MOUNTAIN VIEW MEADOWS

CITY OF FERNDALE, WASHINGTON

SITUATE IN A PORTION OF THE NW 1/4 OF SECTION 30, TOWNSHIP 39 NORTH, RANGE 2 EAST, W.M., CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

ROADWAY & UTILITY IMPROVEMENT PLANS

SURVEY NOTES

- 1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION IN FEBRUARY OF 2004.
- 2) EQUIPMENT USED: THEOMAT 00'01.5" EDM: ± 2 PPM, ± 3 MM
- 3) HORIZONTAL DATUM: NAD 83/91 (CITY OF FERNDALE) BASIS OF BEARINGS: PSE CP NO. 23 'FERN7' TO PSE CP NO. 10 'HENDRICKS & MT. VIEW' PER THE CITY OF FERNDALE SURVEY CONTROL NETWORK
- RECORD INVERSE AZIMUTH: 96'34'19", 2397.163' PSE MEASURED: S83°25'41"E, 2397.081' (BASIS OF BEARINGS)
- 4) VERTICAL DATUM: NGVD 29 (CITY OF FERNDALE) BENCH MARK: 'FERN7', FOUND 2" BRASS DISK IN CASE ELEVATION: 147.15', PER THE CITY OF FERNDALE SURVEY CONTROL NETWORK (ANY PSE CONTROL POINT MAY BE USED AS A PROJECT TBM)
- 5) CONTOUR INTERVALS ARE ONE-FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC
- 6) PACIFIC SURVEYING AND ENGINEERING INC., ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST THAT ARE UNDETECTABLE AND/OR NOT VISIBLE.
- 7) THIS TOPOGRAPHY MAP WAS DONE WITHOUT BENEFIT OF A TITLE REPORT AND PACIFIC SURVEYING AND ENGINEERING SERVICES, INC. IS NOT RESPONSIBLE FOR ANY EASEMENTS, COVENANTS, AND RESTRICTIONS NOT SHOWN HEREON.

ROAD INTERSECTION EQUATIONS

STA 10+00.00 MEADOW VIEW LANE = STA 31+67.95 MOUNTAIN VIEW ROAD

ABBREVIATIONS

- ASPHALT CONCRETE B/C BACK OF CURB
- BEGIN CURB RETURN BACK OF SIDEWALK
- BEGIN VERTICAL CURVE CURB AND GUTTER
- COFSD CITY OF FERNDALE STANDARD DRAWING CORRUGATED POLYETHYLENE PIPE CURVE DELTA

CENTERLINE OR CLASS

- END CURB RETURN EXISTING GRADE
- EDGE OF PAVEMENT END VERTICAL CURVE
- EXST EXISTING
- F&G FRAME AND GRATE F.HYD. FIRE HYDRANT
- F/C FACE OF CURB FINISH FLOOR
- FINISH GRADE FLOWLINE OR FLANGE
- INVERT ELEVATION
- CURVE LENGTH MECHANICAL JOINT
- POINT OF CURVATURE = BEGIN CURVE POINT OF COMPOUND CURVATURE
- POINT OF REVERSE CURVATURE
- POINT OF TANGENCY = END CURVE POINT OF VERTICAL INTERSECTION
- CURVE RADIUS R/W RIGHT OF WAY
- STORM DRAIN
- SDCB STORM DRAIN CATCH BASIN SANITARY SEWER CLEAN-OUT
- SSMH SANITARY SEWER MANHOLE SIDE WALK TOP BACK OF CURB
- TOP FACE OF CURB TOP OF CURB
- T/P TOP OF PIPE TYPICAL
- WL WATER LINE

MDW VIEW LN MEADOW VIEW LANE MT VIEW RD MOUNTAIN VIEW ROAD

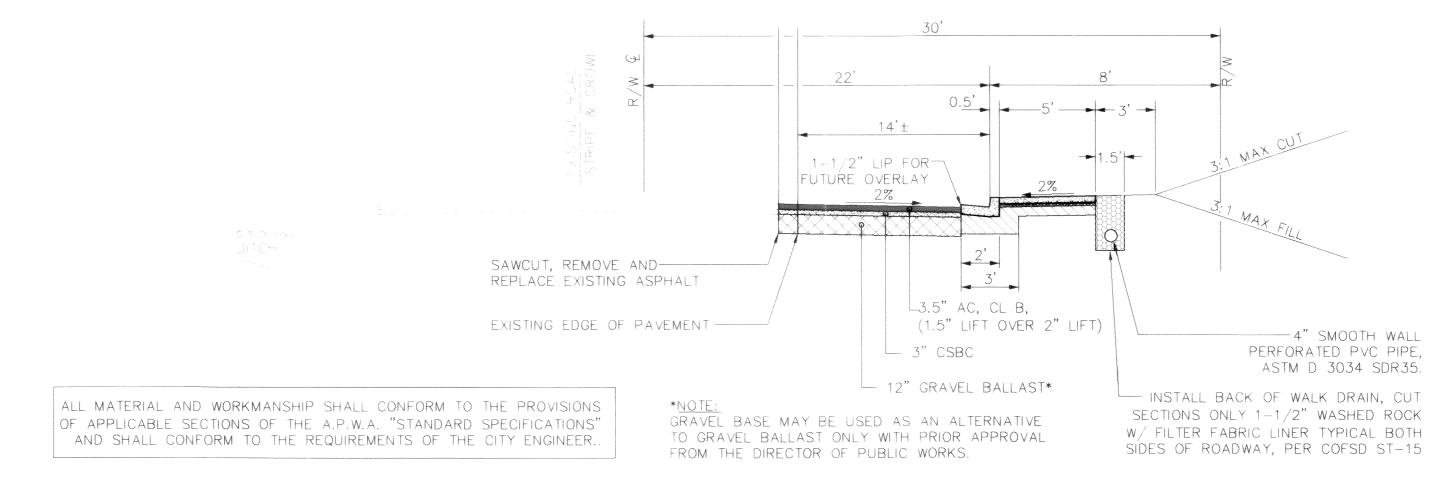
STREET NAME ABBREVIATIONS:

PROPOSED LINE LEGEND

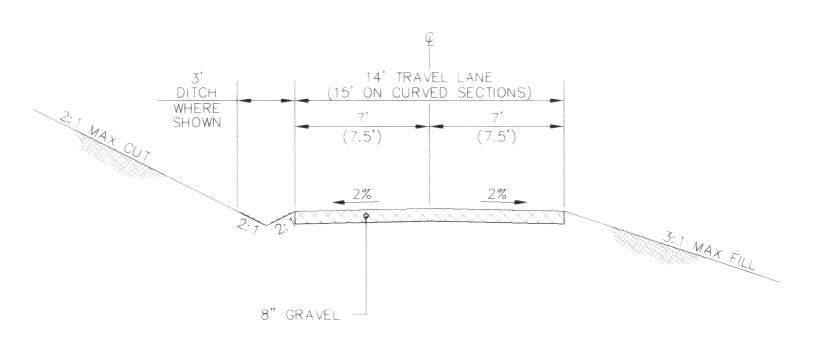
- = PROPOSED ROADWAY CENTERLINE = PROPOSED RIGHT OF WAY LINE = PROPOSED EASEMENT LINE
- = PROPOSED CURB & GUTTER = PROPOSED STORM DRAIN LINE
- = PROPOSED SANITARY SEWER LINE - * - * - * - = PROPOSED WATER LINE

CONCRETE CURB & GUTTER + TBOC=+0.05 PER COFSD R-9 CL FG=0.00 GUTTER FL = -0.451' GRAVEL BASE, COMPACTED-TO 95% OF OPTIMUM DENSITY UNDER CURB & GUTTER, TYP. 3 - MAINTAIN 1:1 STRUCTURAL INSTALL MIN. 4" PVC, BASE MATERIAL PRISM. 3.5" AC, CL B,-ASTM D 3034 SDR35, ROOF DRAINS CONNECT TO CATCH BASINS TYPICAL / | (1.5" LIFT OVER 2" LIFT) TYP. BOTH SIDES OF ROADWAY BOTH SIDES OF ROADWAY - WATER MAIN OVER 2" OF 3/4" WASHED ROCK OVER 6" GRAVEL BASE, COMPACTED TO 95% OF OPTIMUM DENSITY (TYP.) 12" GRAVEL BALLAST* -4" SMOOTH WALL-PERFORATED PVC PIPE, SANITARY SEWER MAIN ASTM D 3034 SDR35. GRAVEL BASE MAY BE USED AS AN ALTERNATIVE INSTALL BACK OF WALK DRAIN, CUT -TO GRAVEL BALLAST ONLY WITH PRIOR APPROVAL ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE PROVISIONS SECTIONS ONLY 1-1/2" WASHED ROCK FROM THE DIRECTOR OF PUBLIC WORKS. OF APPLICABLE SECTIONS OF THE A.P.W.A. "STANDARD SPECIFICATIONS" W/ FILTER FABRIC LINER TYPICAL BOTH AND SHALL CONFORM TO THE REQUIREMENTS OF THE CITY ENGINEER .. SIDES OF ROADWAY, PER COFSD ST-15

TYPICAL ROADWAY SECTION ~ MEADOW VIEW LANE NOT TO SCALE

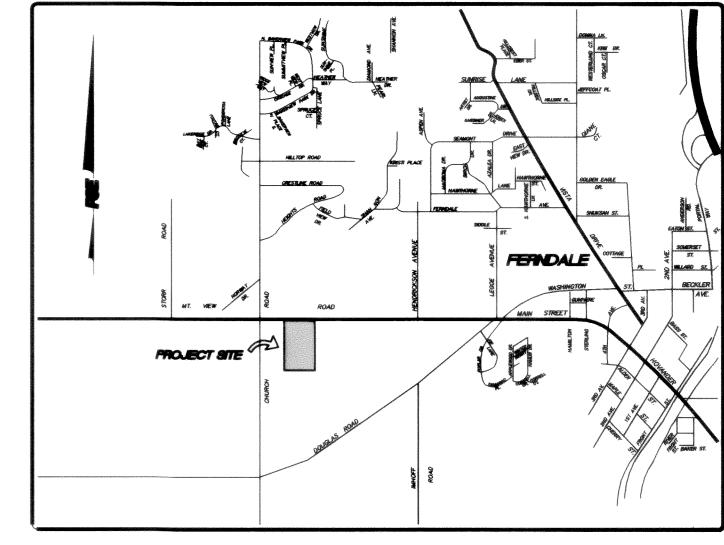


TYPICAL ROADWAY SECTION ~ MOUNTAIN VIEW ROAD **NOT TO SCALE**



TYPICAL POND ACCESS ROAD SECTION NOT TO SCALE

VICINITY MAP



SHEET INDEX

- **COVER SHEET**
- SHEET INDEX MAP
- **EXISTING CONDITIONS MAP**

ROADWAY & STORM DRAINAGE IMPROVEMENTS:

- 4 MEADOW VIEW LANE
- MOUNTAIN VIEW ROAD ~ STATIONS 29+85 to 35+40
- MEADOW VIEW LANE ~ STATIONS 10+00 to 14+90
- POND ACCESS ROAD ~ STATIONS 50+00 to 56+08

SANITARY SEWER IMPROVEMENTS:

- **MOUNTAIN VIEW ROAD ~ STATIONS 29+85 to 35+40**
- MOUNTAIN VIEW ROAD ~ STATIONS 35+40 to 40+95

WATER & SANITARY SEWER IMPROVEMENTS:

10 MEADOW VIEW LANE ~ STATIONS 10+00 to 14+90

NOTES & DETAILS:

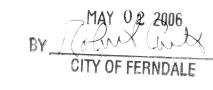
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PROPOSED FEATURE SYMBOL LEGEND

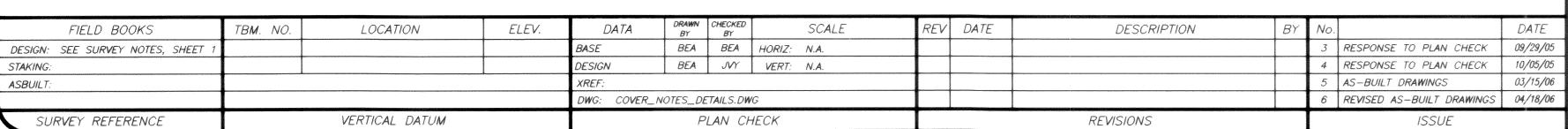
- → PROPOSED SURVEY MONUMENT
- = PROPOSED STORM DRAIN CATCH BASIN, TYPE 2
- = PROPOSED STORM DRAIN CATCH BASIN, TYPE 1
- = PROPOSED STORM DRAIN CLEANOUT = PROPOSED SANITARY SEWER MANHOLE
- SSCO = PROPOSED SANITARY SEWER CLEANOUT
- ■ PROPOSED DOUBLE WATER SERVICE
- = PROPOSED SINGLE WATER SERVICE
- = PROPOSED GATE VALVE = PROPOSED FIRE HYDRANT
- **■** = PROPOSED REDUCER
- → = PROPOSED WATER BLOW-OFF ASSEMBLY
- = PROPOSED STREET SIGN
- = PROPOSED SINGLE SANITARY SEWER SERVICE
- PROPOSED DOUBLE SANITARY SEWER SERVICE







APPROVED



AS BUILT NOTE: ONLY INFORMATION NOTED

AS "[AB]" HAS BEEN FIELD SURVEYED AND/OR

I hereby certify that the improvements in Mountain View

Engineering, Inc., and constructed in conformance with the plans approved by the Public Works Director for said

development and the general specifications adopted by the

Meadows have been inspected by Pacific Survey and

MEASURED DURING CONSTRUCTION.

City of Ferndale Department of Public Works.

AS BUILT CERTIFICATION

JEFFREY A. VANDER YACHT, P.E.

