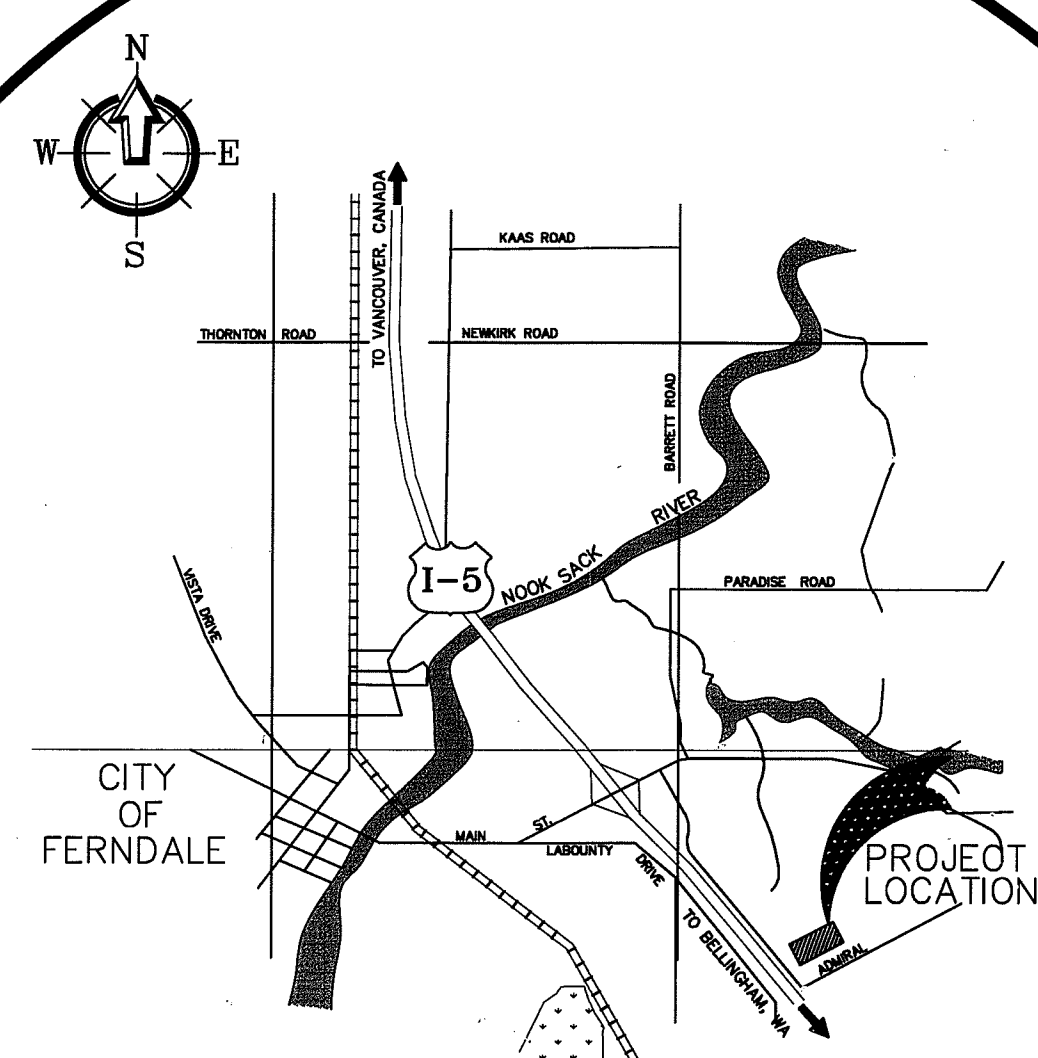


A PORTION OF THE NORTHEAST QUARTER OF SECTION 33, T39N, R2E, W.M.

