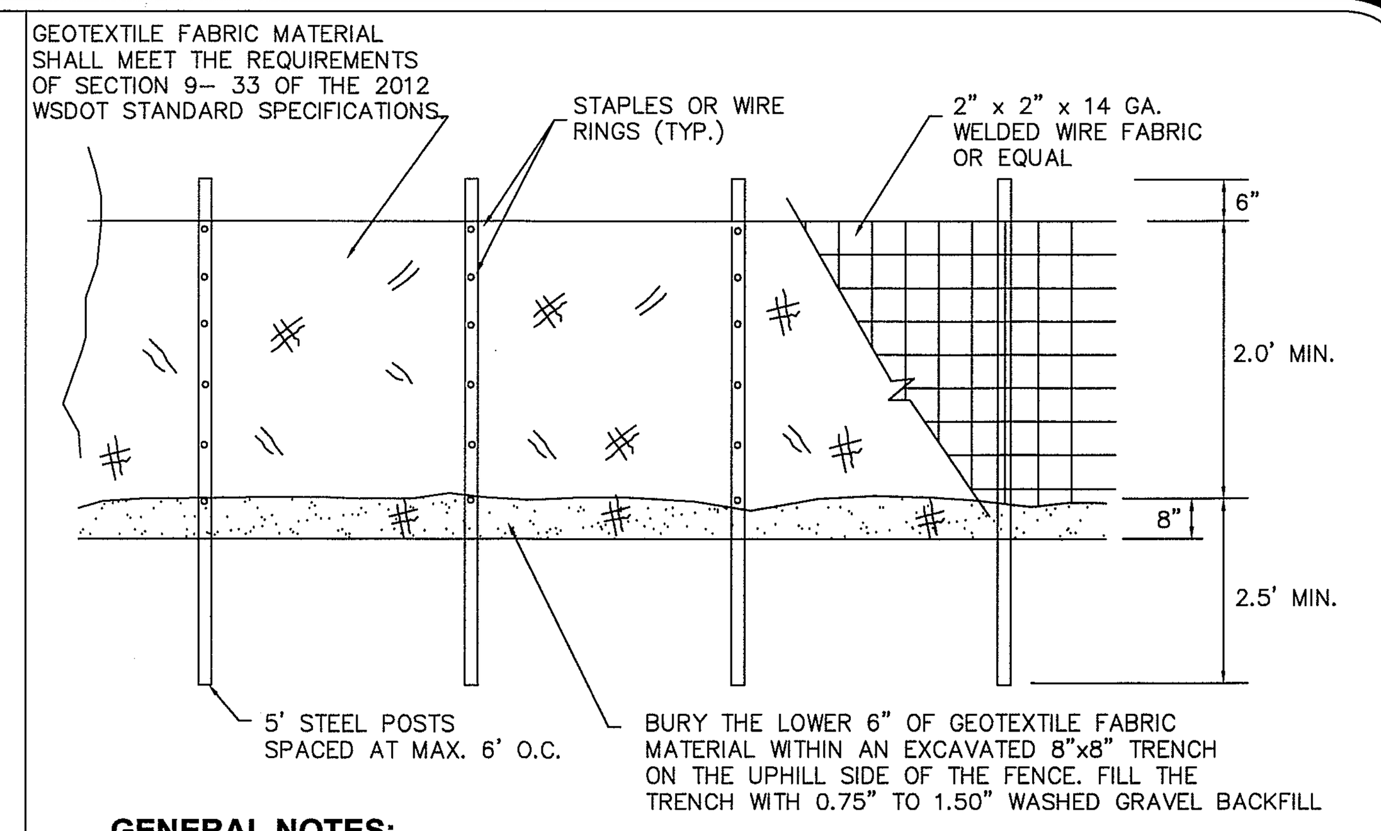




CALL 2 BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555
UTILITIES UNDERGROUND LOCATION CENTER

CITY OF FERNDALE TESC NOTES:

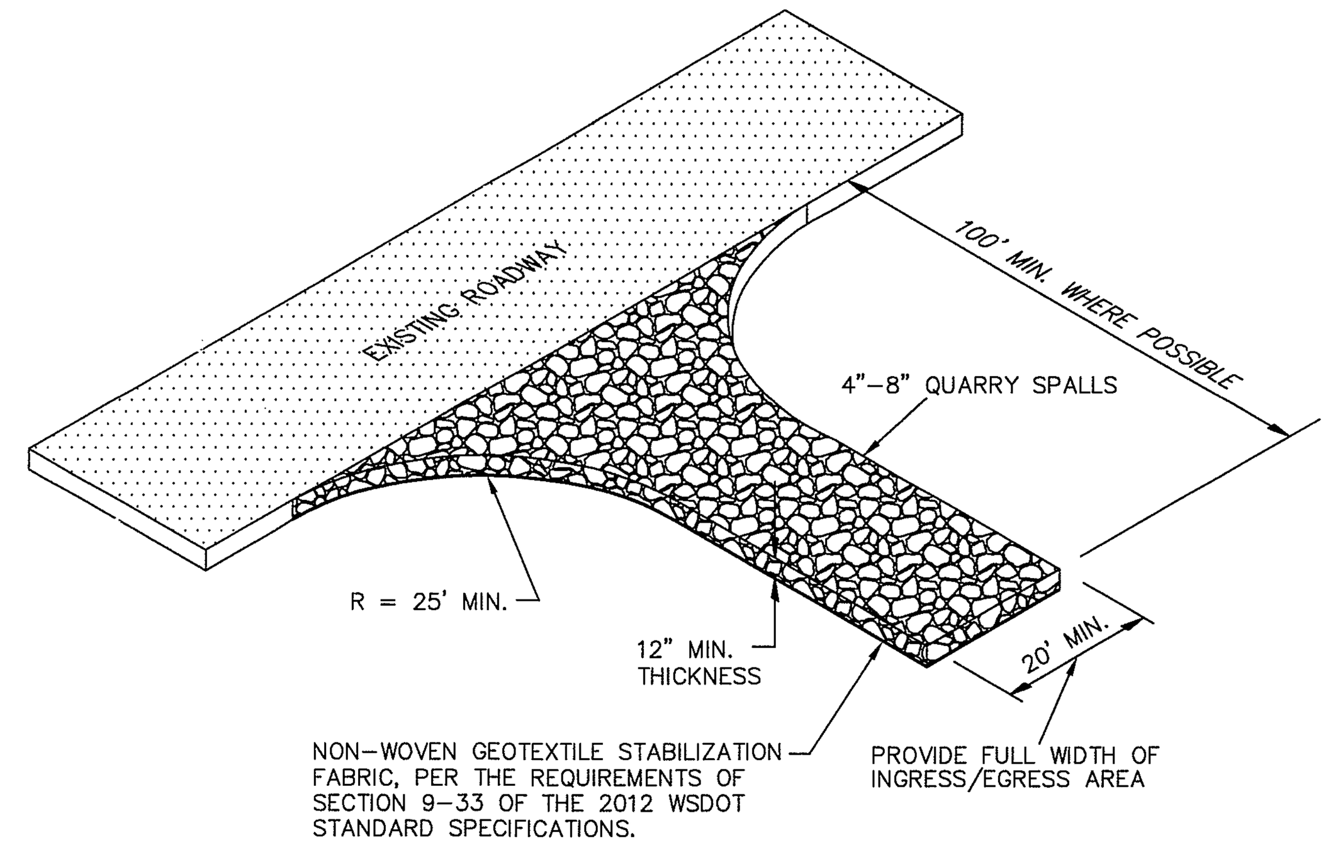
1. STABILIZATION & SEDIMENT TRAPPING. ALL EXPOSED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF BMP'S. FROM OCTOBER 1 TO APRIL 30, NO SOILS SHALL REMAIN UNEXPOSED FOR MORE THAN 2 DAYS. FROM MAY 1 TO SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN 7 DAYS. PRIOR TO LEAVING THE SITE, STORMWATER 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.



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

EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. 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.
2. 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.
3. THE EXISTING AND PROPOSED STORM SYSTEMS SHALL BE CLEANED AND MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL ALL ON-SITE SOILS HAVE BEEN STABILIZED.
4. 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.

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DRAWN BY SR DATE 11/21/13
CHECKED BY RL DATE 11/21/13
JOB # 12042