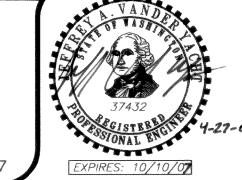


MOUNTAIN VIFW ROAD DEVELOPMENT, LLC 405 14th STREET

BELLINGHAM, WASHINGTON 98225

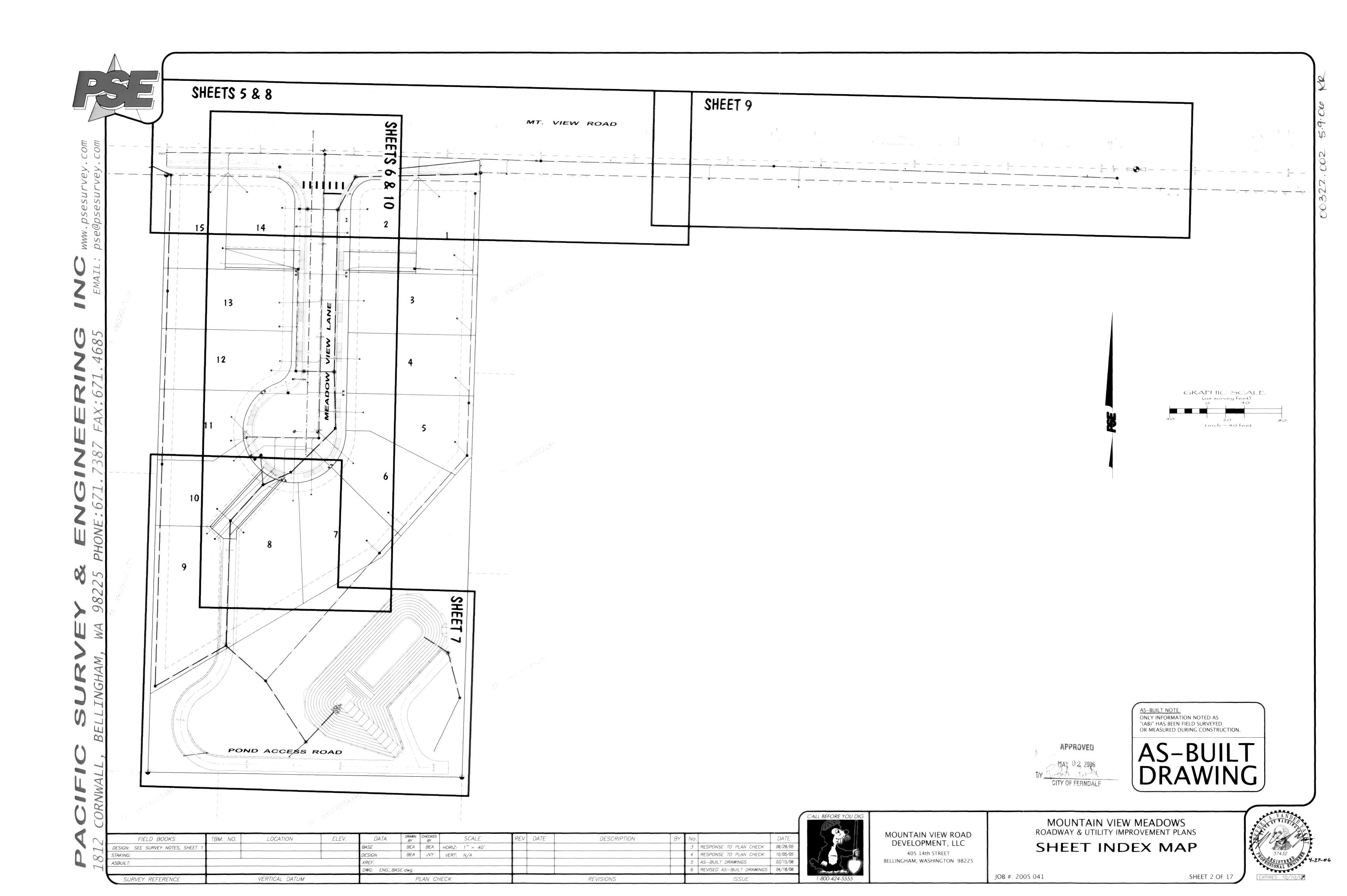
COVER SHEET

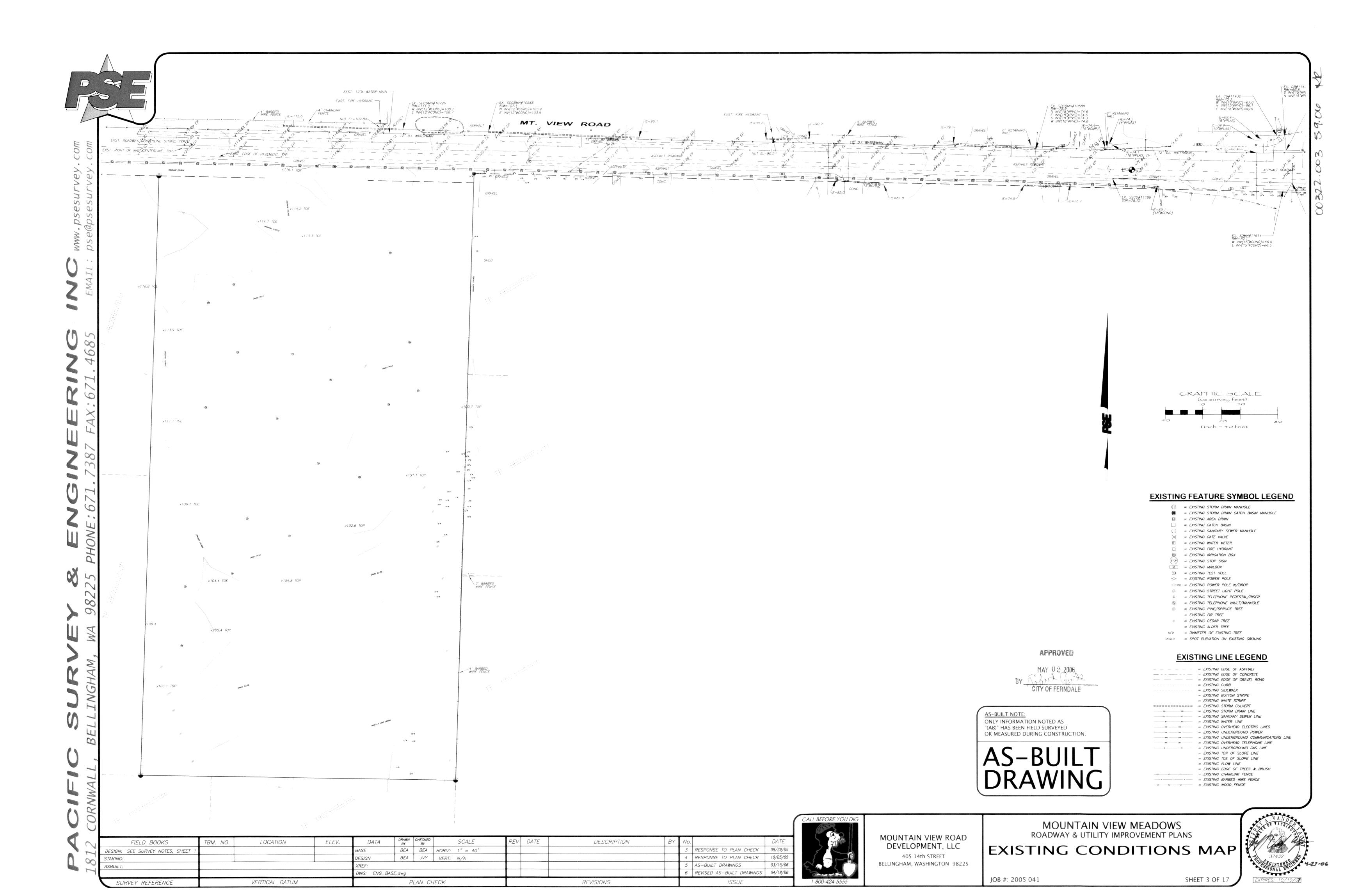
MOUNTAIN VIEW MEADOWS ROADWAY & UTILITY IMPROVEMENT PLANS

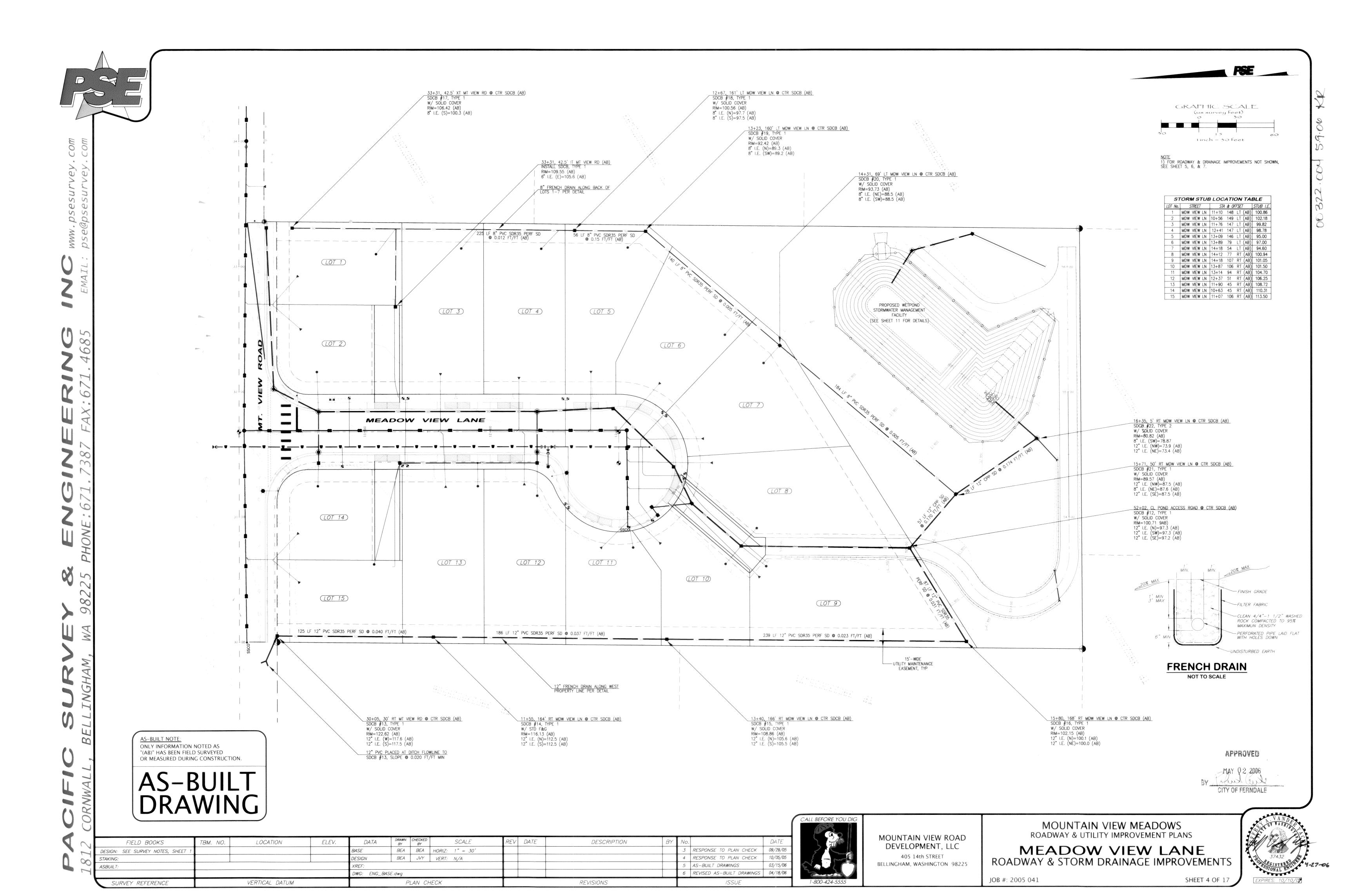


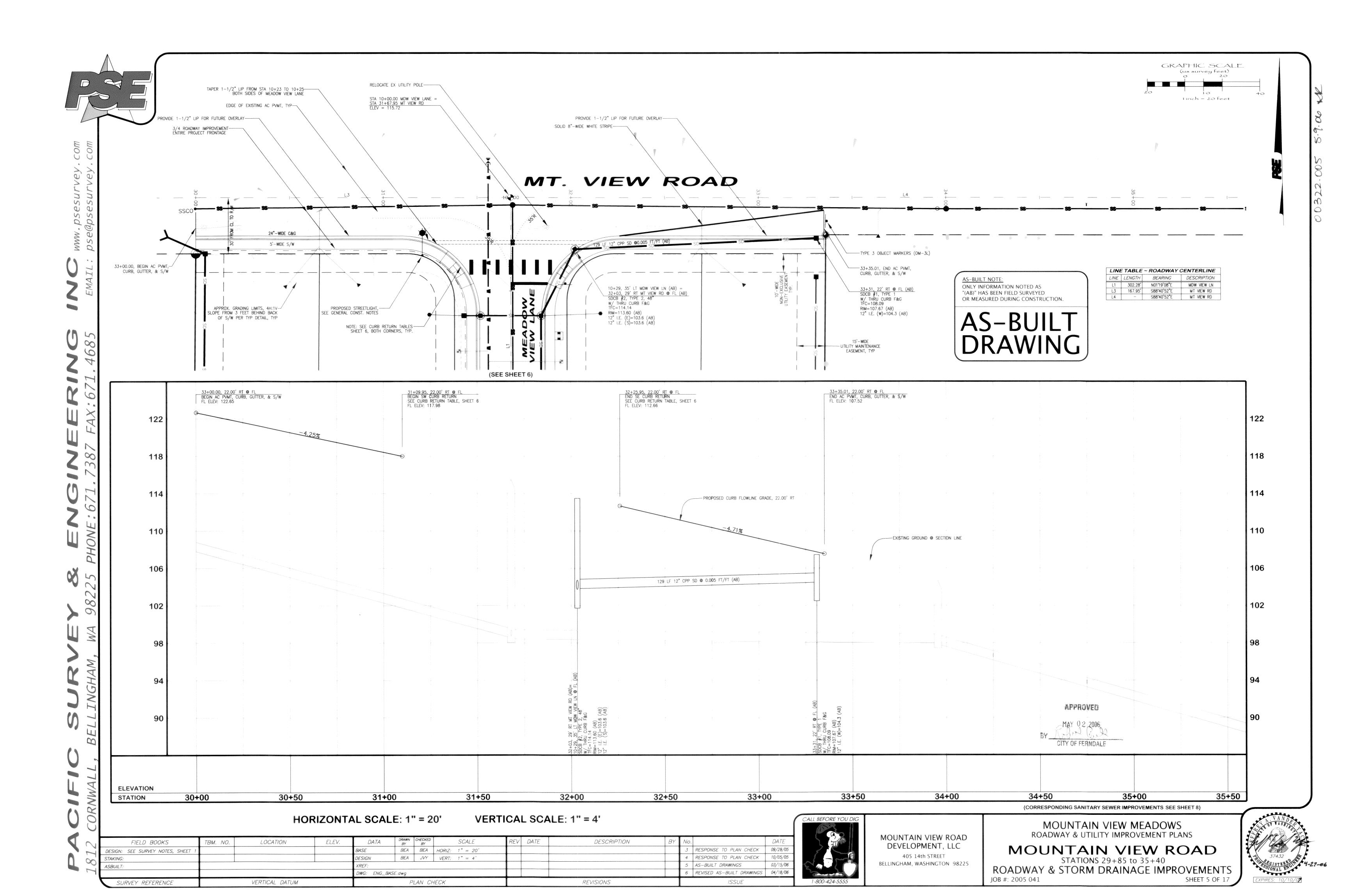
JOB #: 2005 041

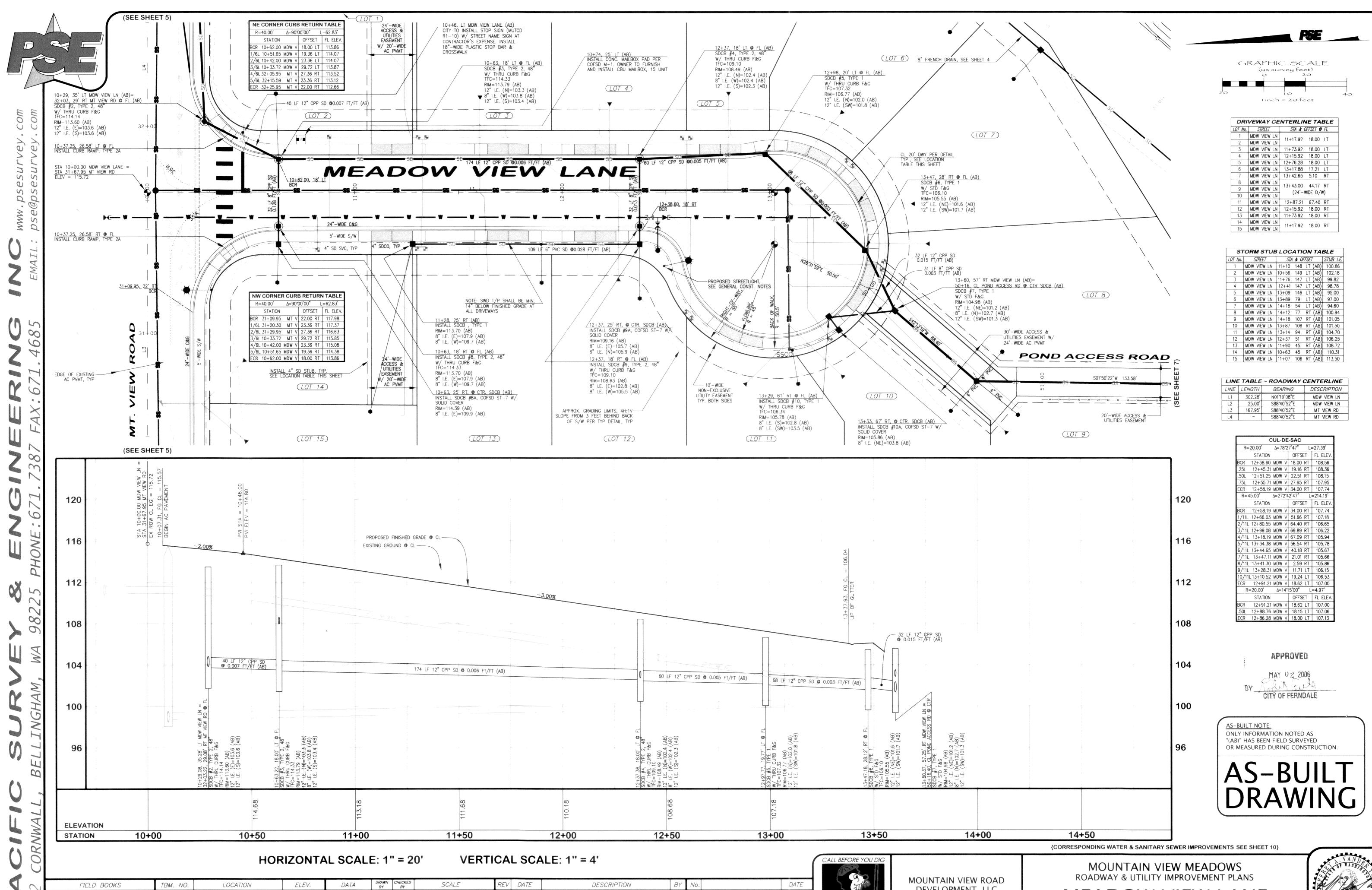
SHEET 1 OF 17