PACIFIC INDUSTRIAL PARK LOT 23

AS-BUILT













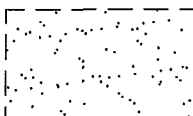









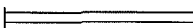







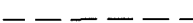
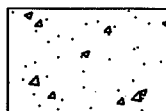



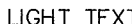




00539.001 12/01/12 stf



VICINITY MAP

Sheet Number	Sheet Title
01	COVER SHEET
02	EXISTING CONDITIONS
03	EROSION CONTROL PLAN
04	SITE GRADING PLAN
05	STORM DRAINAGE PLAN: NORTH
06	STORM DRAIN PLAN & PROFILE: WEST
07	STORM DRAIN PLAN & PROFILE: EASTERN PORTION
08	STORM DRAINAGE STANDARD DETAILS
09	WATER DISTRIBUTION AND SANITARY SEWER PLAN
10	AND WATER & SEWER STANDARD DETAILS
	COMPOSITE UTILITY PLAN
	CITY OF FERNDAL CONSTRUCTION NOTES
	AND WATER & SEWER STANDARD DETAILS

LEGEND

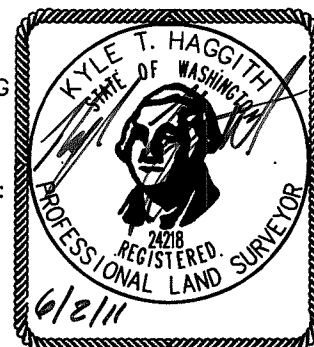
	= STORM MANHOLE		= AS BUILT STORM DRAIN CATCH BASIN
	= EXIST SANITARY SEWER MANHOLE		= AS BUILT STORM DRAIN MANHOLE (TYPE 2)
	= EXIST FIRE HYDRANT		= AS BUILT STORM DRAIN LINE
	= EXIST METER BOX		= AS BUILT WATER LINE
	= EXIST WATER VALVE		= AS BUILT WATER SERVICE
	= EXIST WATER BLOWOFF		= AS BUILT WATER HYDRANT
	= EXIST ASPHALT		= AS BUILT GATE VALVE
	= EXIST SANITARY SEWER LINE		= AS BUILT SAN. SEWER LINE
	= EXIST STORM DRAIN LINE		= AS BUILT SANITARY SEWER SERVICE
	= EXIST CONTOUR (5')		= AS BUILT SEWER CLEANOUT
	= EXIST CONTOUR (1')		= AS BUILT SEWER MANHOLE
	= EXIST CULVERT		= DITCH
	= EXIST DITCHLINE		= 1' CONTOUR
	= EXIST ROAD EDGE OF PAVEMENT		= 5' CONTOUR
	= EXIST SURVEY BOUNDARY LINE		= ASPHALT
	= EXIST EASEMENT LINE		= CONC. SIDEWALK
	= EXIST UNDERGROUND POWER		= ULTRA BLOCK WALL
	= EXIST GAS MAIN		= DESIGN INFORMATION
	= EXIST WATER LINE		= AS-BUILT INFORMATION (AB)
	= EXIST ROAD CENTER LINE		
	= EXIST CONC. RET. WALL		