RUSNAK LONG PLAT
FOR: RUSNAK CONSTRUCTION

RAMON L. LAOS PROFESSIONAL ENGINEER 11-21-13

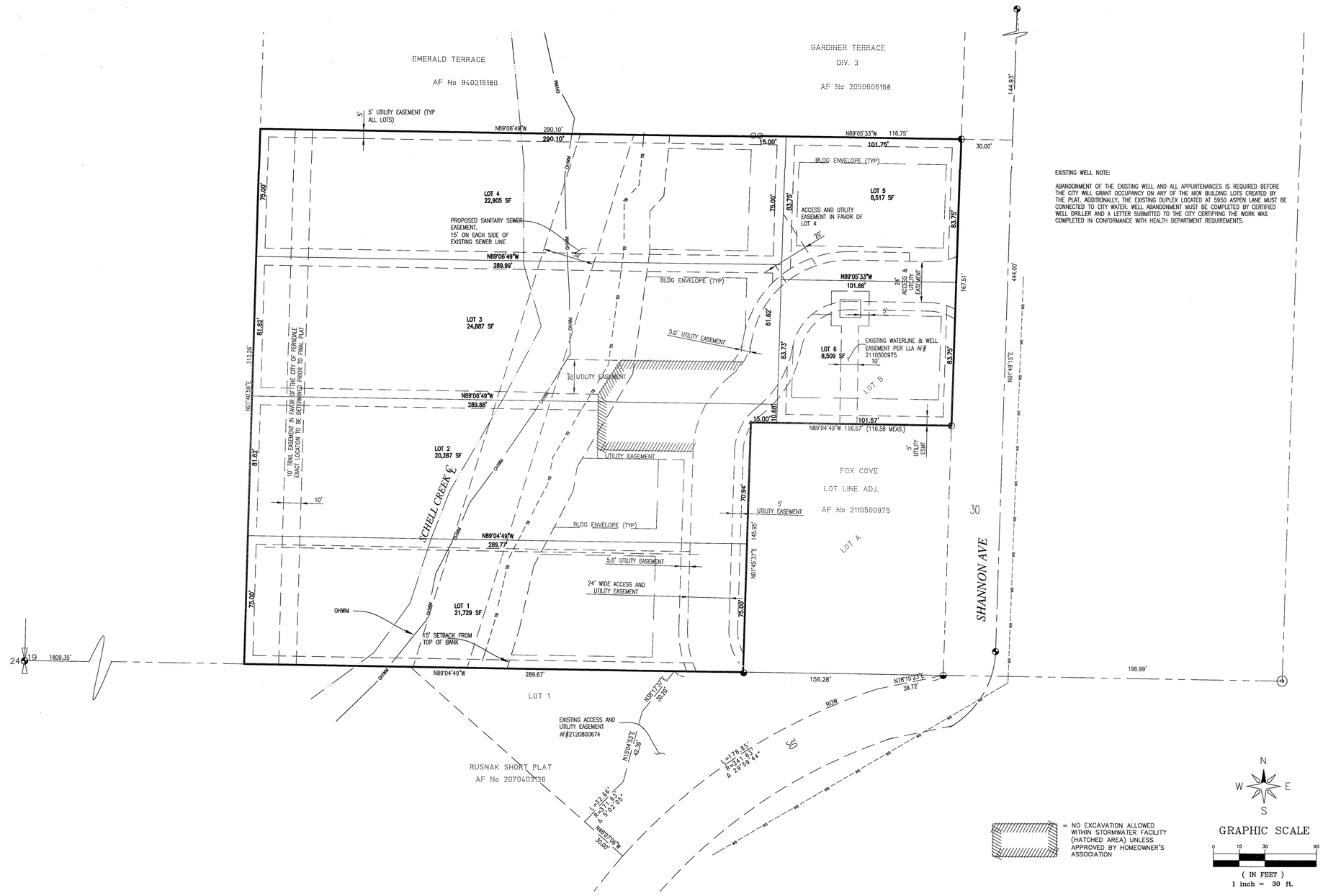
LDES, INC.
5160 INDUSTRIAL PL. #108
FERNDALE, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

RUSNAK LONG PLAT
EROSION CONTROL PLAN
AS BUILT

APPROVED
JAN 2 4 2014
BY ______ P.E.
CITY OF FERNDALE

SHEET 3 OF 10

0054. 004 2/3/14 SH



EXISTING WELL NOTE:

ABANDONMENT OF THE EXISTING WELL AND ALL APPURTENANCES IS REQUIRED BEFORE THE CITY WILL GRANT OCCUPANCY ON ANY OF THE NEW BUILDING LOTS CREATED BY THE PLAT. ADDITIONALLY, THE EXISTING DUPLEX LOCATED AT 5950 ASPEN LANE MUST BE CONNECTED TO CITY WATER. WELL ABANDONMENT MUST BE COMPLETED BY CERTIFIED WELL DRILLER AND A LETTER SUBMITTED TO THE CITY CERTIFYING THE WORK WAS COMPLETED IN CONFORMANCE WITH HEALTH DEPARTMENT REQUIREMENTS.

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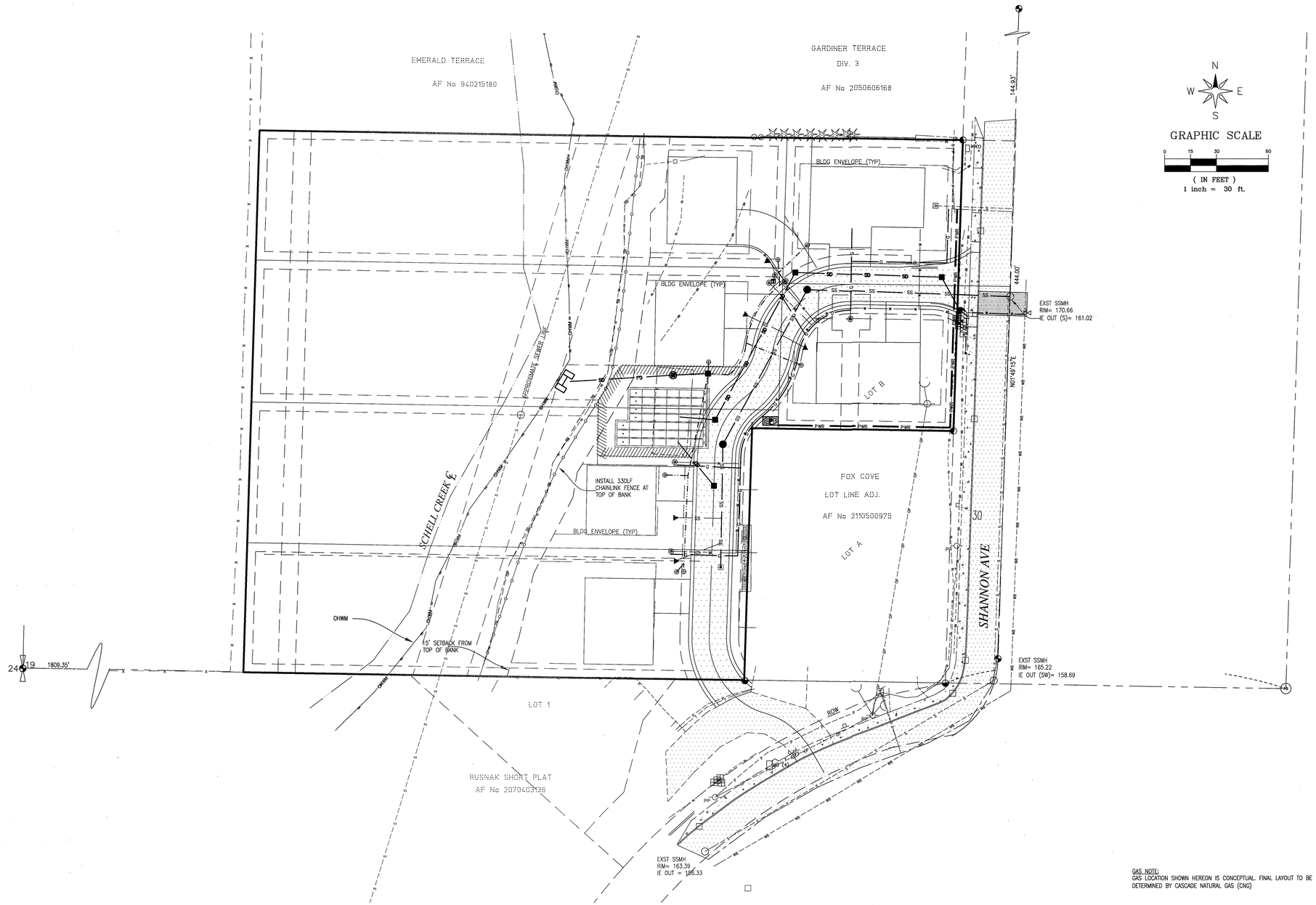
DRAWN BY SR DATE 11/21/13 CHECKED BY RL DATE 11/21/13	RUSNAK LONG PLAT		KYLE I. FRAGGITH STATE OF WASHINGTON 36016 REGISTERED PROFESSIONAL LAND SURVEYOR	LDES, INC. 5160 INDUSTRIAL PL. #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	*RUSNAK LONG PLAT* SUBDIVISION PLAN AS BUILT	APPROVED JAN 24 2014 BY _____ P.E. CITY OF FERNDALE
JOB # 12042	FOR: RUSNAK CONSTRUCTION					SHEET 4 OF 10



GAS NOTE:
GAS LOCATION SHOWN HEREON IS CONCEPTUAL. FINAL LAYOUT TO BE DETERMINED BY CASCADE NATURAL GAS (CNG)

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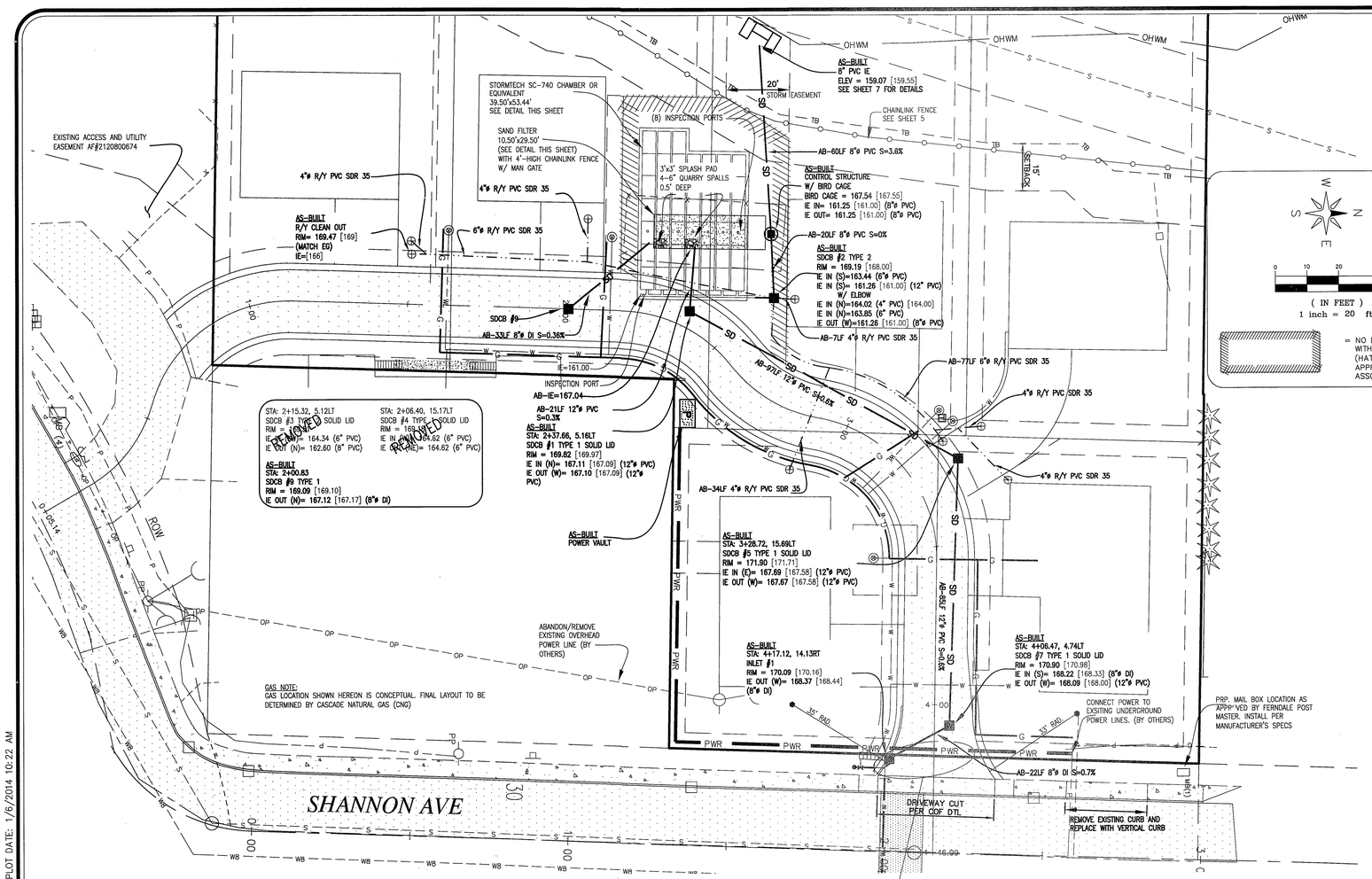
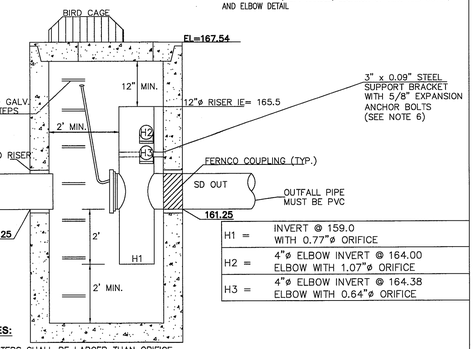
	RUSNAK LONG PLAT			LDES, INC. 5160 INDUSTRIAL PL. #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	*RUSNAK LONG PLAT* COMPOSITE UTILITY PLAN AS BUILT	REVISIONS - COMMENTS SR 10/17/13 SUBMITTAL 1 SR 11/20/13 SUBMITTAL 2	APPROVED JAN 24 2014 BY J. Mlogan, P.E. CITY OF FERNDALE
JOB # 12042	**FOR:** **RUSNAK CONSTRUCTION**						SHEET 5 OF 10