DESIGN: SEE SURVEY NOTES, SHEET STAKING: ASBUILT: SURVEY REFERENCE

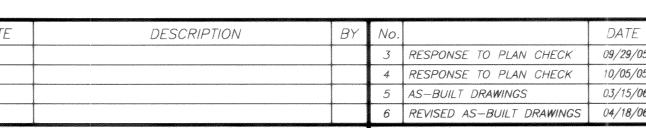
VERTICAL DATUM

BEA BEA HORIZ: 1" = 20'

BEA JVY VERT: 1" = 4'

PLAN CHECK

DESIGN



REVISIONS

09/29/05

10/05/05

03/15/00

DEVELOPMENT, LLC

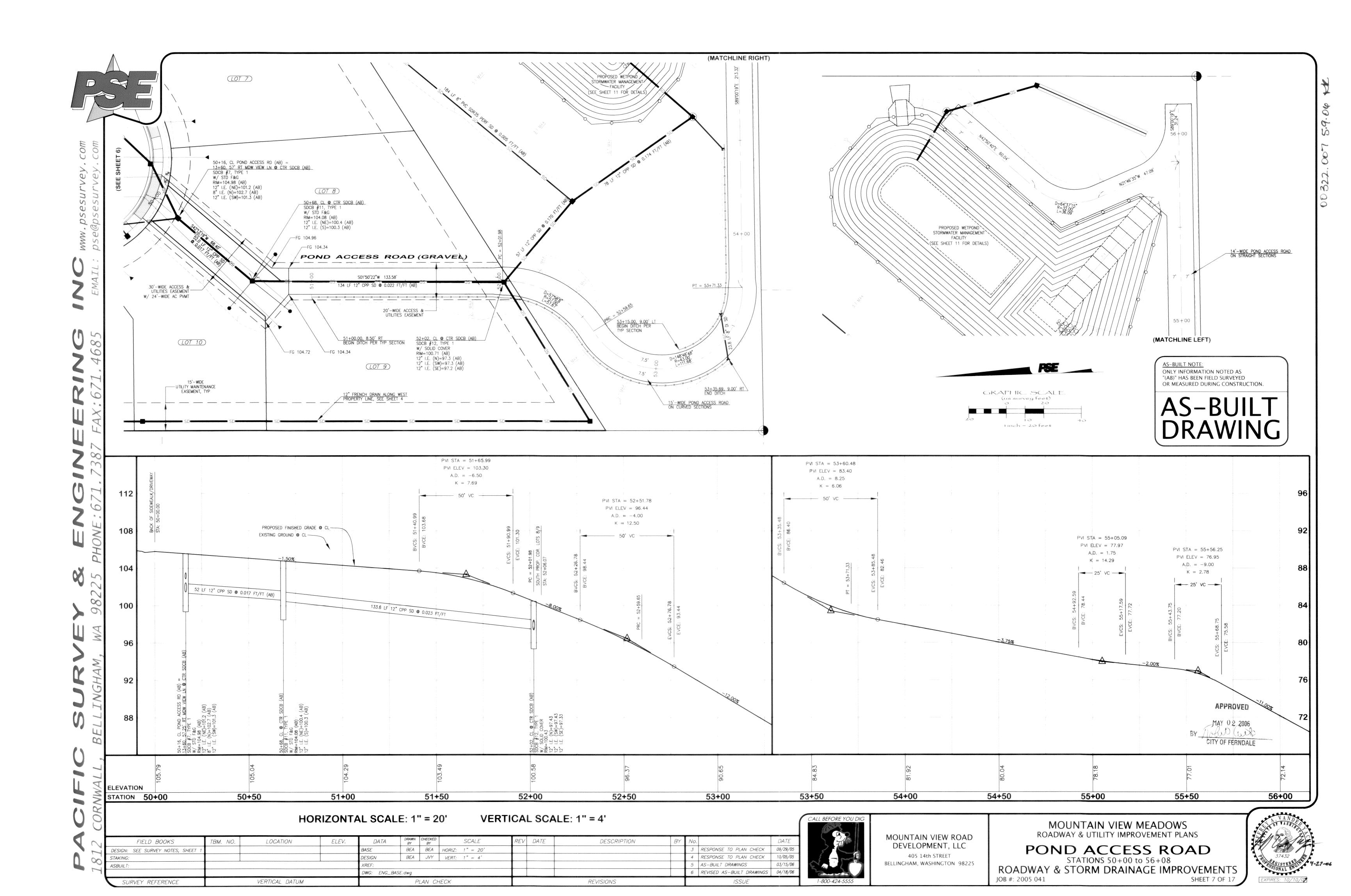
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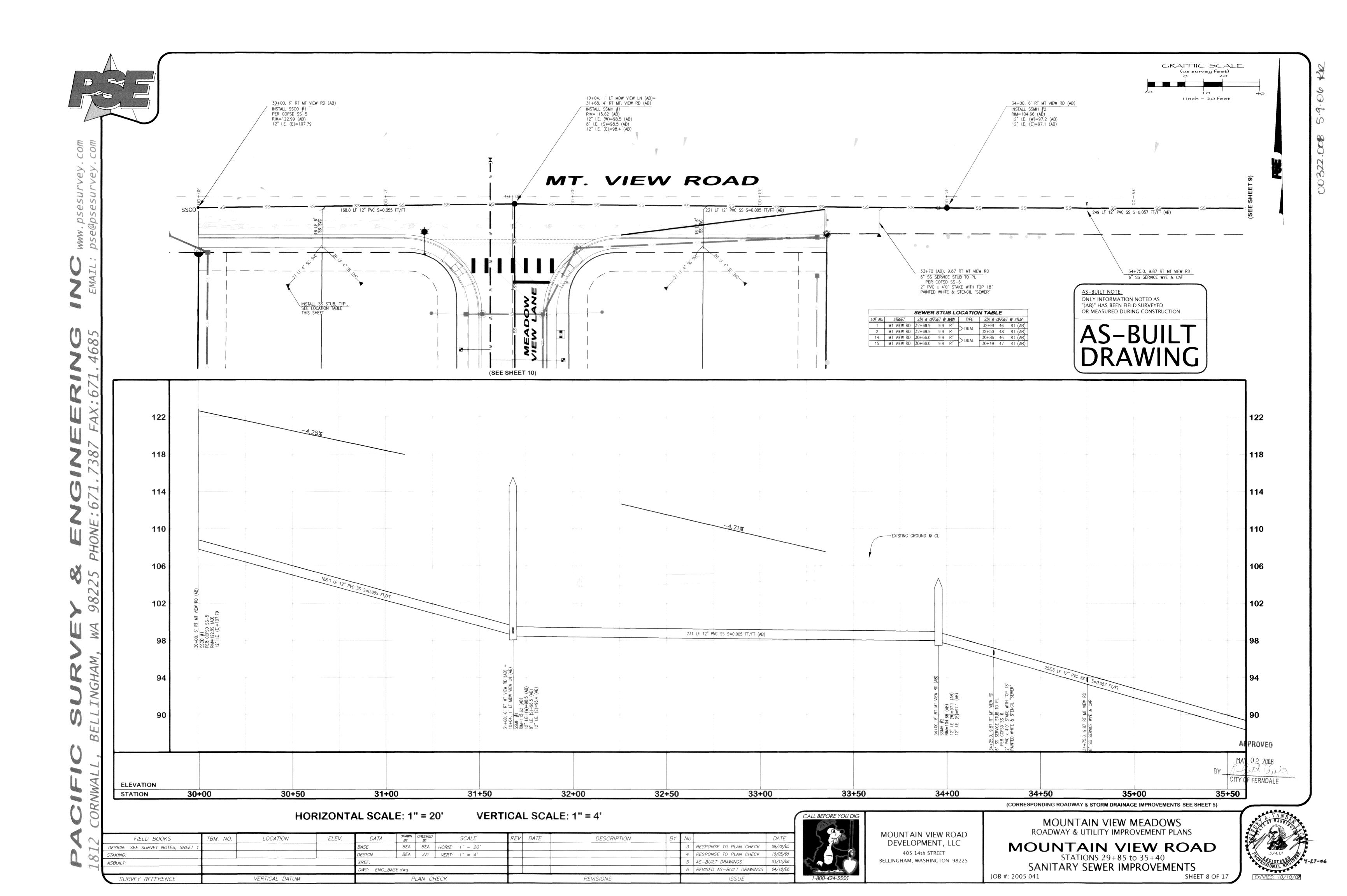
405 14th STREET BELLINGHAM, WASHINGTON 98225