APPROVED
DEC 31 2012
BY *[Signature]* P.E.
CITY OF FERNDAL

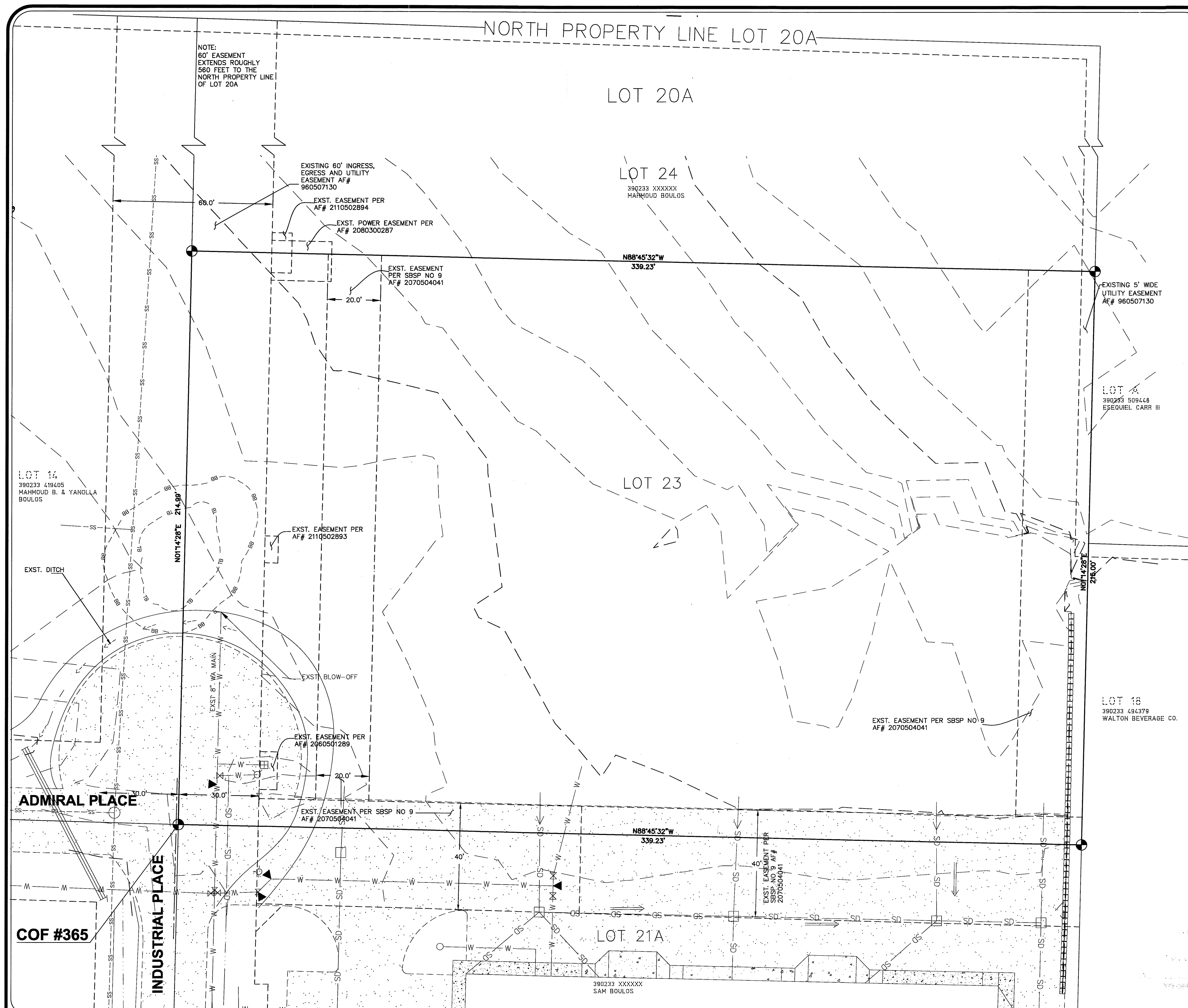
ENGINEER'S CERTIFICATION
I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
PACIFIC INDUSTRIAL PARK LOT 23 HAVE BEEN
INSPECTED BY LDES AND TO THE BEST OF MY
KNOWLEDGE, HAVE BEEN CONSTRUCTED IN
CONFORMANCE WITH THE CITY OF FERNDAL
DEVELOPMENT STANDARDS, THE CITY OF FERNDAL
MUNICIPAL CODE, SUBSEQUENT STANDARDS
ADOPTED BY REFERENCE THEREIN, AND STANDARD
ENGINEERING PRACTICE.
[Signature]
RAMON LLANOS, P.E.



SURVEYOR'S CERTIFICATION
I CERTIFY THAT THE LOCATIONS, ELEVATIONS,
DEPTHS, AND AS-BUILT COMMENTS REFLECTING
MATERIALS ACTUALLY USED DURING
CONSTRUCTION ACCURATELY REFLECT EXISTING
FIELD CONDITIONS AS DETERMINED BY ME OR
UNDER MY DIRECT SUPERVISION ON THIS DATE.
[Signature]
KYLE HAGGITH, L.S.