NOTE:
REFER TO WSDOT STANDARD PLAN B-10.40-00 IN REGARD TO THE SHEAR GATE, LIFT HANDLE, LOCATION OF RING AND COVER, AND ELBOW DETAIL

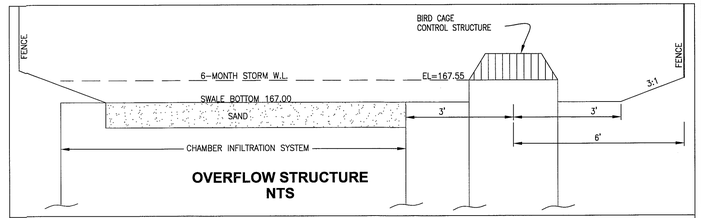


H1 =	INVERT @ 159.0 WITH 0.77"ø ORIFICE
H2 =	4"ø ELBOW INVERT @ 164.00 ELBOW WITH 1.07"ø ORIFICE
H3 =	4"ø ELBOW INVERT @ 164.38 ELBOW WITH 0.64"ø ORIFICE

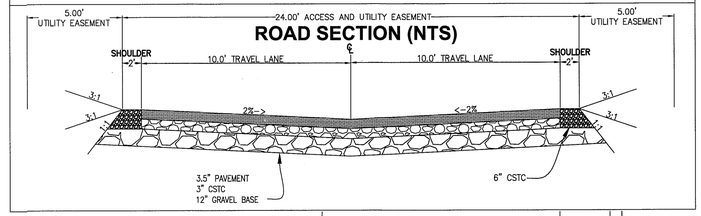
GENERAL NOTES:

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. USE EX. MANHOLE AS FEASIBLE AND INSTALL NEW INLET PIPE AND OUTLET CONTROL STRUCTURE.
6. 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 MANHOLE WALL 2 INCHES.

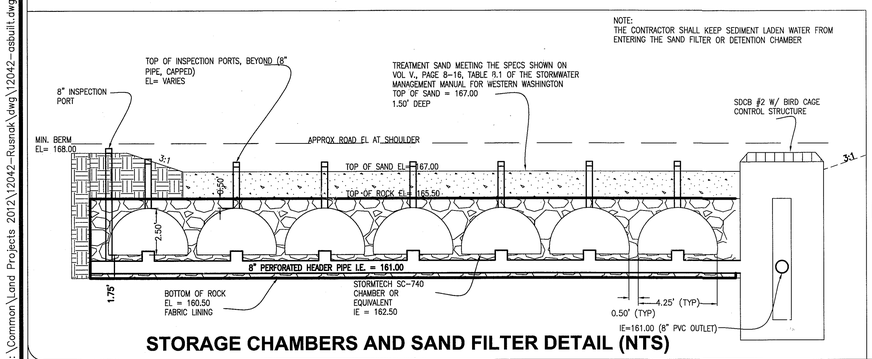
SD CONTROL STRUCTURE 54" TYPE 2



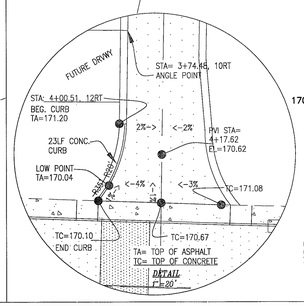
OVERFLOW STRUCTURE NTS

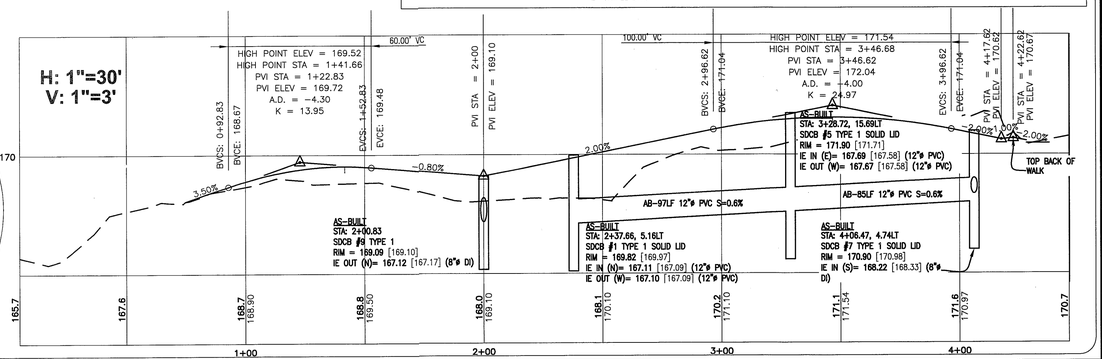


ROAD SECTION (NTS)



STORAGE CHAMBERS AND SAND FILTER DETAIL (NTS)





STORAGE CHAMBERS AND SAND FILTER DETAIL (NTS)

RUSNAK LONG PLAT		LDES, INC. 5160 INDUSTRIAL PL. #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	*RUSNAK LONG PLAT* GRADING & STORM PLAN AS BUILT	REVISIONS - COMMENTS	APPROVED JAN 24 2014 BY _____ P.E. CITY OF FERNDALE
JOB # 12042	**FOR: RUSNAK CONSTRUCTION**			SR 10/17/13 SUBMITTAL 1 SR 11/20/13 SUBMITTAL 2 SR 12/19/13 SUBMITTAL 3 SR 1/3/14 SUBMITTAL 4	SHEET 6 OF 10

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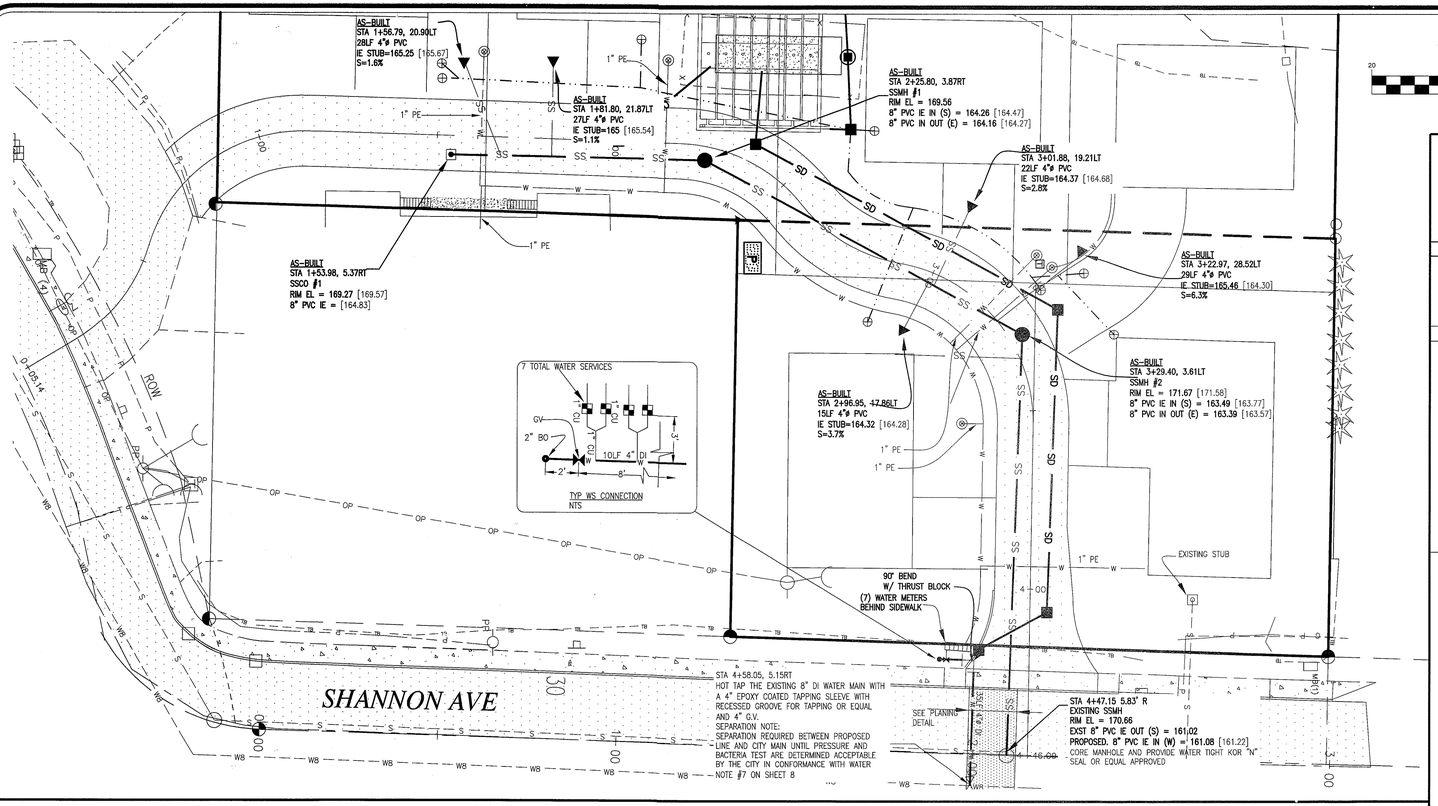
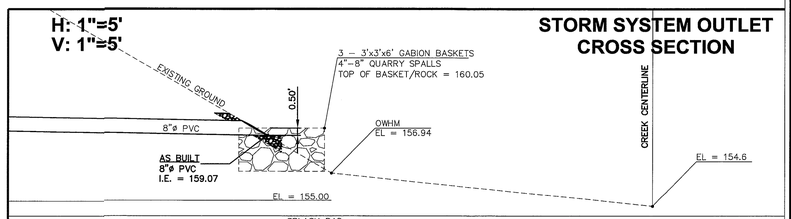
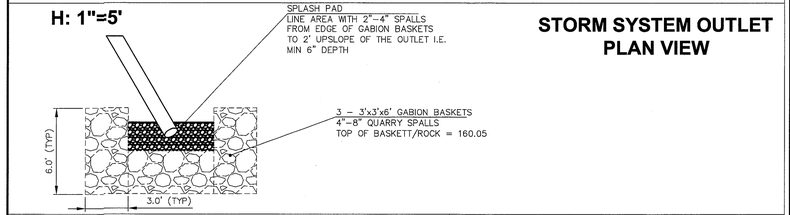
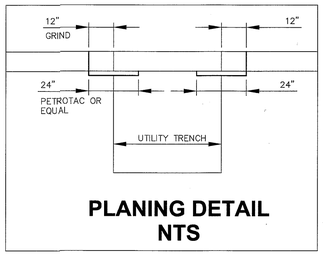