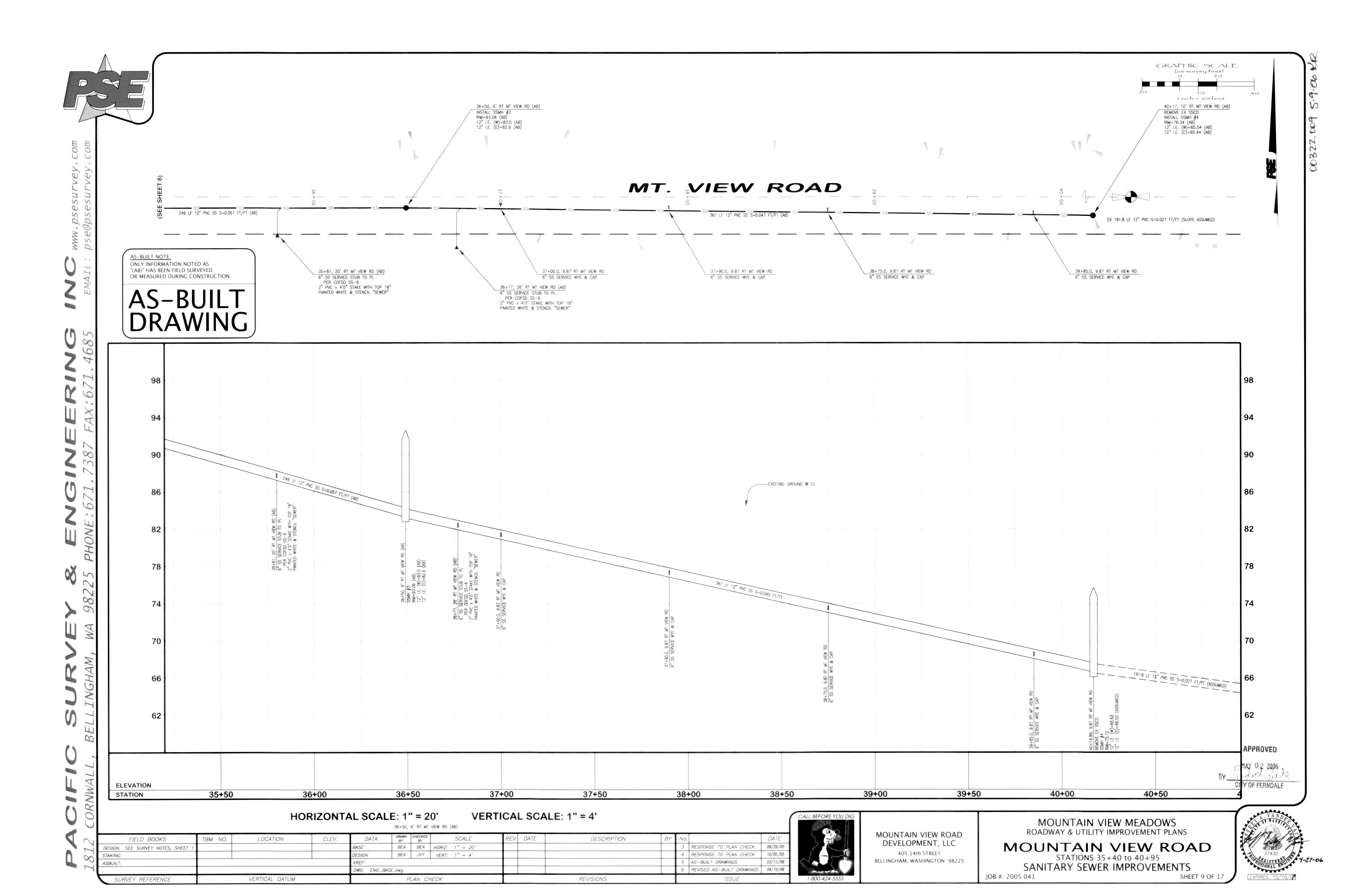
MEADOW VIEW LANE

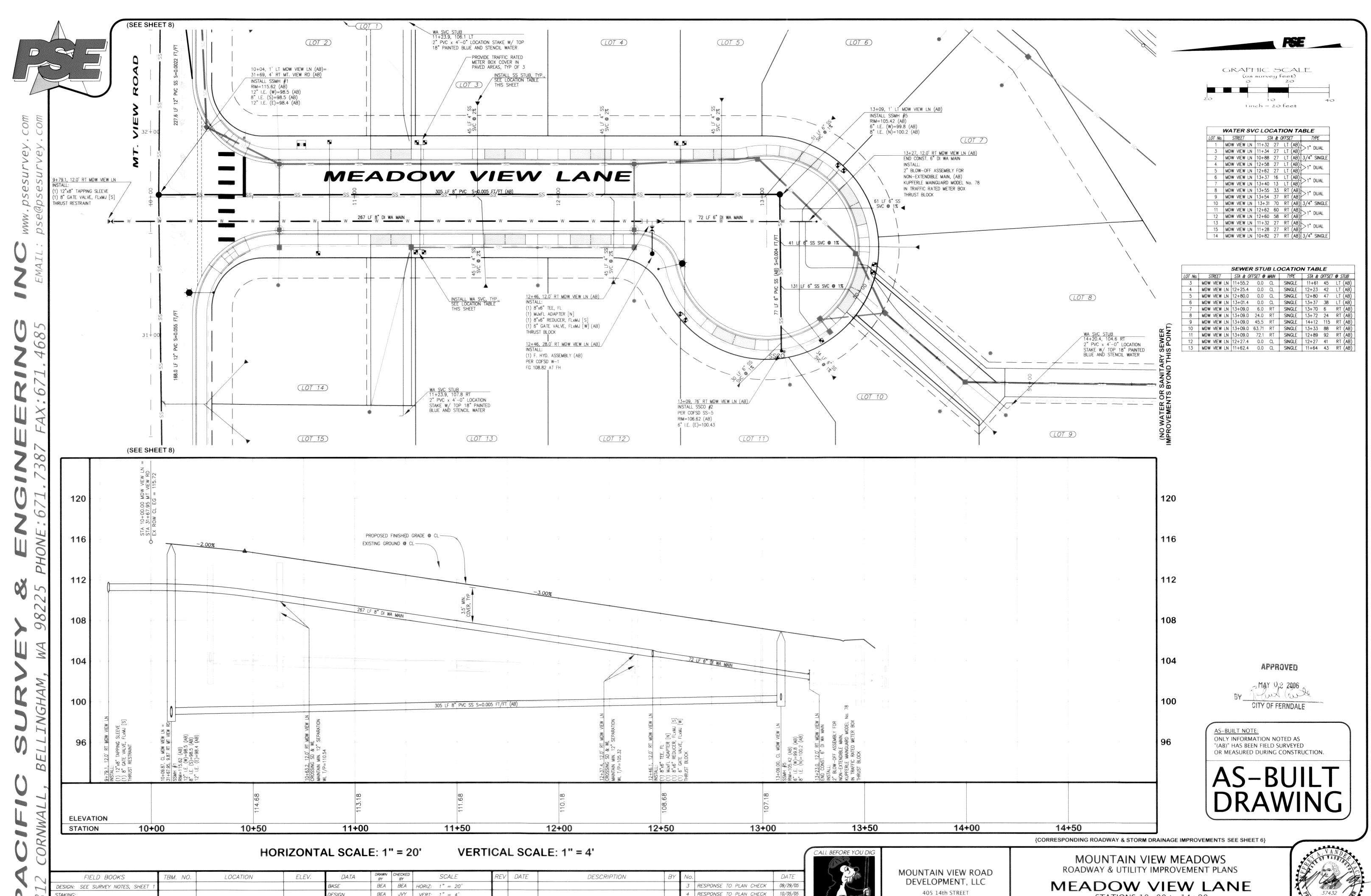
STATIONS 10+00 to 14+90 ROADWAY & STORM DRAINAGE IMPROVEMENTS











RESPONSE TO PLAN CHECK

REVISED AS-BUILT DRAWINGS 04/18/06

AS-BUILT DRAWINGS

REVISIONS

10/05/05

03/15/06

BELLINGHAM, WASHINGTON 98225

JOB #: 2005 041

BEA JVY VERT: 1" = 4'

PLAN CHECK

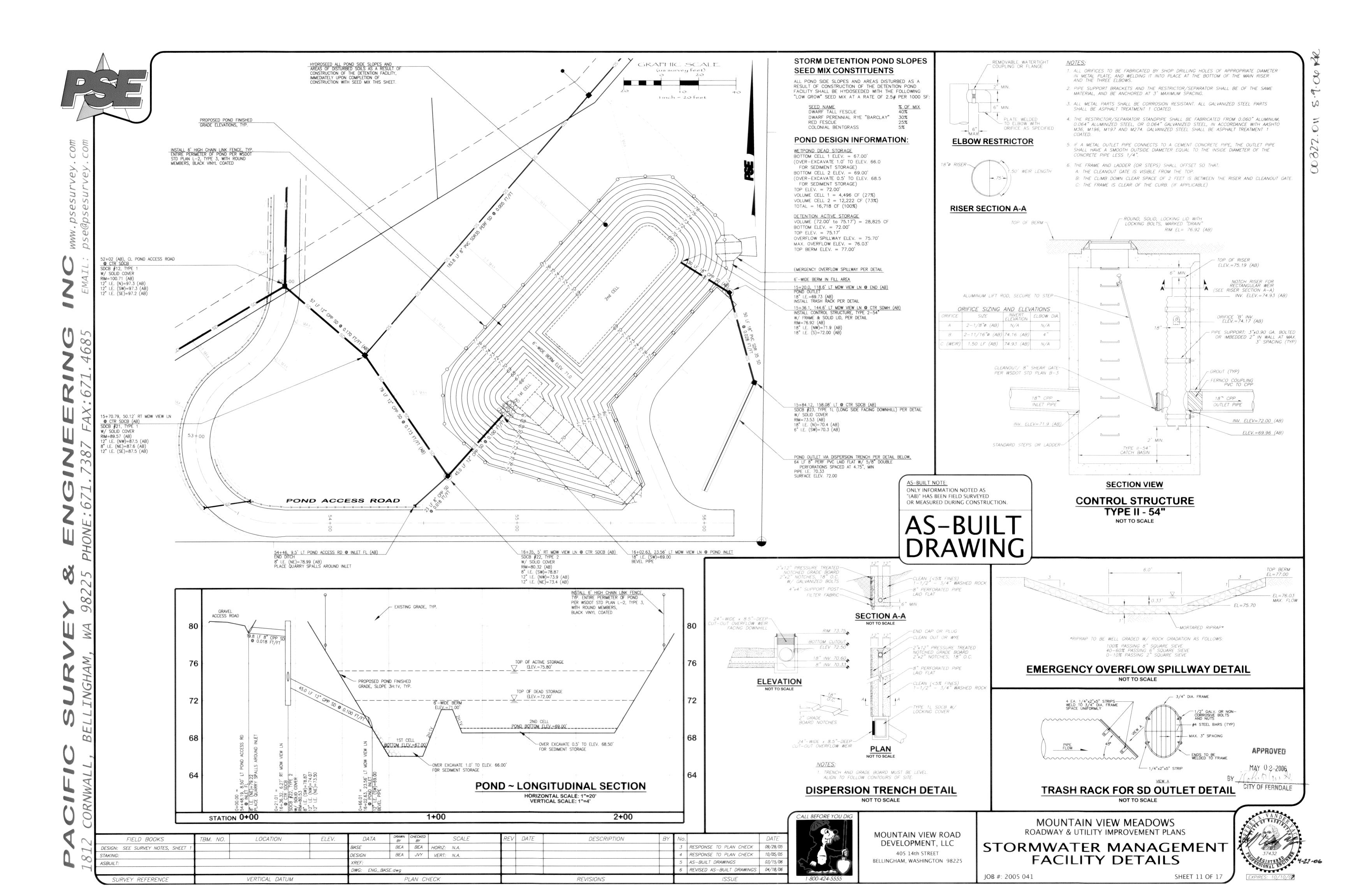
ASBUILT

SURVEY REFERENCE

VERTICAL DATUM

STATIONS 10+00 to 14+90

WATER & SANITARY SEWER IMPROVEMENTS



LOCATION FIELD BOOKS ELEV. DESCRIPTION BEA BEA HORIZ: 1" = 30'
BEA JVY VERT: N/A RESPONSE TO PLAN CHECK 09/29/05 DESIGN: SEE SURVEY NOTES, SHEET RESPONSE TO PLAN CHECK 10/05/05 DESIGN 5 AS-BUILT DRAWINGS 03/15/06 ASBUILT: DWG: ENG_BASE.dwg 6 REVISED AS-BUILT DRAWINGS 04/18/06 SURVEY REFERENCE VERTICAL DATUM PLAN CHECK REVISIONS



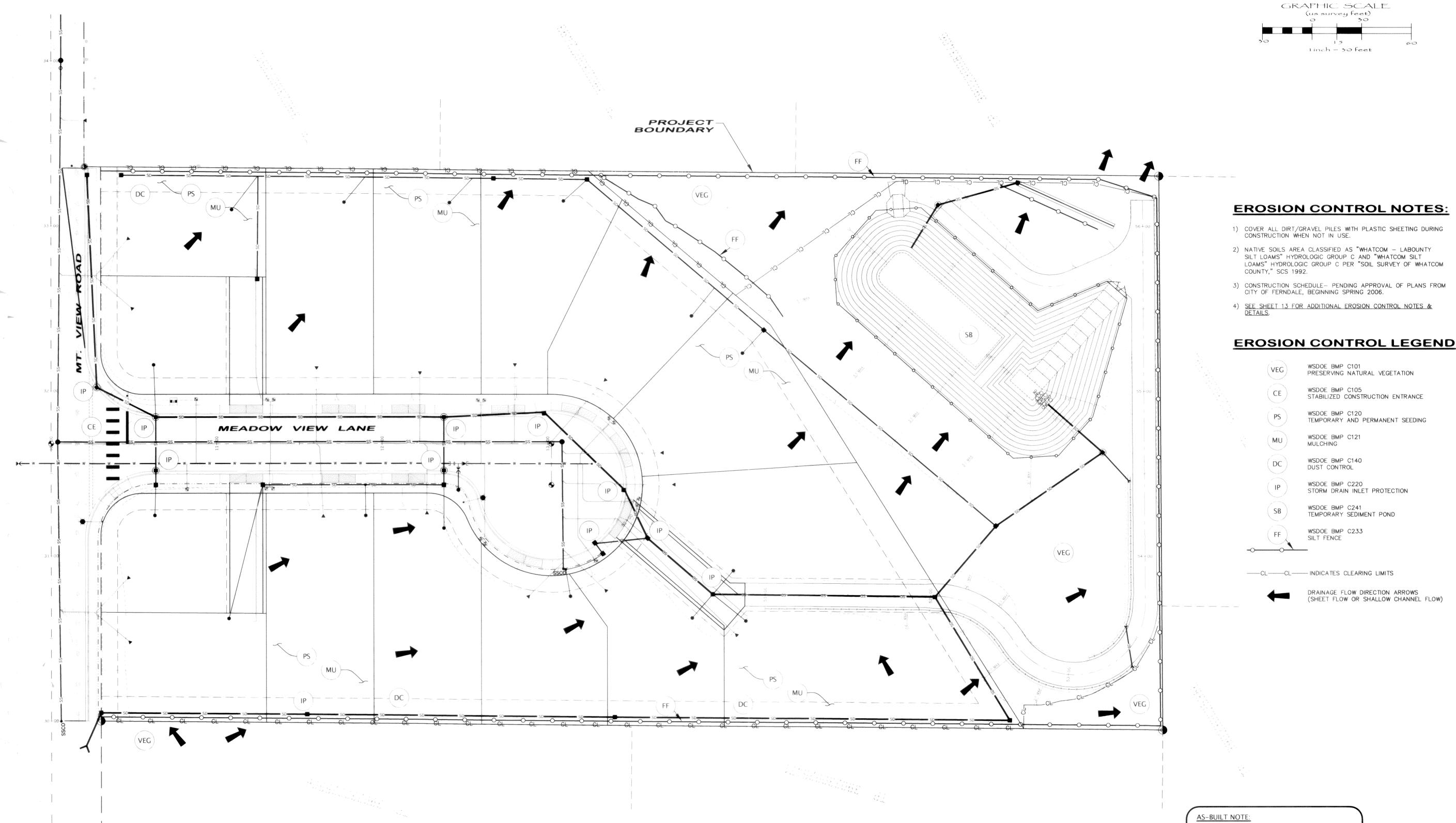
DEVELOPMENT, LLC

405 14th STREET BELLINGHAM, WASHINGTON 98225 MOUNTAIN VIEW MEADOWS ROADWAY & UTILITY IMPROVEMENT PLANS

APPROVED

CITY OF FERNDALE

TEMPORARY EROSION & SEDIMENT CONTROL PLAN



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

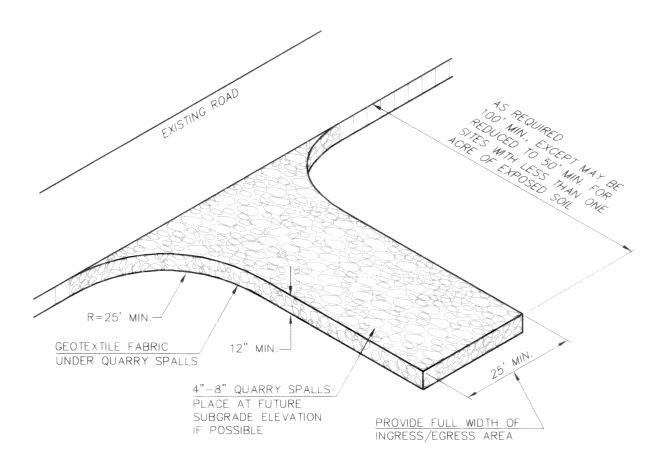
AS-BUILT DRAWING

MOUNTAIN VIEW ROAD

JOB #: 2005 041 SHEET 12 OF 17



EROSION AND SEDIMENT CONTROL DETAILS

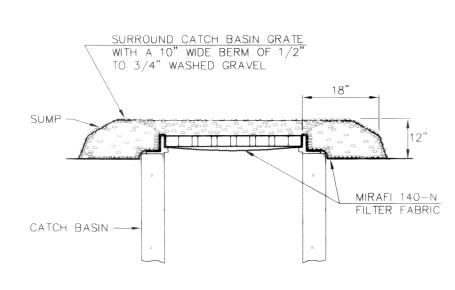


ROCK STABILIZATION CONSTRUCTION ROAD ENTRANCE

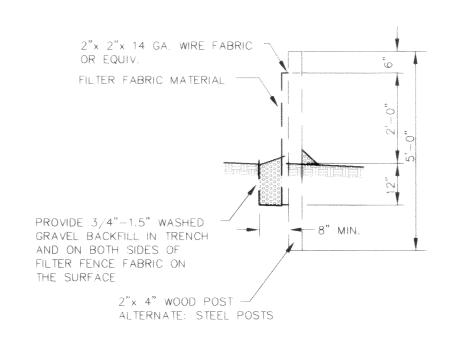
MAINTENANCE:

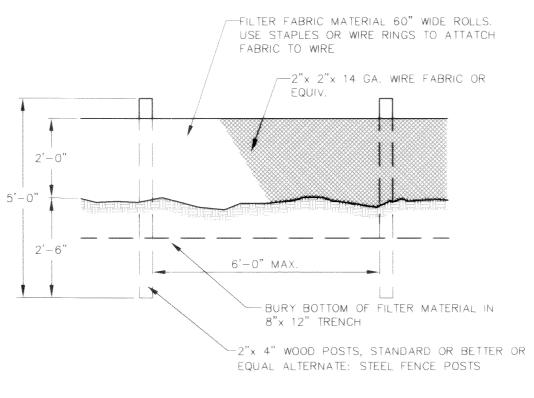
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 4 TO 8-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

		MULCH SPECIFICATION	ONS
Mulch Material	Quality Standards	Application Rates	Remarks
Straw	Air—dried; free from undesirable seed and coarse material	2"-3" thick; 2-3 bales per 1000 sq. ft. or 2-3 tons per acre	Cost—effective protection when applied with adequate thickness. Hand—application generally requires greater thickness than blown straw. Straw should be crimped to avoid wind blow. The thickness of straw may be reduced by half when used in conjunction with seeding.
Wood Fiber Cellulose	No growth inhibiting factors	Approx. 25-30 lbs. per 1000 sq. ft. or 1000- 1500 lbs per acre	Shall be applied with hydromulcher. Shall not be used without seed and tackifier unless the application rate is at least doubled. Some wood fiber with very long fibers can be effective at lower application rates and without seed or tackifier.
Compost	No visible water or dust during handling. Must be purchased from supplier with Solid Waste Handling Permit.	2" thick min.; approx. 100 tons per acre (approx. 800 lbs per yard)	More effective control can be obtained by increasing thickness to 3". Excellent mulch for protecting final grades until landscaping because it can be directly seeded or tilled into soil as an amendment. Sources for compost are available from the King County Commission for Marketing Recyclable Materials at 296-4439.
Chipped Site Vegetation	Average size shall be several inches.	2" minimum thickness	This is a cost-effective way to dispose of debris from clearing and grubbing and eliminates the problems associated with burning. It should generally not be used on slpoes above approx. 10% because of its tendency to be transported by runoff. It is not recommended within 200 feet of surface waters. If seeding is expected shortly after munch, the decomposition of the chipped vegetation may tie up nutrients important to grass establishment.