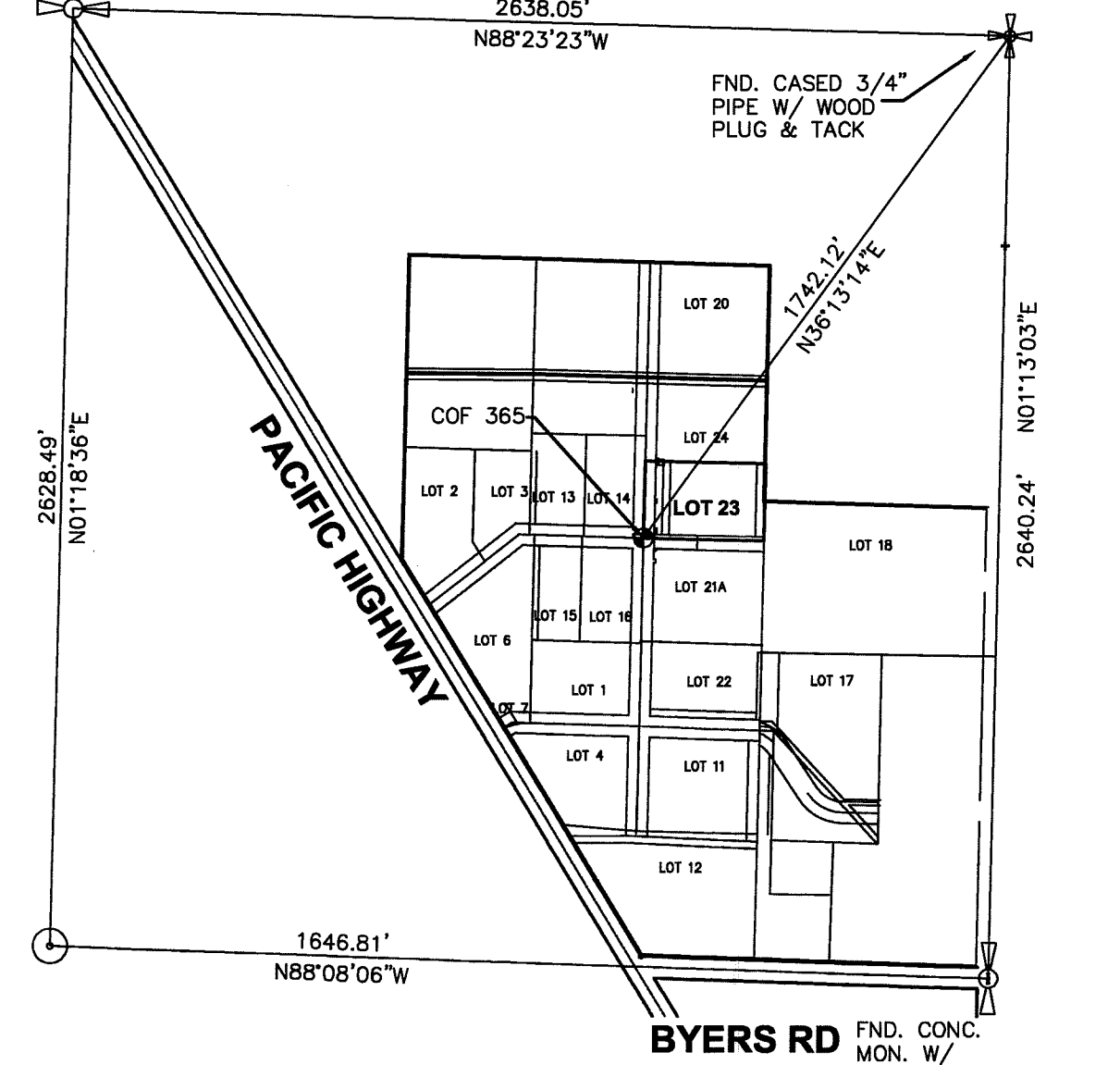


DRAWN BY SR DATE 6/1/2011 CHKD BY RL DATE 9/1/2011	PACIFIC INDUSTRIAL PARK LOT 23				
JOB # 06014	FOR: SAM BOULOS PO BOX 189 FERNDAL WA 98248			LDES, INC. 5160 INDUSTRIAL PL #108 FERNDAL, WA 98248 PHONE 360-383-0620 FAX 360-383-0639	PACIFIC INDUSTRIAL PARK LOT 23 COVER SHEET AS-BUILT
		REVISIONS - INITIALS/DATE/COMMENTS		SHEET 01 OF 10	
		SR 3/31/2011 SUBMITTAL #1			
		MP 6/1/2011 SUBMITTAL #2			