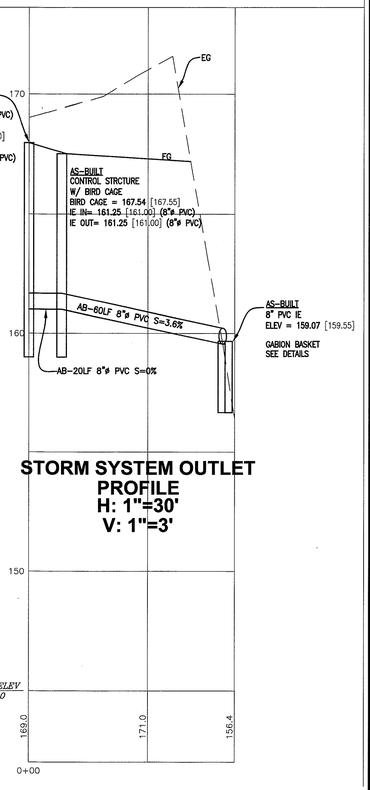


SHANNON AVENUE PAVEMENT NOTE:
1. FULL DEPTH SAW-CUT REQUIRED PRIOR TO EXCAVATING
2. ROADWAY RESTORATION PER CITY OF FERNDALE DETAIL R-11A
3. ADDITIONAL SAW CUTS MAY BE REQUIRED PER CITY DETAILS SS-15, R-11A, AND W-11.

SEWER NOTE:
THE 8 INCH SANITARY SEWER MAINLINE INCLUDING MANHOLES ARE PUBLIC AND WILL BE MAINTAINED BY THE CITY OF FERNDALE. THE SEWER LINES AND ALL OTHER UTILITIES AND THE ROADWAY WITHIN THE RUSNAK LONG PLAT ARE PRIVATE AND WILL REQUIRE MAINTENANCE BY THE HOMEOWNER'S ASSOCIATION.



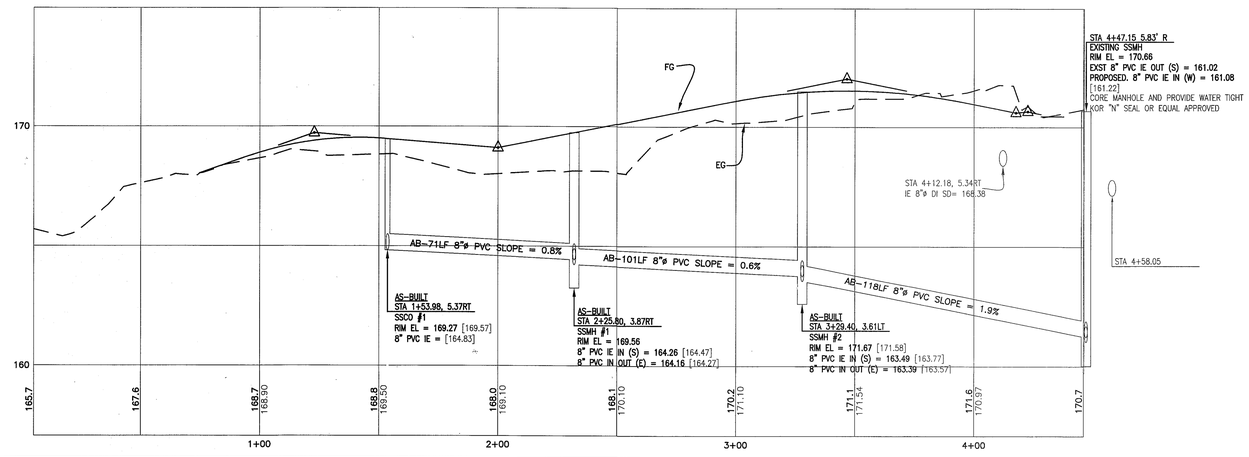
PLANING DETAIL
NTS



STORM SYSTEM OUTLET
PROFILE
H: 1"=30'
V: 1"=3'

APPROVED
JAN 24 2014
BY _____, P.E.
CITY OF FERNDALE

H: 1"=30'
V: 1"=3'



	RUSNAK LONG PLAT		
JOB # 12042	**FOR:**	**RUSNAK CONSTRUCTION**	

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

RUSNAK LONG PLAT
SANITARY SEWER AND WATER PLAN
STORM SEWER OUTFALL DETAILS
AS BUILT

REVISIONS -		COMMENTS
SR	10/17/13	SUBMITTAL 1
SR	11/20/13	SUBMITTAL 2
SR	12/20/13	SUBMITTAL 3
SR	1/3/14	SUBMITTAL 4

SHEET 7 OF 10

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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 PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED 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.

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 & CRUSHED 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 DRAINAGE

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.

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" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE EITHER IOWA OR 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:

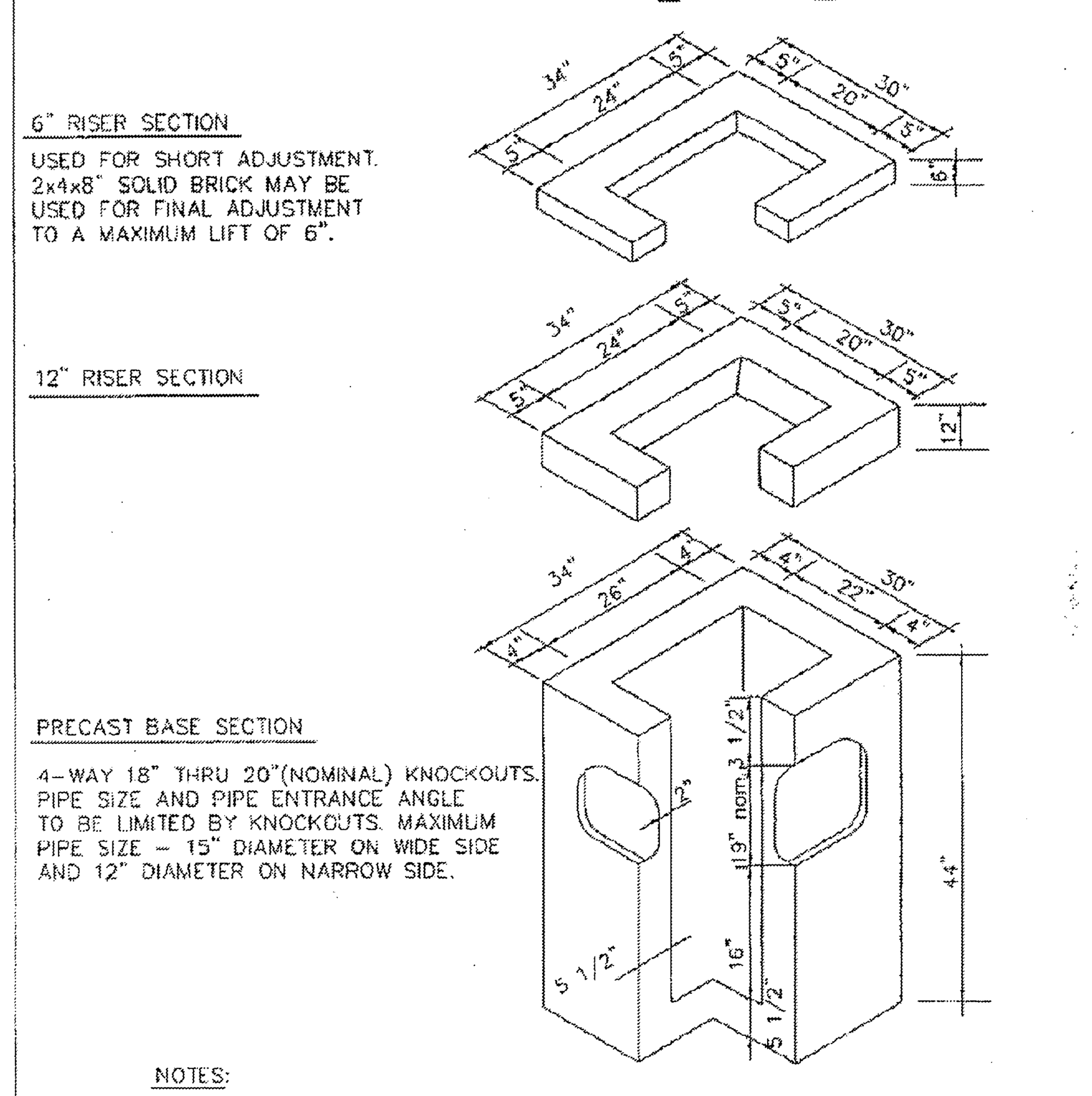
TYPICAL STREET SECTION	PER THESE PLANS
PCC CURB AND GUTTER	COFSD R-9
PCC SIDEWALKS	COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
PCC CURB RAMPS	WSDOT STD. DETAIL F-40.