INTERIM CATCH BASIN GRATE PROTECTION NOT TO SCALE





SILT FILTER FENCE DETAIL

TEMPORARY EROSION/SEDIMENTATION CONTROL

- 1. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN
- 2. APPROVAL OF THESE TEMPORARY EROSION/SEDIMENTATION CONTROL (TESC) PLANS DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.S., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- 3. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
- 4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 5. THE TESC FACILITIES SHOWN ON THE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
- 6. THE TESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
- 7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- 8. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 7 DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED TESC METHODS (E.G., SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).
- 9. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
- 10. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
- 11. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- 12. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF
- 13. DURING THE TIME PERIOD OF OCTOBER 1 THROUGH APRIL 30, ALL PROJECT DISTURBED AREAS GREATER THAN 5,000 SQUARE FEET. THAT ARE TO BE LEFT UNWORKED FOR MORE THAN 12 HOURS. SHALL BE COVERED BY ONE OF THE FOLLOWING COVER MEASURES: MULCH, SODDING OR PLASTIC
- 14. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.
- 15. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
- 16. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
- 17. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6 INCHES MUST HAVE SLOPES NOT STEEPER THAN 3H: 1V.
- 18. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- 19. EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY INSPECTOR.

NPDES NOTES

- 1. THE CONTRACTOR SHALL KEEP A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE IMPLEMENTED.
- 2. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED, MAINTAINED AND REPAIRED BY THE CONTRACTOR AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES PER 24 HOUR PERIOD. AN INSPECTION REPORT FILE SHALL BE MAINTAINED BY THE CONTRACTOR.

FILTER FENCE NOTES

- 1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
- 2. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE). THE FENCE POSTS SHALL BE SPACED AT A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
- 3. A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE AND 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
- 4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- 5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE
- 6. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE 5 APPLYING.
- 7. THE TRENCH SHALL BE BACKFILLED WITH 3/4-INCH MINIMUM DIAMETER WASHED GRAVEL.
- 8. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
- 9. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SEEDING NOTES

1. SEEDBED PREPARATION MAY INCLUDE THE FOLLOWING:

- A. IF INFERTILE OR COURSE TEXTURED SUBSOIL WILL BE EXPOSED DURING GRADING, STOCKPILE TOPSOIL AND RE-SPREAD IT OVER THE FINISHED SLOPE AND ROLL IT TO PROVIDE A FIRM BASE.
- B. IF CONSTRUCTION FILLS HAVE LEFT SOIL EXPOSED WITH A LOOSE, ROUGH OR IRREGULAR SURFACE, TRACK WALK UP SLOPE.
- C. IF CUTS OR CONSTRUCTION EQUIPMENT HAVE LEFT A TIGHTLY COMPACTED SURFACE, BREAK WITH CHISEL PLOW OR OTHER SUITABLE EQUIPMENT.
- D. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPES (CONTOURED). THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE AFTER ROUGHENING.
- 2. FERTILIZATION AS PER SUPPLIER'S RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHOROUS FERTILIZER.
- 3. HYDROSEEDING APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE
- 4. SEEDING APPLY APPROPRIATE MIXTURE TO THE PREPARED SEEDBED AT A RATE OF 120 LBS/ACRE.
- COVER THE SEED WITH TOPSOIL OR MULCH NO DEEPER THAN ONE-HALF INCH. TEMPORARY EROSION CONTROL PROPORTIONS PERCENT PERCENT

SEED MIX	BY WEIGHT	PURITY	GERMINATION
CHEWINGS OR RED FESCUE	40%	98	90
ANNUAL OR PERENNIAL RYE	40%	98	90
REDTOP OR COLONIAL BENTGRASS	10%	92	85
WHITE DUTCH CLOVER	10%	98	90

APPROVED

CITY OF FERNDALE

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

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.		DATE
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SURVEY REFERENCE		VERTICAL DATUM			P	LAN C	HECK			REVISIONS			ISSUE	



MOUNTAIN VIEW ROAD DEVELOPMENT, LLC

405 14th STREET BELLINGHAM, WASHINGTON 98225

MOUNTAIN VIEW MEADOWS ROADWAY & UTILITY IMPROVEMENT PLANS

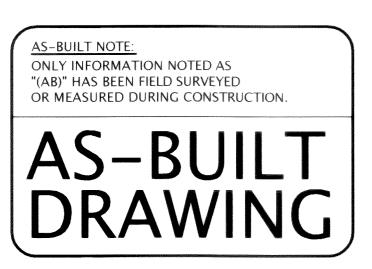
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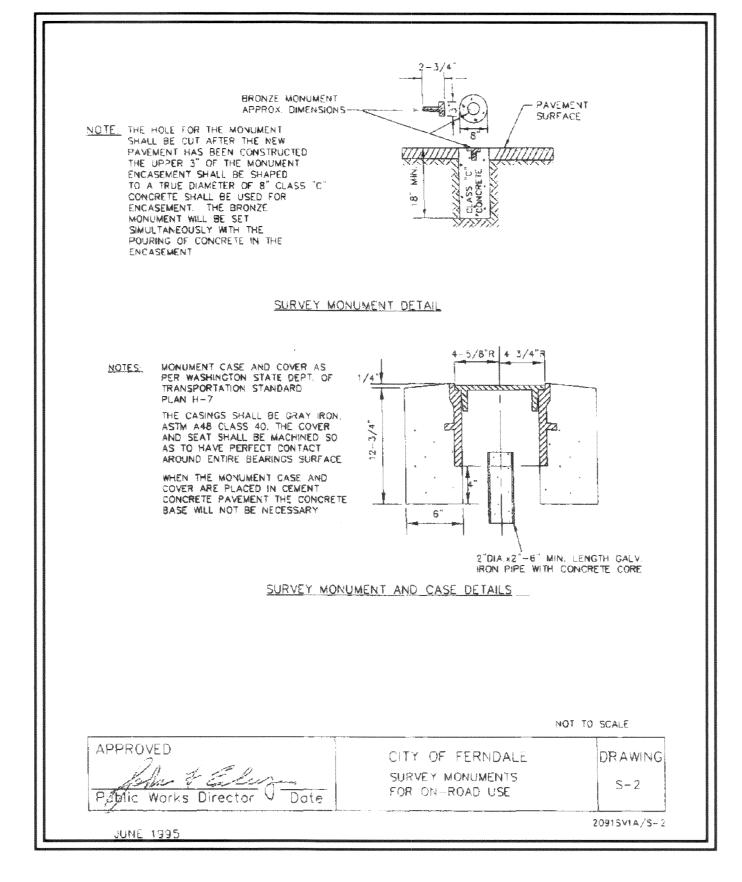
CONTROL DETAILS