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.

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



NOTES:

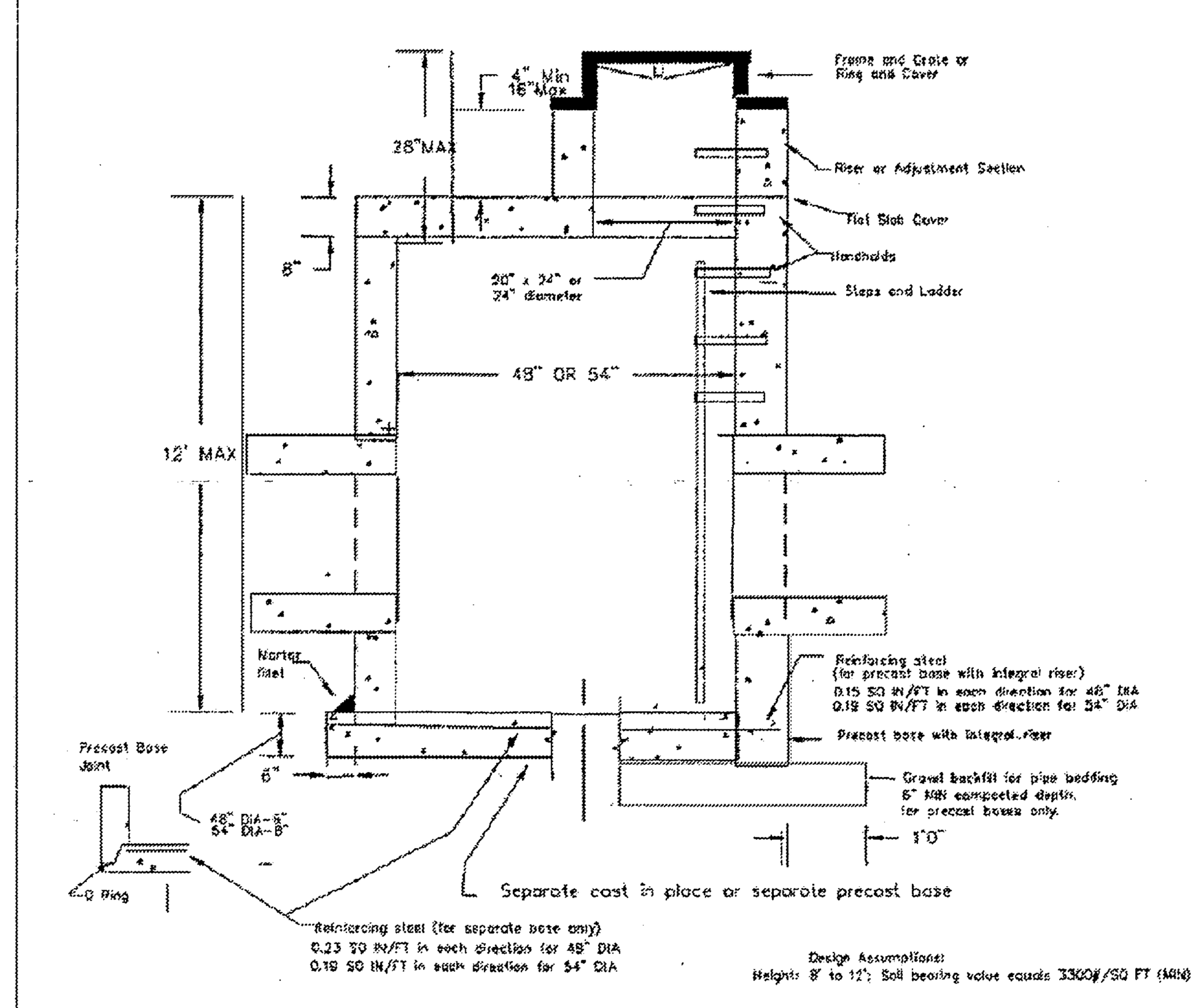
1) CAST IN PLACE OR MASONRY CONSTRUCTION UNITS MAY BE SUBSTITUTED AS PER A.P.W.A. STANDARDS OR STATE STANDARDS. (B-1)

2) FOR DETAILS OF REINFORCEMENTS AND INSTALLATION. SEE A.P.W.A. STANDARDS OR STATE STANDARDS.

NOT TO SCALE

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

JUNE 1995



Notes

Catch basins to be constructed in accordance with ASTM C 478 (AASHTO M 199) C 890 unless otherwise shown on plans or noted in the standard specifications.

Handholds in riser or adjustment section shall have 3" minimum clearance. Steps in catch basin shall have 6" minimum clearance. No steps are required when height is 4' or less.

All reinforced cast in place concrete shall be Class A. Non-reinforced concrete in channel and shelf shall be Class C. All precast concrete shall obtain 4000 PSI @ 28 days.

Precast bases shall be furnished with cutout or knockouts. Knockouts shall have a wall thickness of 2" minimum. Knockout or cutout hole size is equal to pipe outer diameter plus catch basin wall thickness. Maximum hole size is 36" for 48" catch basin; 42" for 54" catch basin. Minimum distance between holes is 8".

Frame and grate or ring and cover shall be in accordance with standard specifications and meet the strength requirements of Federal Specification RR-F-621D. Mating surfaces shall be finished to assure a non-rocking fit.

All base reinforcing steel shall have a minimum yield strength of 60,000 PSI and be placed in the upper half of the base with 1" minimum clearance.

The bottom of the precast Catch Basin may be rounded.

Frame and grate may be installed with flange down or cast into riser.

NOT TO SCALE

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

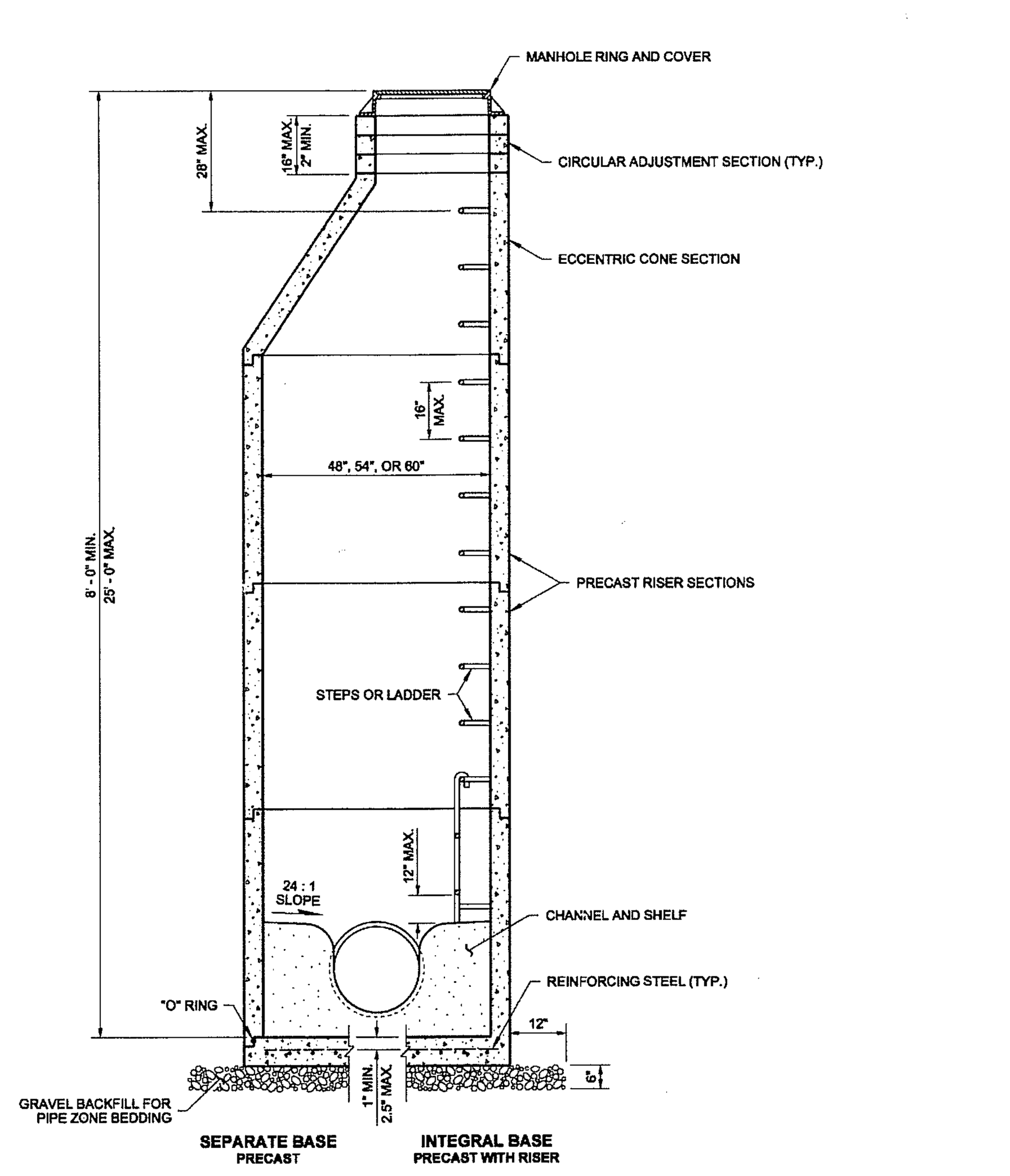
JUNE 1995

JOB # 12042	**RUSNAK LONG PLAT** / FOR: **RUSNAK CONSTRUCTION**	**LDES, INC.** 5160 INDUSTRIAL PL #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	***RUSNAK LONG PLAT*** **FERNDALE GENERAL NOTES AND DETAILS AS BUILT**	APPROVED JAN 2 4 2014 BY [signature] P.E. CITY OF FERNDALE

Professional engineer seal: RAMON LLANOS, STATE OF WASHINGTON, 33283, REGISTERED PROFESSIONAL ENGINEER, 11-21-13

SHEET 8 OF 10

00560.008 2/2/14 sd



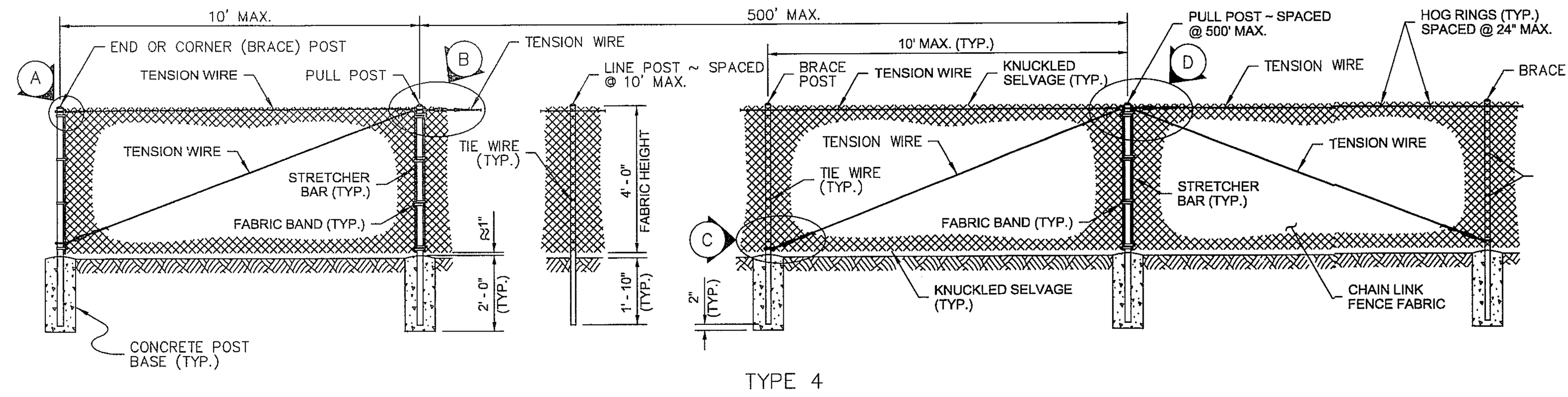
NOTES

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"

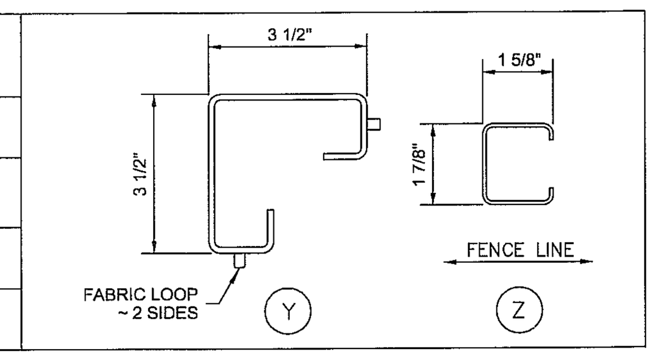
MANHOLE TYPE 1
STANDARD PLAN B-15.20-01

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 02-07-12
Washington State Department of Transportation