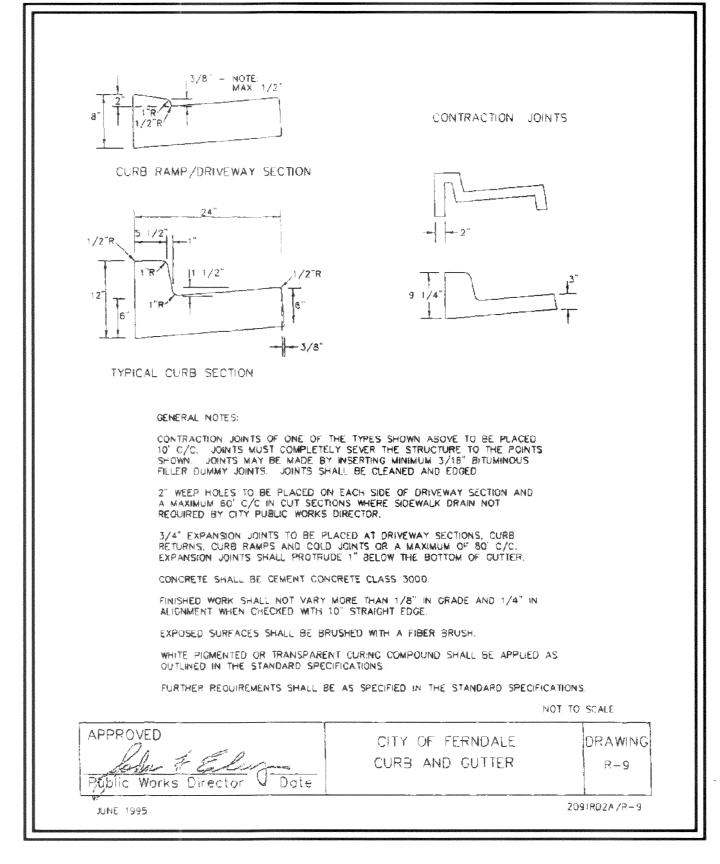


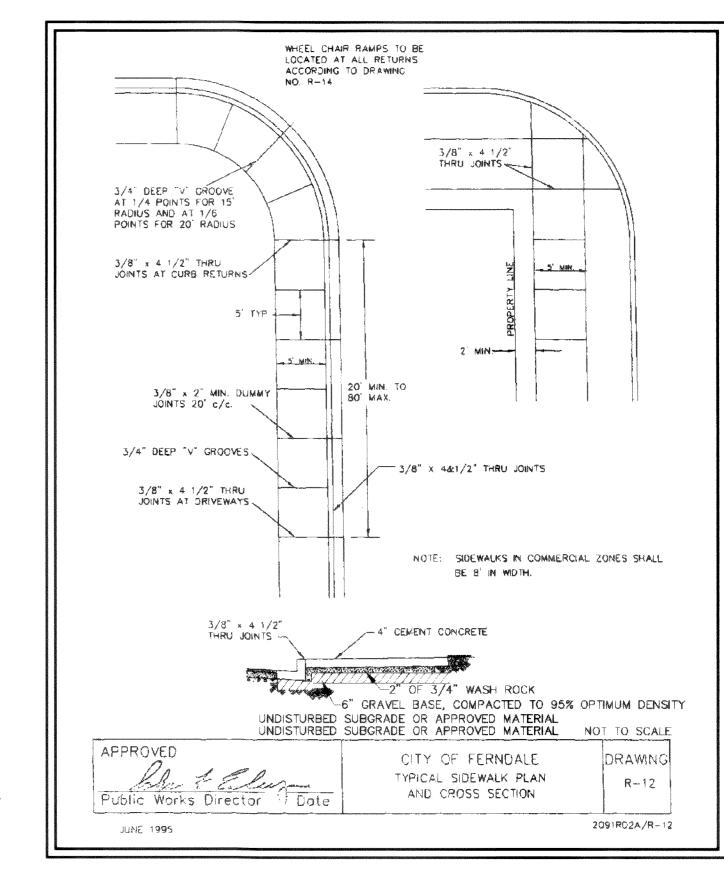
JOB #: 2005 041 **SHEET 13 OF 17**

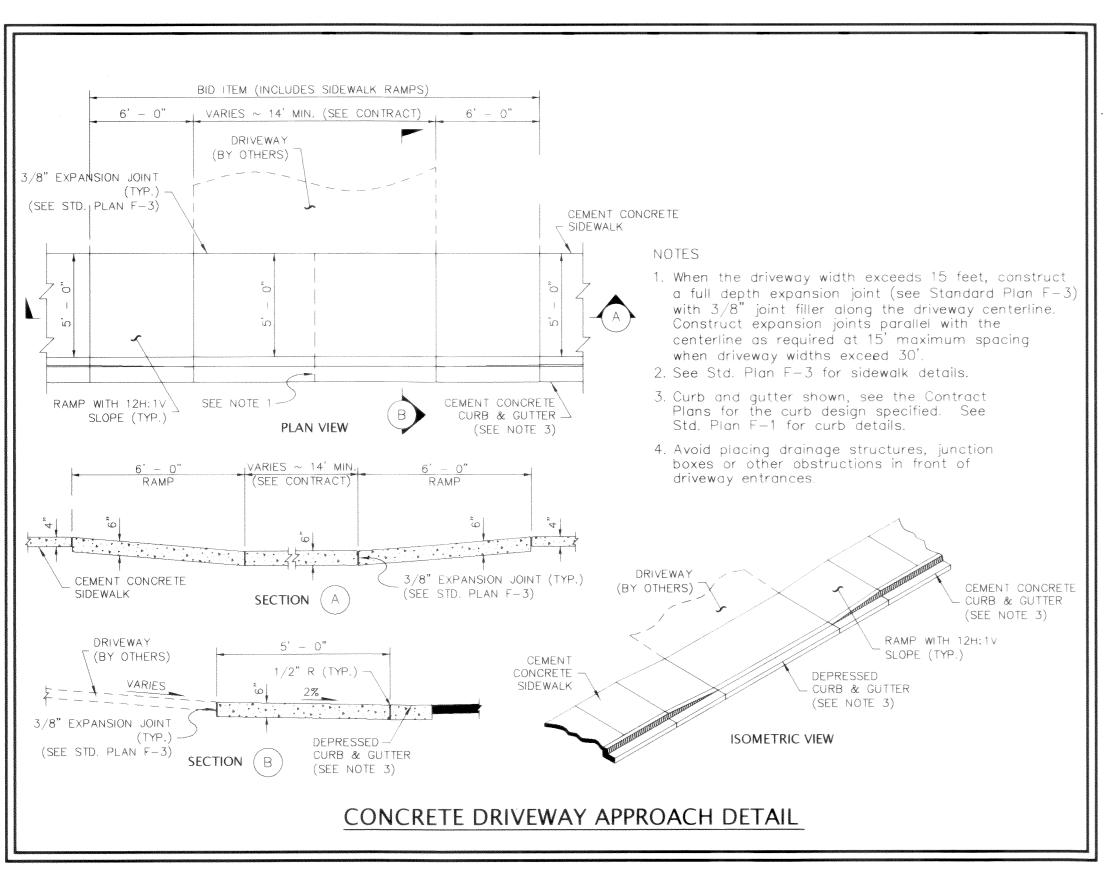
ROADWAY & SURFACE IMPROVEMENT DETAILS

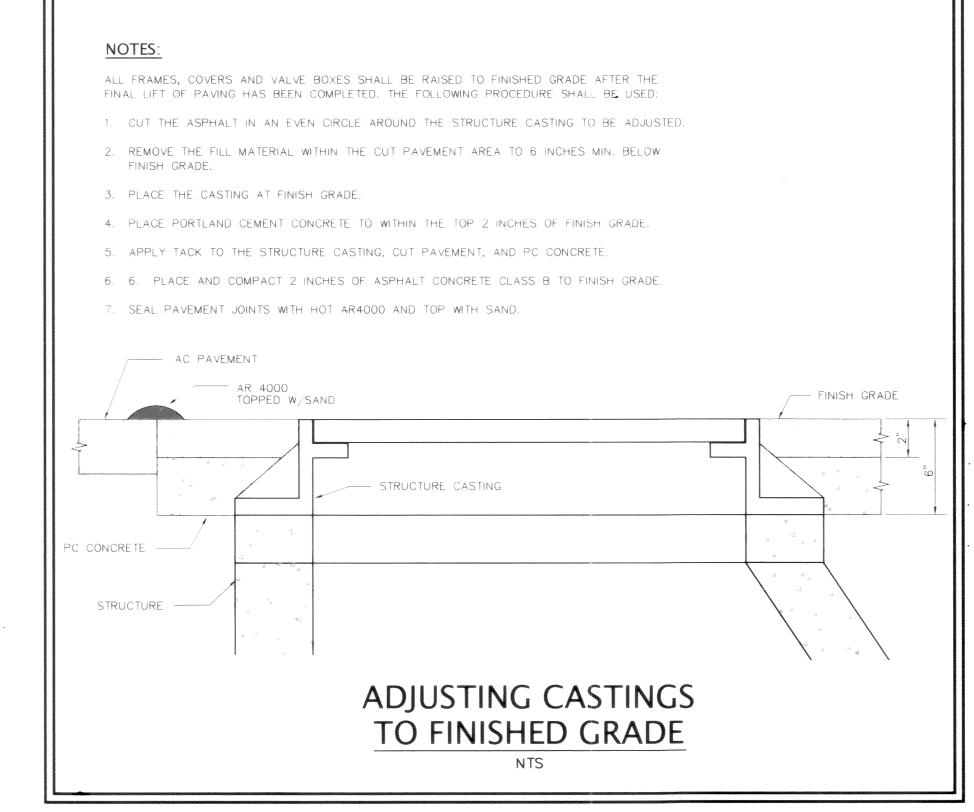


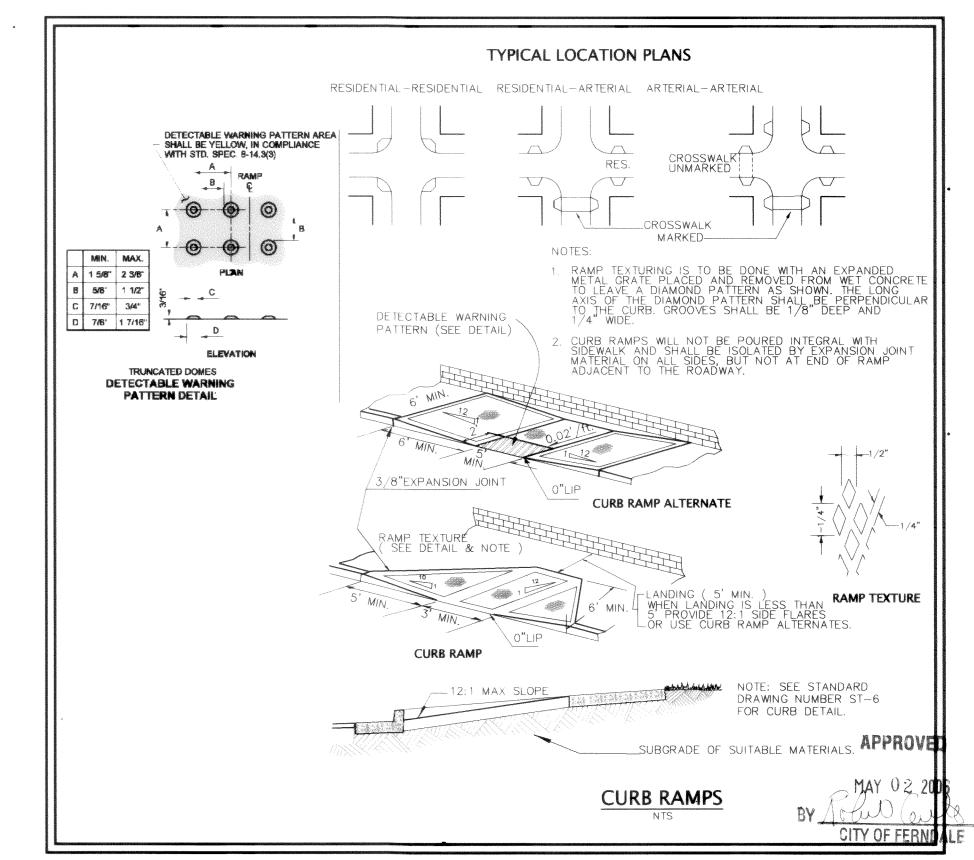












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DEVELOPMENT, LLC
405 14th STREET

JOB #: 2005 041

BELLINGHAM, WASHINGTON 98225

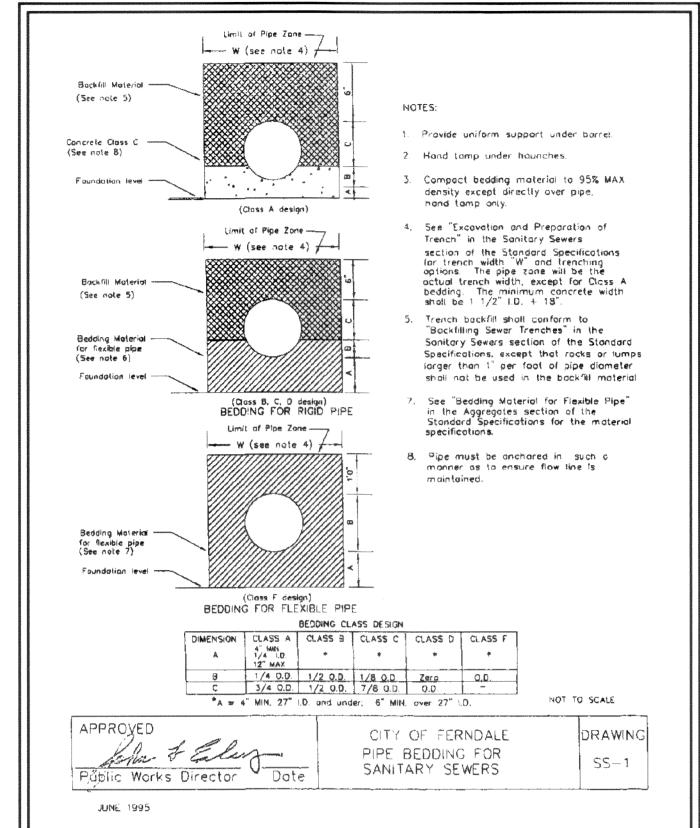
MOUNTAIN VIEW MEADOWS
ROADWAY & UTILITY IMPROVEMENT PLANS

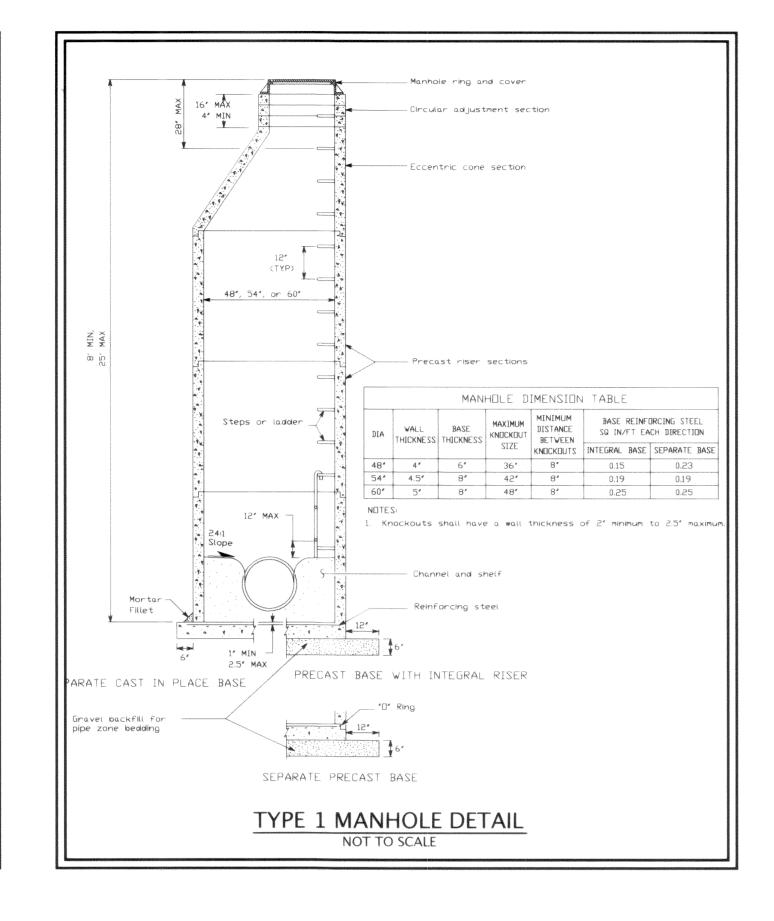


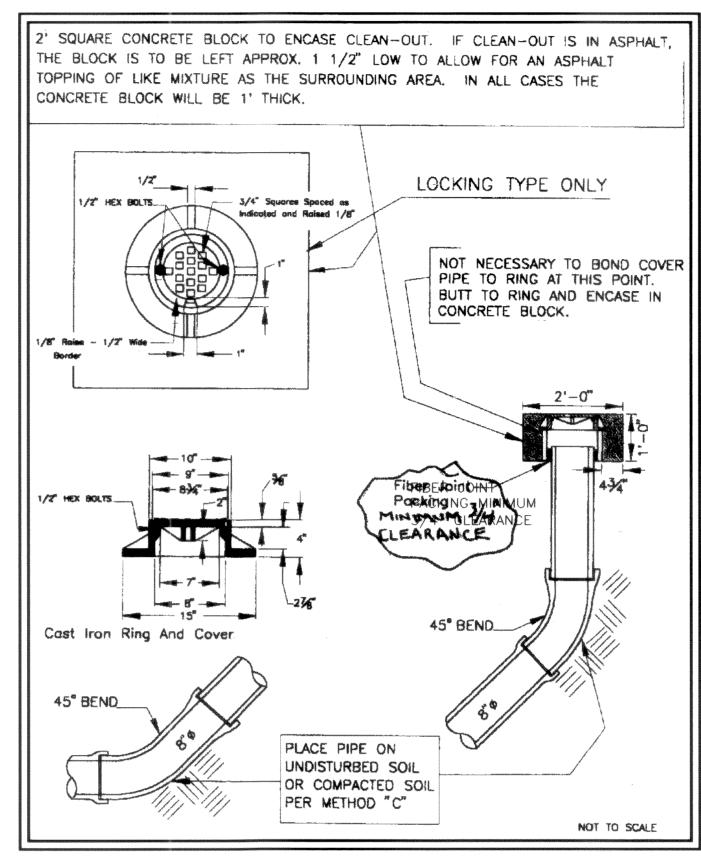


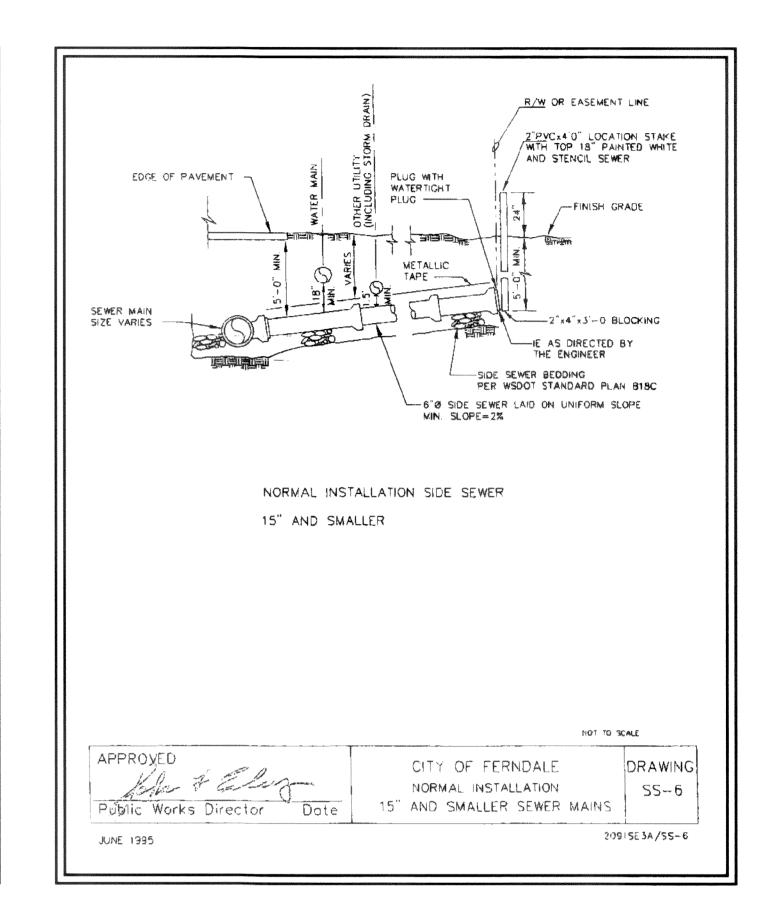
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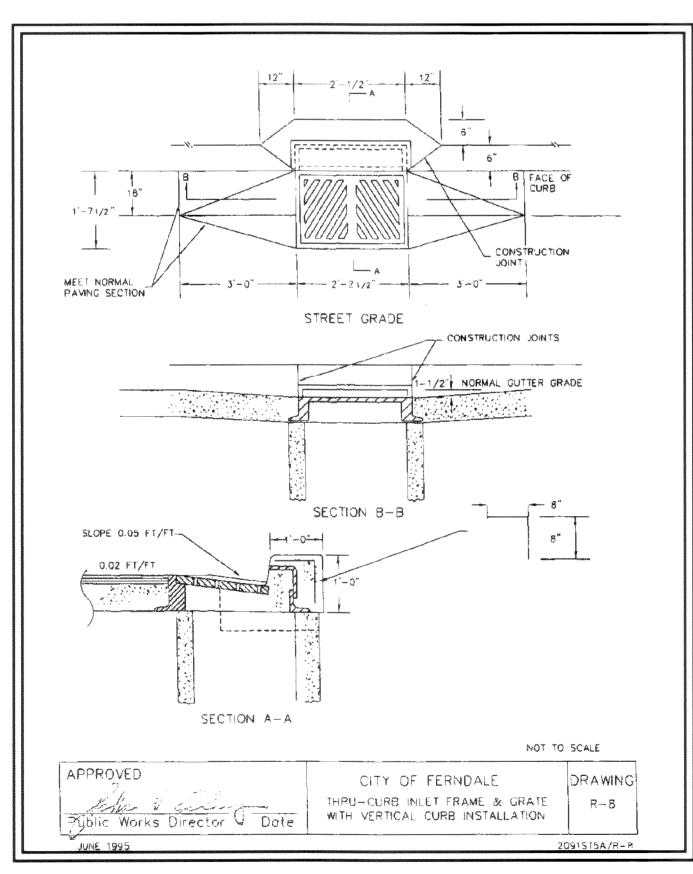
SANITARY SEWER & STORM DRAINAGE DETAILS