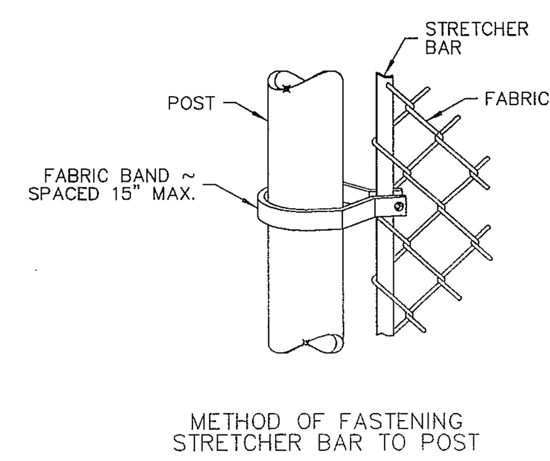
TYPE 4

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

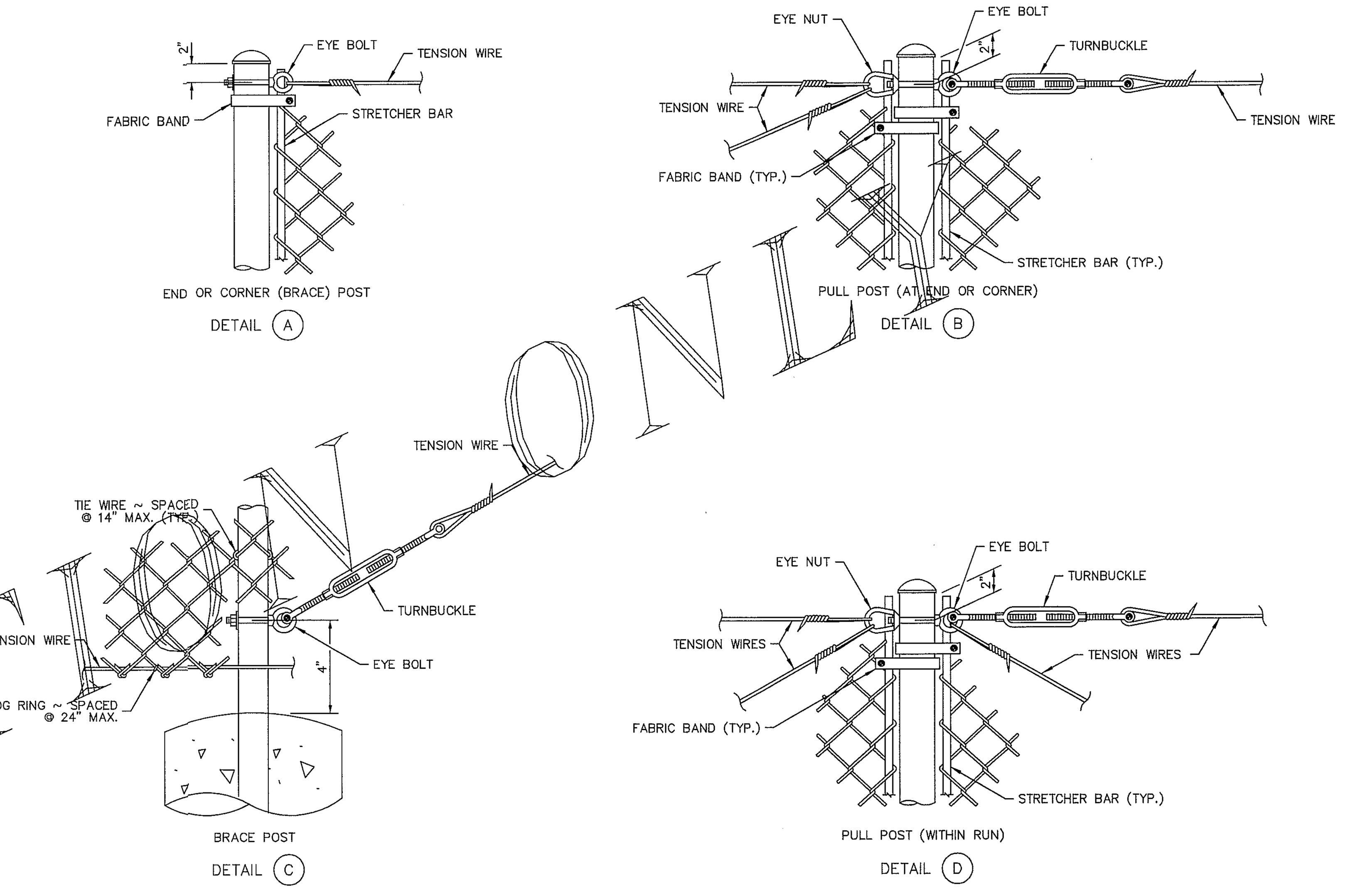


NOTES

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



METHOD OF FASTENING STRETCHER BAR TO POST



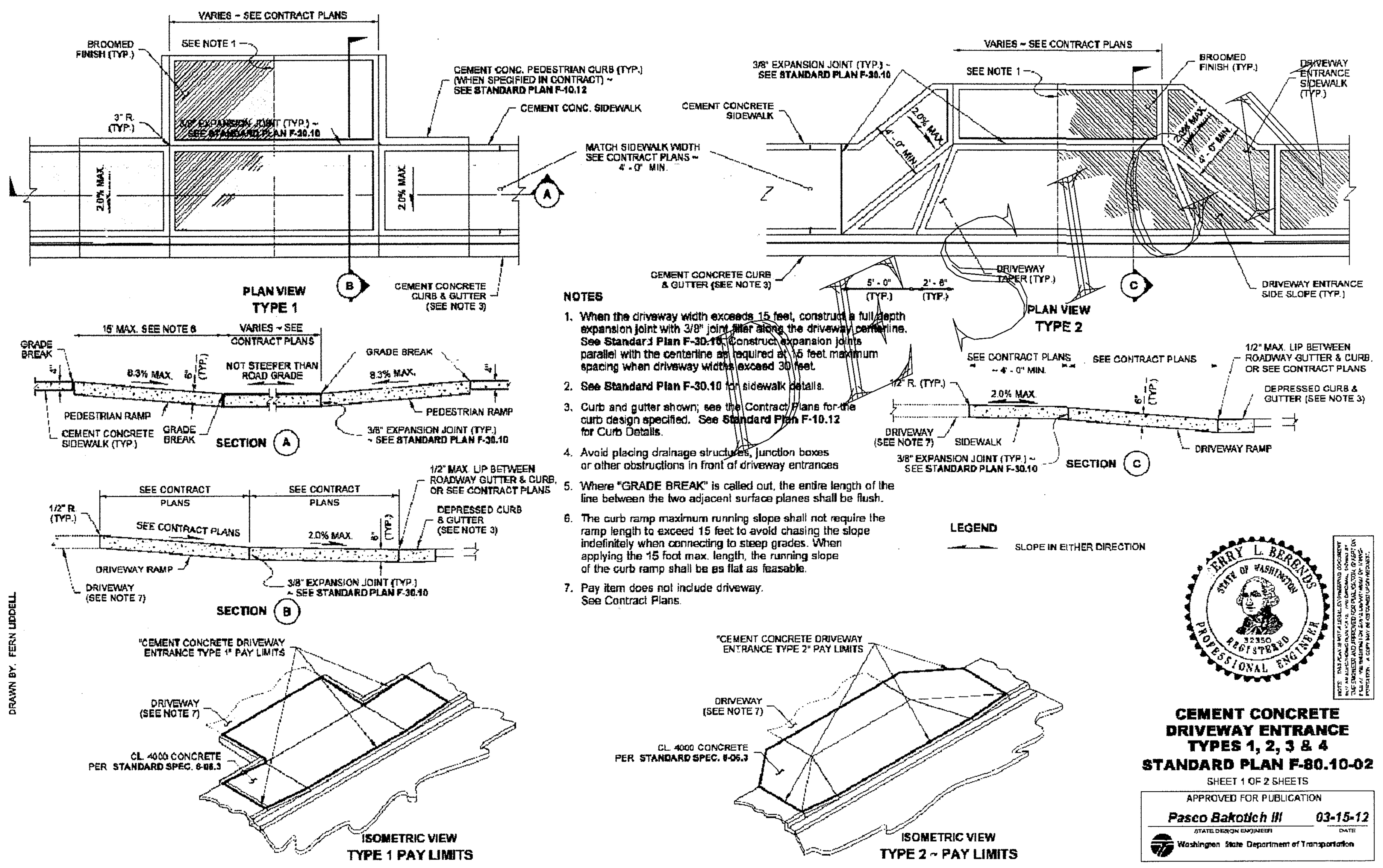
END OR CORNER (BRACE) POST DETAIL (A)

PULL POST (AT END OR CORNER) DETAIL (B)

BRACE POST DETAIL (C)

PULL POST (WITHIN RUN) DETAIL (D)

CHAINLINK FENCE TYPE 3
PER WSDOT L-20.10-02
NTS



PLAN VIEW TYPE 1

PLAN VIEW TYPE 2

SECTION (A)

SECTION (B)

SECTION (C)

ISOMETRIC VIEW TYPE 1 PAY LIMITS

ISOMETRIC VIEW TYPE 2 ~ PAY LIMITS

NOTES

1. When the driveway width exceeds 15 feet, construct a full depth expansion joint with 3/8" joint filler along the driveway centerline. See Standard Plan F-30.10. Construct expansion joints parallel with the centerline as required at 15 feet maximum spacing when driveway widths exceed 30 feet.
2. See Standard Plan F-30.10 for sidewalk details.
3. Curb and gutter shown; see the Contract Plans for the curb design specified. See Standard Plan F-10.12 for Curb Details.
4. Avoid placing drainage structures, junction boxes or other obstructions in front of driveway entrances
5. Where "GRADE BREAK" is called out, the entire length of the line between the two adjacent surface planes shall be flush.
6. 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 max. length, the running slope of the curb ramp shall be as flat as feasable.
7. Pay item does not include driveway. See Contract Plans.

LEGEND

SLOPE IN EITHER DIRECTION

CEMENT CONCRETE DRIVEWAY ENTRANCE TYPES 1, 2, 3 & 4
STANDARD PLAN F-80.10-02

SHEET 1 OF 2 SHEETS
APPROVED FOR PUBLICATION
Pasco Bakotich III 03-15-12
Washington State Department of Transportation

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

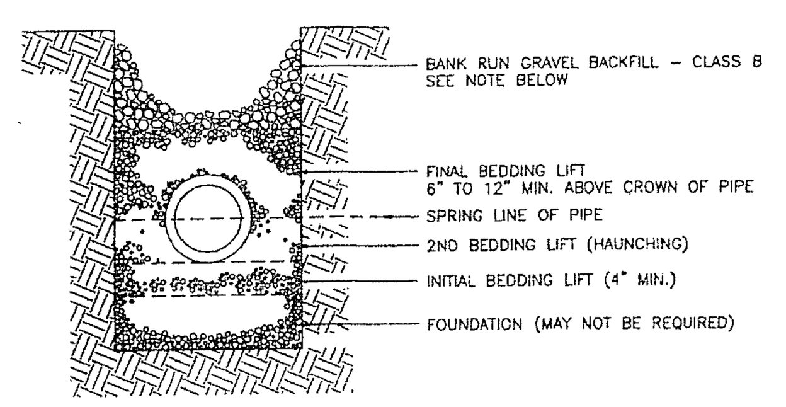
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE–

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

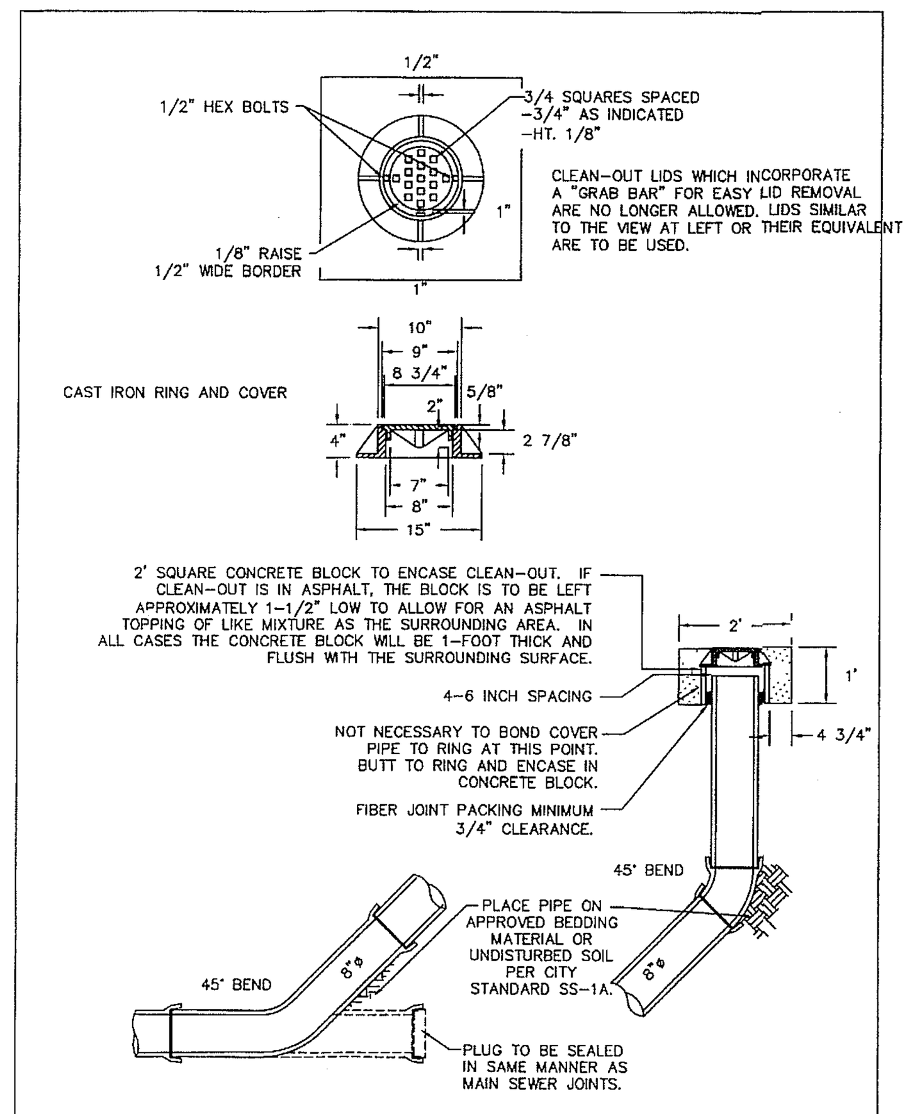
BACKFILL – WHENEVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.



MARCH 13, 2012

APPROVED — Public Works Director — Date

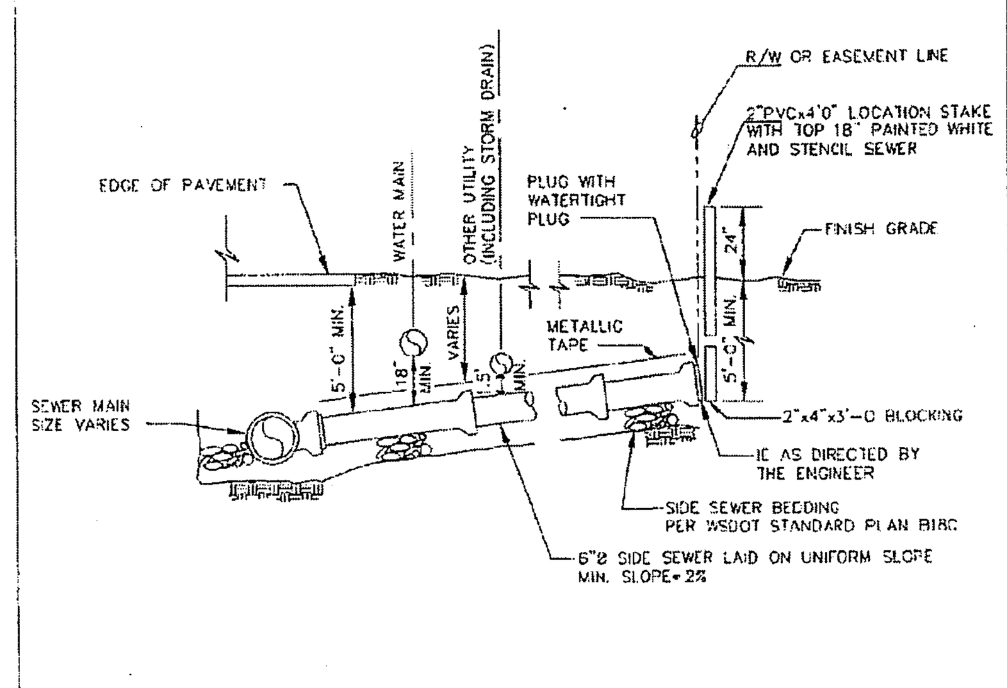
BEDDING SPECIFICATIONS FOR PVC PIPE
STANDARD DETAIL SS-1



MARCH 13, 2012

APPROVED — Public Works Director — Date

8" CLEAN OUT
STANDARD DETAIL SS-5



NORMAL INSTALLATION SIDE SEWER
15" AND SMALLER

NOT TO SCALE

APPROVED — Public Works Director — Date

CITY OF FERNDALE
NORMAL INSTALLATION
15" AND SMALLER SEWER MAINS

DRAWING SS-6

JUNE 1995

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00560.009 2/3/14 SH

	RUSNAK LONG PLAT		
JOB # 12042	FOR:	RUSNAK CONSTRUCTION	

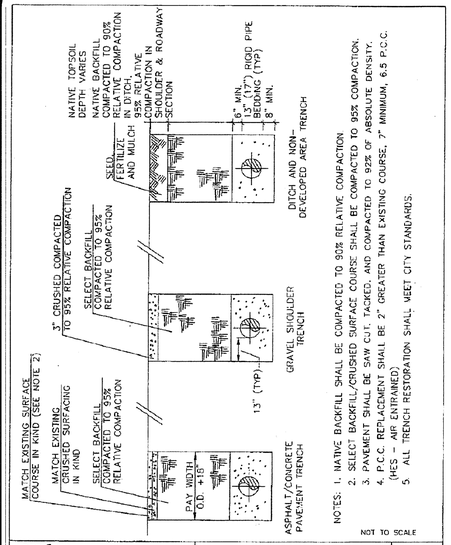
RAMON LLANOS — PROFESSIONAL ENGINEER — 33203

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

RUSNAK LONG PLAT
DETAILS
AS BUILT

APPROVED
JAN 2 4 2014
BY _________ P.E.
CITY OF FERNDALE

SHEET 09 OF 10



APPROVED	CITY OF FERNDALE	DRAWING
John F. Ellis	TRENCHING DETAIL	SS-15
Public Works Director Date		

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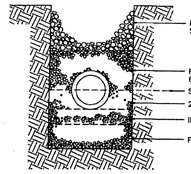
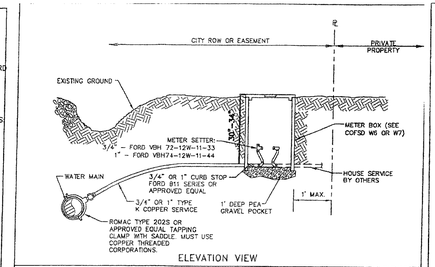
BACKFILL - WHENEVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.



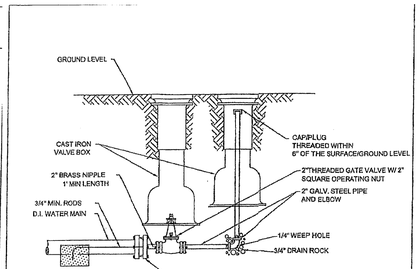
March 13, 2012

APPROVED	BEDDING SPECIFICATIONS FOR PVC PIPE
Public Works Director Date	STANDARD DETAIL S1-17



August 16, 2012

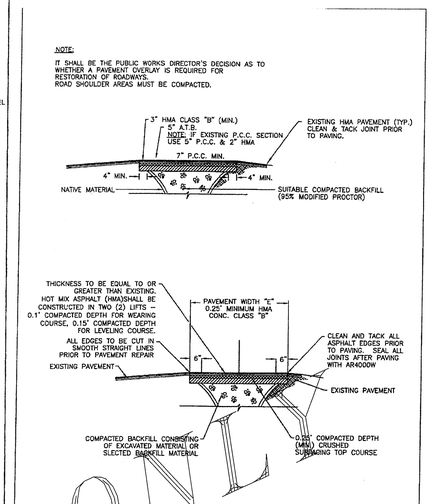
APPROVED	TYPICAL 3/4" AND 1" WATER SERVICE
Public Works Director Date	STANDARD DETAIL W-5
	NOT TO SCALE



MARCH 13, 2012

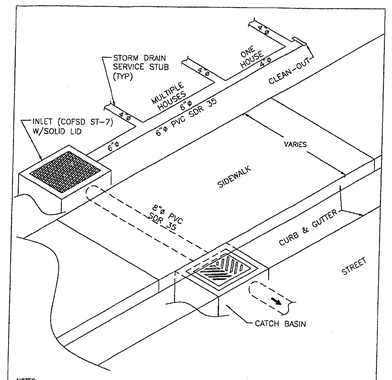
APPROVED	2" BLOW-OFF (ALTERNATE)
Public Works Director Date	WATER MAIN EXTENSION
	STANDARD DETAIL W-10

NOTE:
IT SHALL BE THE PUBLIC WORKS DIRECTOR'S DECISION AS TO WHETHER A PAVEMENT OVERLAY IS REQUIRED FOR RESTORATION OF ROADWAYS. ROAD SHOULDER AREAS MUST BE COMPACTED.



2010

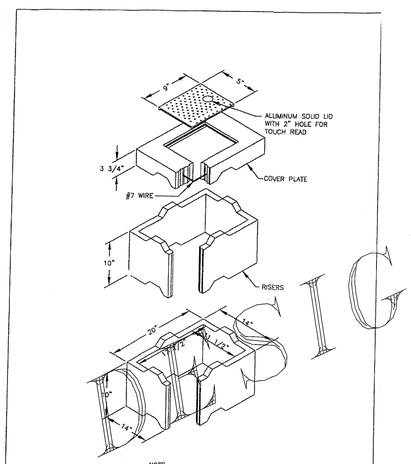
CITY OF FERNDALE EXISTING ROADWAY RESTORATION REPAIR	DETAIL R-11A



NOTES:
1. ENGINEER SHALL DESIGN ALL STORM DRAIN SERVICE STUB INVERT ELEVATIONS TO FACILITATE 2% SLOPE FROM 3' BELOW THE LOWEST POINT OF THE BUILDING ENVELOPE.
2. STORM DRAIN SERVICE STUB SHALL BE 4" WHITE PVC PIPE ASTM D 3034 SDR 35.
3. TRUNK LINE FOR MULTIPLE RESIDENTIAL STORM DRAIN SERVICE STUBS SHALL BE 6" WHITE PVC PIPE CONNECTED TO COFSD ST-7 INLET.
4. EACH COFSD ST-7 INLET SHALL BE CONNECTED TO A NEARBY TYPE 1, TYPE 1L OR TYPE 2 CATCH BASIN WITH 8" WHITE PVC PIPE.
5. EACH STORM DRAIN SERVICE STUB SHALL BE CAPPED WITH WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" STENCILED WITH THE WORD "DRAIN" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

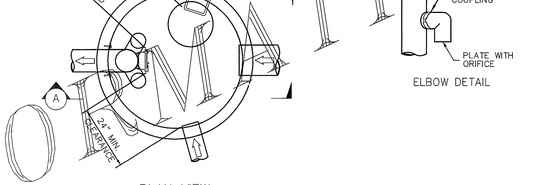
April 11, 2012

APPROVED	POSITIVE LOT DRAIN
Public Works Director Date	STANDARD DETAIL ST-16
	NOT TO SCALE



April 16, 2012

APPROVED	3/4" CONCRETE METER BOX
Public Works Director Date	STANDARD DETAIL W-6
	NOT TO SCALE



ELBOW DETAIL

PLAN VIEW

NOTES

1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36". Attach the pipe supports to the manhole with 5/8" stainless steel expansion bolts or embed the supports into the manhole wall 2".
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 8".
3. The flow restrictor shall be fabricated from one of the following materials:
   0.060" Corrugated Aluminum Alloy Drain Pipe
   0.064" Corrugated Galvanized Steel Drain Pipe with Treatment 1
   0.064" Corrugated Aluminized Steel Drain Pipe
   0.060" Aluminum alloy flat sheet, in accordance with ASTM B 209, 5052 H32 or EPS High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that: the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the frame is clear of the curb.
5. The multi-orifice elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation ZG32A; or cast iron in accordance with ASTM A 48, Class 30B.
8. The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion), it may be of solid rod or hollow tubing, with adjustable hook as required.
9. A neoprene rubber gasket is required between the riser mounting flange and the gate flange.

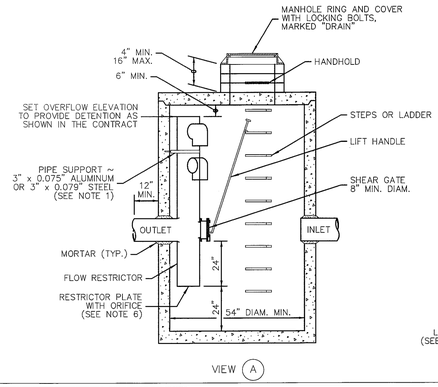
Install the gate so that the level-line mark is level when the gate is closed.

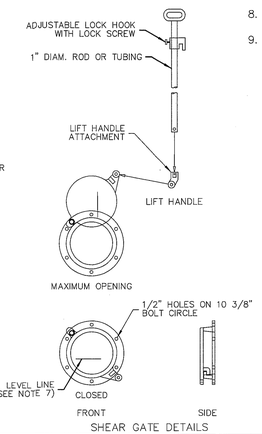
The mating surfaces of the lid and the body shall be machined for proper fit.

All shear gate bolts shall be stainless steel.

The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.

Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches.





SHEAR GATE DETAILS

CATCH BASIN TYI
WITH FLOW RESTR

JOB # 12042	FOR: RUSNAK CONSTRUCTION	RUSNAK LONG PLAT	RAMON LLANOS REGISTERED PROFESSIONAL ENGINEER 11-21-13		LDES, INC. 5160 INDUSTRIAL PL #108 FERNDALE, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	RUSNAK LONG PLAT DETAILS AS BUILT

APPROVED
JAN 24 2014
BY J. Mayer, P.E.
CITY OF FERNDALE

SHEET 10 OF 10

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