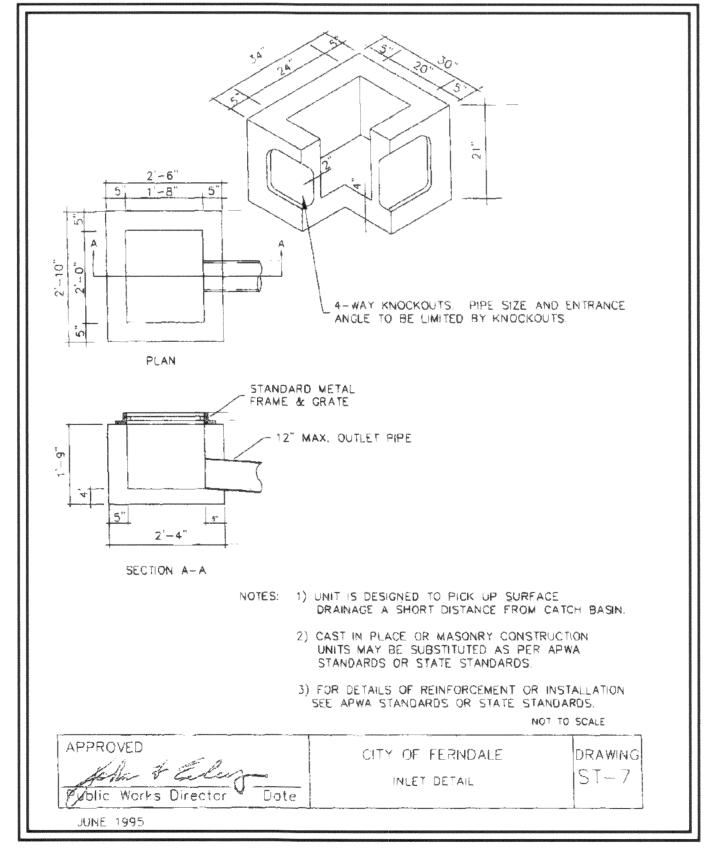


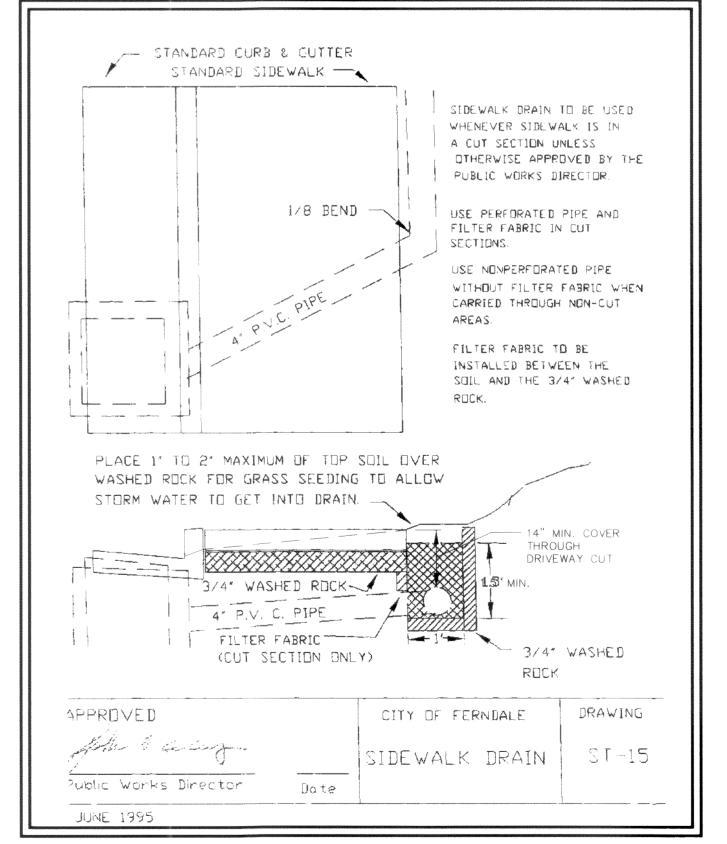


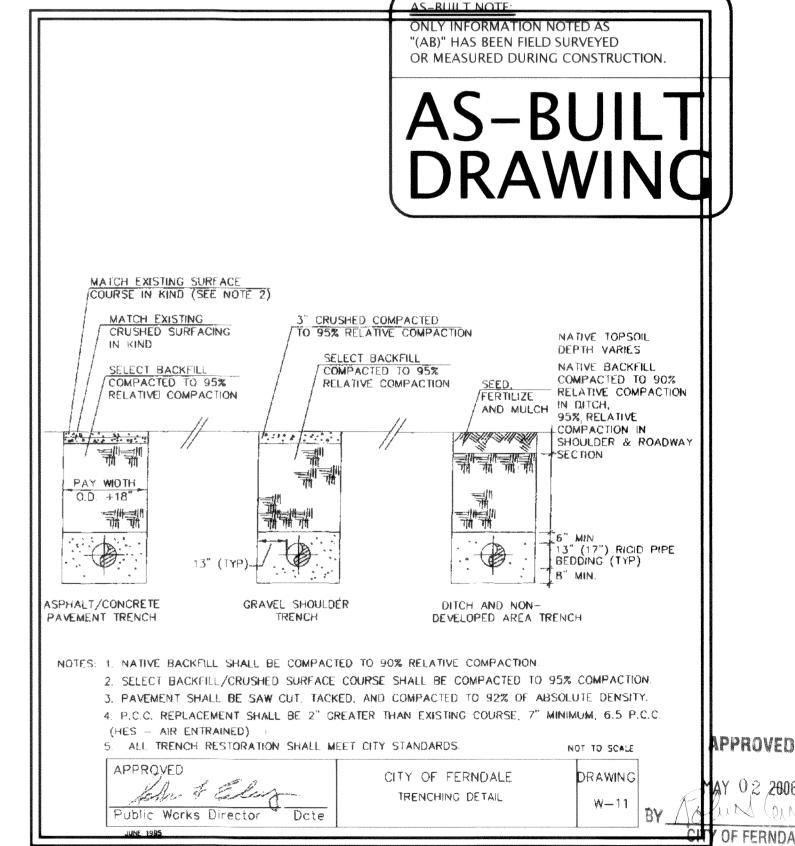












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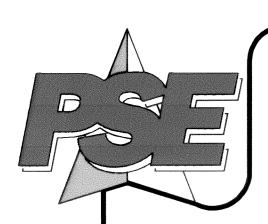
405 14th STREET
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MOUNTAIN VIEW MEADOWS ROADWAY & UTILITY IMPROVEMENT PLANS





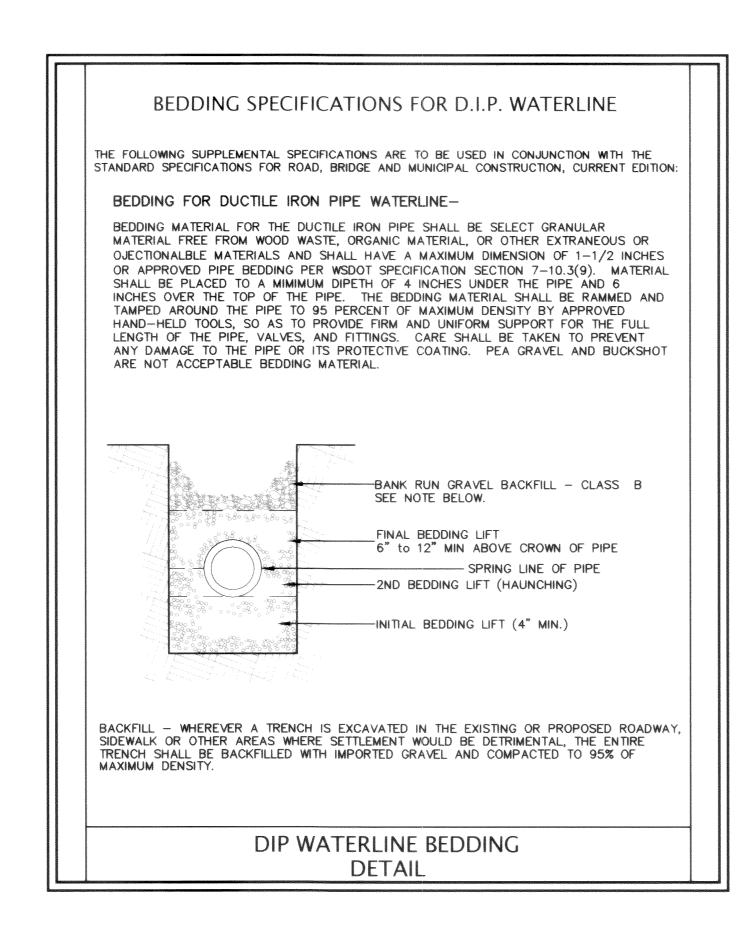
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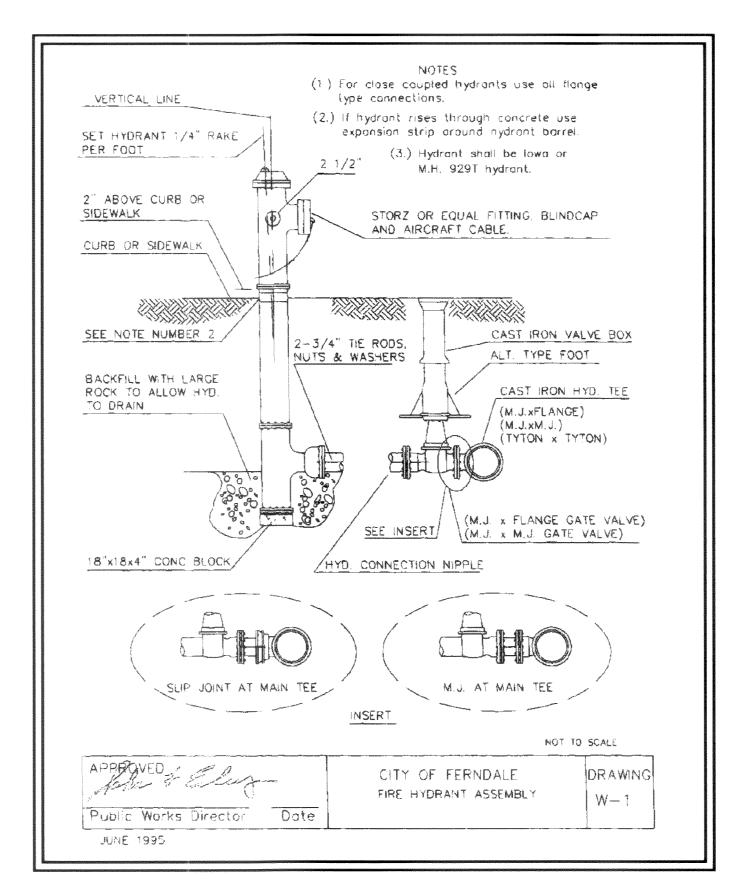


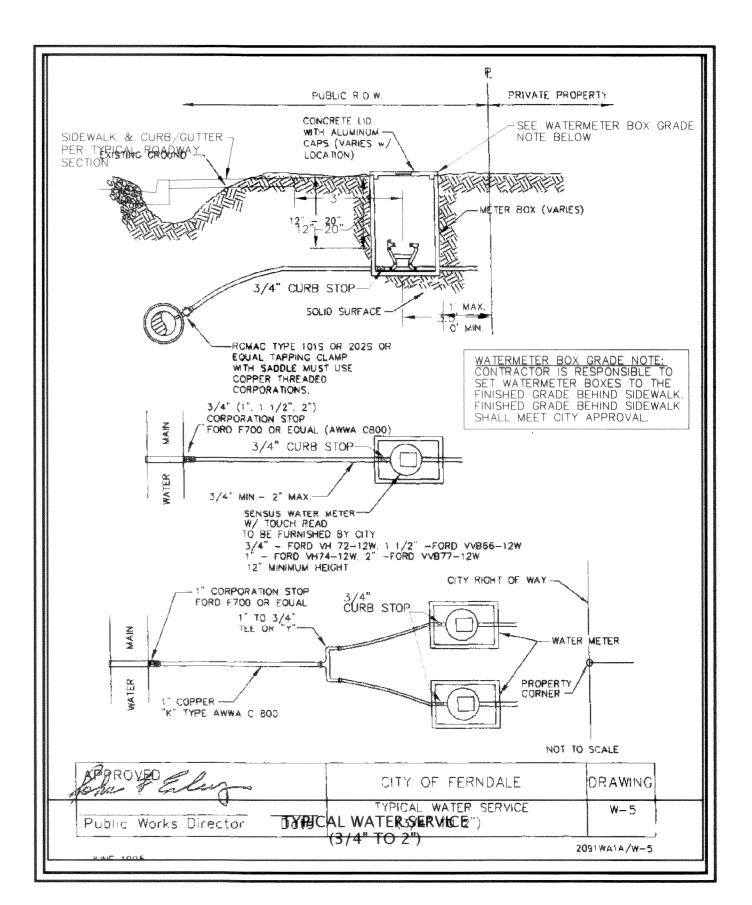
WATER SYSTEM DETAILS

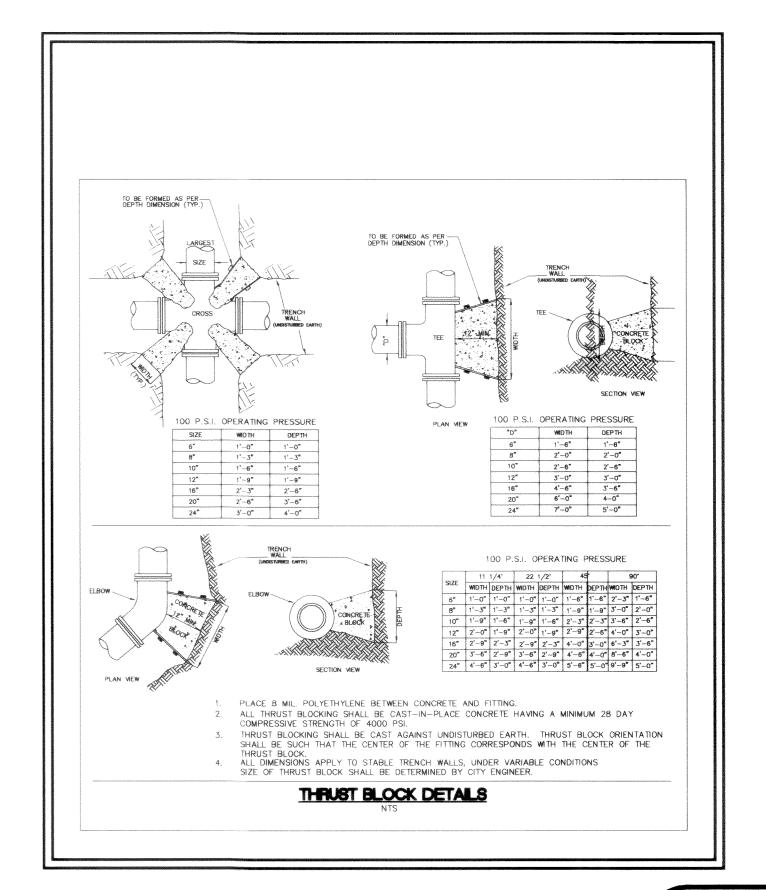
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AS-BUILT DRAWING



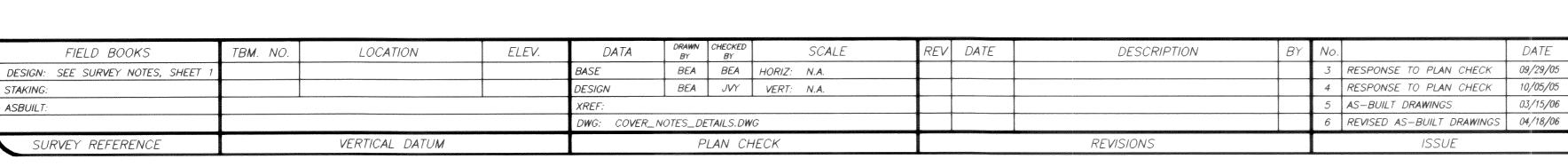






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CITY OF FERNDALE

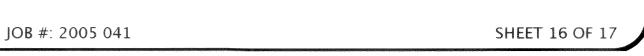




MOUNTAIN VIEW ROAD DEVELOPMENT, LLC 405 14th STREET BELLINGHAM, WASHINGTON 98225

MOUNTAIN VIEW MEADOWS ROADWAY & UTILITY IMPROVEMENT PLANS

WATER SYSTEM DETAILS







GENERAL CONSTRUCTION NOTES

GENERAL REQUIREMENTS

- 1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. WORK AND MATERIALS SHALL ALSO CONFORM TO THE CITY OF FERNDALE DEVELOPMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
- 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.
- 3. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHTS—OF—WAY.
- 4. THE CONTRACTOR SHALL SCHEDULE 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.
- 5. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
 - A. PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.

 B. PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS—OF—WAY OR IN WATERLINE EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - C. PLACEMENT AND BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS—OF—WAY OR IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - D. GRADING OF PUBLIC ROADWAY AT:

 1) COMPLETION OF EXCAVATION TO SUBGRADE.

 2) COMPLETION OF BALLAST COURSE PLACEMENT.
 - 3) COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
 E. POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - F. ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - G. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
- H. END OF MAINTENANCE PERIOD.
- 6. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB-SURFACE CONDITIONS AND SOILS TYPES.
- 7. 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. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1—07.23—TRAFFIC CONTROL, SHALL APPLY
- 8. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 9. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATIONS 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.
- 10. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON A COMBINATION OF FIELD RECONNAISSANCE, FIELD SURVEY AND UTILITY COMPANY RECORDS AND ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES PRIOR TO STARTING CONSTRUCTION. 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. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555.
- 11. 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.
- 12. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST BETWEEN ACTUAL FIELD CONDITIONS AND THE ASSUMED CONDITIONS SHOWN ON THE APPROVED PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION, SO THAT NECESSARY PLAN OR DESIGN CHANGES CAN BE MADE. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR EXTRA WORK, INCLUDING REMOVAL AND RECONSTRUCTION OF NEWLY BUILT IMPROVEMENTS, MADE NECESSARY BY ERRORS OF DIMENSION OR GRADE ON THE APPROVED PLANS, UNLESS SUCH NOTIFICATION WAS GIVEN.
- 13. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.

 14. 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.

 15. ALL MATERIALS TESTING REQUIREMENTS FOR THE IMPROVEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR. CONTRACTOR SHOULD DETERMINE THESE REQUIREMENTS PRIOR TO THE START OF
- 16. ALL PORTLAND CEMENT CONCRETE SHALL BE APWA CLASS 3000, PER APWA STANDARD SPECIFICATIONS, SECTION 6-02.3(2)B.
- 17. 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, 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 AT LEAST 48—HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS—BUILT SURVEY. THE ENGINEER WILL PROVIDE CERTIFIED AS—BUILT MYLARS TO PUBLIC WORKS UPON PROVISIONAL ACCEPTANCE OF ROAD AND UTILITY IMPROVEMENTS.
- 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. TESTING OF NEW WATER LINES, SANITARY SEWER LINES, AND STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

AD

MONUMENTS

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

 TYPICAL STREET SECTION

 TYPICAL SECTION ON SHEET 1 OF THESE PLANS
 - PCC CURB AND GUTTER
 PCC SIDEWALKS
 PCC CURB RAMPS, ADA APPROACHES
 SIDEWALK DRAINS

TYPICAL SECTION ON SHEET 1 OF THESE PLANS
CITY OF FERNDALE STANDARD DETAIL (COFSD) R-9
COFSD R-12 & TYP. SECTION ON SHEET 1
WSDOT STD. DETAIL F-3
COFSD ST-15
COFSD S-2

- 2. ALTERNATE PAVEMENT SECTIONS, WHEN DESIGNED BY A LICENSED GEOTECHNICAL ENGINEER, MAY BE SUBMITTED TO THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR FOR CONSIDERATION AND, IF APPROVED, USED IN PLACE OF THE PAVEMENT SECTION SHOWN ON THESE PLANS.
- 3. PROJECT SURVEYOR OR THEIR DESIGNEE SHALL SURVEY THE ELEVATION OF THE COMPLETED SUBGRADE ALONG THE ROADWAY CENTERLINE AT 25—FOOT INTERVALS. THE PROJECT SURVEYOR SHALL SUBMIT THE SURVEY DATA TO THE CITY OF FERNDALE AND THE ENGINEER FOR REVIEW. ALL SUBGRADE ELEVATIONS SHALL BE AT OR BELOW THE DESIGN SUBGRADE ELEVATION. NO TOLERANCE IS PROVIDED FOR SUBGRADE ABOVE THE DESIGN SUBGRADE ELEVATION. OTHER METHODS OF SUBGRADE CERTIFICATION MAY BE USED IF MUTUALLY AGREED UPON BY THE CITY, CONTRACTOR, AND ENGINEER.
- 4. 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.

5. EARTHWORK

- A. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
- B. THE CONTRACTOR SHALL RAZE, REMOVE AND DISPOSE OF ALL BUILDING AND FOUNDATIONS, STRUCTURES, FENCES AND OTHER OBSTRUCTIONS THAT LIE WHOLLY OR PARTIALLY WITHIN THE PROJECT LIMITS.
- C. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UNCOMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
- D. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
- E. MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.
- F. UNSUITABLE MATERIAL 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.
- G. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING

6. BASE COURSES

- A. GRAVEL BASES AND BALLAST SHALL NOT HAVE THE PERCENT PASSING THE U.S. NO. 200 SIEVE EXCEED 5%.
- B. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
- C. OWNER SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. ALL TESTING SHALL BE THROUGH ENG. REV. ACCOUNT AND PAID FOR BY OWNER.

7. PAVEMENTS

- 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.
- D. 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.
- E. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCH.

8. STREET LIGHTING

- A. CONTRACTOR SHALL PROVIDE STREET ILLUMINATION IN ACCORDANCE WITH THE PROVISIONS OF SECTION 707 OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. 100—WATT HIGH PRESSURE SODIUM LAMPS SHALL BE INSTALLED ON STANDARD CONCRETE OCTAGONAL OR ROUND POLES NO LESS THAN 25 FEET HIGH AND SPACED NO MORE THAN 250' APART, MEASURED ALONG THE PAVEMENT CENTERLINE. POLE LOCATIONS ARE SHOWN ON THESE PLANS.
- B. FINAL LOCATIONS OF STREET LIGHTS IS TO BE COORDINATED WITH PUGET SOUND ENERGY.
- C. CONTRACTOR IS TO COMPLY WITH THE SPECIFICATIONS SHOWN ON WSDOT STANDARD DETAIL J-11A, STANDARD JUNCTION BOX, UNLESS OTHERWISE DIRECTED BY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR.
- D. CONTRACTOR MUST INFORM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR (4) WORKING DAYS IN ADVANCE.

9. MAILBOXES

- A. MAILBOX STRUCTURES SHALL BE IN ACCORDANCE WITH DETAIL SHEET 15.
 FINAL LOCATION AS DETERMINED BY USPS AND APPROVED BY CITY OF FERNDALE
- B. MAILBOXES SHALL BE TYPE I, II, AND/OR III CBU (CENTRAL BOX UNIT), USPS APPROVED.

STORM DRAINAGE

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

 "MAIN LINE" CATCH BASINS

 TYPE 1, 11 OR 2, WSDOT STD. DETAILS B-1, B-1A OR E
- "MAIN LINE" CATCH BASINS

 "RESIDENTIAL SERVICE LINE" CATCH BASINS
 THRU-CURB INLET FRAME AND GRATE
 SIDEWALK DRAINS

 TYPE 1, 1L OR 2, WSDOT STD. DETAILS B-1, B-1A OR B-1E
 CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-7
 CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-8
 COFSD ST-15
- 2. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 7-08.3(1). THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED PIPE BEDDING TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE. DRAINAGE MATERIALS SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS SECTION 9-05.
- 3. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.20. STORM SEWER PIPE HAVING DIAMETERS 8" AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.12.
- 4. BACK OF WALK DRAIN SHALL BE 4" SMOOTH WALL PERFORATED PVC PIPE, ASTM D 3034 SDR35, INSTALLED IN CUT SECTIONS PER COFSD ST-15.
- 5. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- 6. UNLESS OTHERWISE SPECIFIED, CAST IRON PRODUCTS SHALL CONFORM TO ASTM DESIGNATION "A 48 CLASS 30" AND DUCTILE IRON PRODUCTS TO ASTM DESIGNATION "A 536 GRADE 80-55-06".
- 7. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
- 8. ALL DRAINAGE SERVICE STUBS SHALL BE MARKED FOR LOCATION WITH A PRESSURE TREATED 2" X 4" TIMBER, PAINTED WHITE OR A WHITE 2" DIA. PVC PIPE. BOTH TYPES OF LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.
- 9. LOT/ROOF DRAIN SERVICES SHALL BE MIN. 4" PVC PIPE, ASTM D 3034 SDR35.
 MULTIPLE RESIDENTIAL STORM DRAIN SERVICES SHALL BE 6" PVC PIPE, DRAINING TO A COFSD ST-7 INLET.
 8" PVC PIPE SHALL BE USED TO CONNECT EACH ST-7 INLET TO A NEARBY TYPE 1, TYPE 1L, OR TYPE 2 CATCH BASIN.
- 10. ALL STORM STUB INVERT ELEVATIONS SHALL BE CONSTRUCTED TO FACILITATE POSITIVE FLOW TO CATCH BASIN.

ANITARY SEWER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING SANITARY SEWER IMPROVEMENTS:

PIPE BEDDING
TRENCH BACKFILL
SS MANHOLE, TYPE 1-48"
SS CLEANOUTS
SIDE SEWERS

CITY OF FERNDALE STANDARD DETAIL (COFSD) SS-1
COFSD SS-15 & SS-1 & WSDOT STD. SPEC. SEC. 9-03.12
COFSD SS-2
COFSD SS-2
COFSD SS-9 (BOLT DOWN/WATERTIGHT)
COFSD SS-5
COFSD SS-5
COFSD SS-6, SS-8 & SS-13

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH A.P.W.A. STANDARD SPECIFICATIONS, 1996 EDITION, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.
- 3. 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 DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
- 4. 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.
- 5. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL OR SUITABLE NATURAL MATERIAL AS DIRECTED BY THE ENGINEER, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- 6. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE SS-2, SS-3 OR SS-4, AND SHALL BE BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW
- 7. 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".
- 8. CONTRACTOR SHALL EXTEND SEWER STUBS BEYOND THE STREET RIGHT-OF-WAY LINE.
- 9. 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". THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:

PIPE BEDDING
TRENCH BACKFILL
BLOW-OFF ASSEMBLY
FIRE HYDRANT ASSEMBLY
THRUST BLOCKING
WATER SERVICE

SEE DETAIL, SHEET 16
COFSD W-11 & WSDOT STD. SPEC. SEC. 9-03.12
COFSD W-9 & W-10
COFSD W-1
COFSD W-1
COFSD W-2, W-3 & W-4
COFSD W-6, & DETAIL SHEET 16

- ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, MINIMUM CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705.
- 3. 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
- 4. 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 7-11.3(13) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE-CAST BLOCKS ARE ALLOWED.
- 5. 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. ALL CONNECTIONS SHALL BE DONE BY THE CONTRACTOR. CONNECTION TO EXISTING CITY WATER SYSTEM SHALL BE PAID IN ADVANCE BY A DEPOSIT.
- 6. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTIONS 7-11-3(11) AND 7-11.3(12) 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 225 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. ALL DISINFECTION AND BACTERIOLOGICAL TESTS SHALL BE CONDUCTED BY THE CITY OF FERNDALE LABORATORY. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
- 7. 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.
- 8. ALL PIPE SHALL HAVE A MINIMUM COVER OF 42".
- 9. 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 8 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.

10. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. ALL WATER SERVICE STUB ENDS SHALL BE MARKED FOR LOCATION WITH A 4' LONG 2" X 4"

- 11. CONTRACTOR IS RESPONSIBLE TO SET WATERMETER BOXES TO THE FINISHED GRADE BEHIND SIDEWALK. FINISHED GRADE BEHIND SIDEWALK SHALL MEET CITY APPROVAL.
- 12. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COF STANDARD DETAIL W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
- OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND CABLE SHALL BE SUPPLIED. HYDRANTS SHALL EITHER BE IOWA OR M.H. 929T HYDRANTS.

 B. FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE.

A. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY-VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE

- 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 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 200 PSI OR 50 PSI

IN EXCESS OF STREET MAIN PRESSURE, WHICHEVER IS GREATER. A FLOW TEST WILL BE REQUIRED WHEN

A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE

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.

JOB #: 2005 041

APPROVED

BY CITY OF FERNDALE

AS-BUILT NOTE:
ONLY INFORMATION NOTED AS
"(AB)" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

SHEET 17 OF 17

AS-BUILT DRAWING

DESCRIPTION LOCATION FIELD BOOKS BEA BEA HORIZ: N.A. RESPONSE TO PLAN CHECK 09/29/03 DESIGN: SEE SURVEY NOTES, SHEET BEA JVY VERT: N.A. 10/05/0 4 RESPONSE TO PLAN CHECK 5 | AS-BUILT DRAWINGS ASBUILT: 6 REVISED AS-BUILT DRAWINGS 04/18/00 DWG: COVER NOTES DETAILS.DWG VERTICAL DATUM PLAN CHECK REVISIONS ISSUF SURVEY REFERENCE



MOUNTAIN VIEW ROAD DEVELOPMENT, LLC

INSTALLATION IS COMPLETE.

405 14th STREET BELLINGHAM, WASHINGTON 98225 MOUNTAIN VIEW MEADOWS
ROADWAY & UTILITY IMPROVEMENT PLANS

GENERAL CONSTRUCTION NOTES