EXISTING CONDITIONS JOB NO. 06014

SECTION BREAKDOWN
SECTION 33, TOWNSHIP 39 NORTH, RANGE 2 EAST., W.M.
SCALE 1" = 500'



LEGEND

- ⊕ = STORM MANHOLE
- = EXIST SANITARY SEWER MANHOLE
- ⊗ = EXIST FIRE HYDRANT
- ⊞ = EXIST METER BOX
- ⊕ = EXIST WATER VALVE
- ⊖ = EXIST WATER BLOW OFF
- ⊞ = EXIST ASPHALT
- SS = EXIST SANITARY SEWER LINE
- SD = EXIST STORM DRAIN LINE
- 5' — = EXIST CONTOUR (5')
- 1' — = EXIST CONTOUR (1')
- — — = EXIST CULVERT
- = EXIST DITCH FLOW
- ⊙ = PROPERTY CORNER
- — — = EXIST DITCHLINE
- — — = EXIST ROAD EDGE OF PAVEMENT
- — — = EXIST SURVEY BOUNDARY LINE
- — — = EXIST EASEMENT LINE
- P — = EXIST UNDERGROUND POWER
- G — = EXIST GAS MAIN
- W — = EXIST WATER LINE
- — — = EXIST ROAD CENTER LINE
- — — = EXIST CONC. RET. WALL

LEGAL DESCRIPTION:
LOT 23 AS DELINEATED ON PACIFIC INDUSTRIAL PARK SPECIFIC BINDING SITE PLAN No. 9,
ACCORDING TO THE PLAT THEREOF, UNDER AUDITOR'S FILE No. 2070504041,
RECORDS OF WHATCOM COUNTY, WASHINGTON.

- SURVEY NOTES:
- 1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION.
 - 2) EQUIPMENT USED: NIKON DTM520: 00'01.5" ± 2 PPM, ± 2 MM
 - 3) BASIS OF BEARINGS: PER SPECIFIC BINDING SITE PLAN No. 8 AF # 2040505272
 - 4) ORIGINAL SURVEY WAS DONE ON OR ABOUT APRIL 2006, AS BUILTS WERE PERFORMED ON MARCH 2011
 - 5) HORIZONTAL DATUM: CITY OF FERNDALE EXISTING MONUMENT LOCATION SURVEY WASHINGTON STATE NORTH ZONE NAD 83/91
VERTICAL DATUM: BENCHMARK DERIVED FROM DAVID EVANS AND ASSOCIATES ORIGINAL BASE MAP CITY OF FERNDALE
EL= 68.05 (LDES PNT# 2002)
 - 6) THIS SURVEY IS INTENDED TO SHOW DISCREPANCIES OF PAST ISSUES AND NOT INTENDED TO RESOLVE LEGAL BOUNDARY LINE ISSUES.

APPROVED

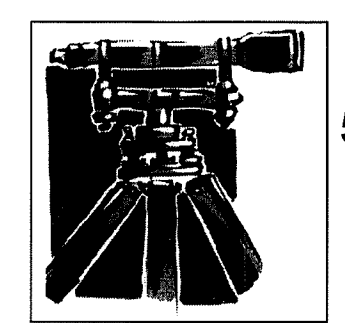
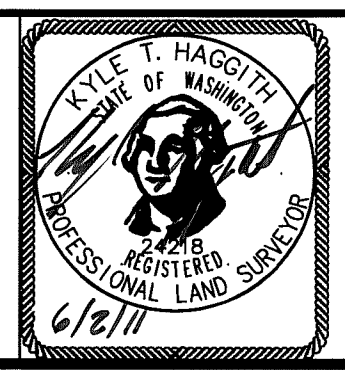
DEC 31 2012
BY *[Signature]* P.E.
CITY OF FERNDALE

DRAWN BY SR DATE 8/1/2011
CHKD BY RL DATE 8/1/2011

PACIFIC INDUSTRIAL PARK LOT 23

JOB # 06014

FOR: **SAM BOULOS**
PO BOX 189 FERNDAL WA 98248



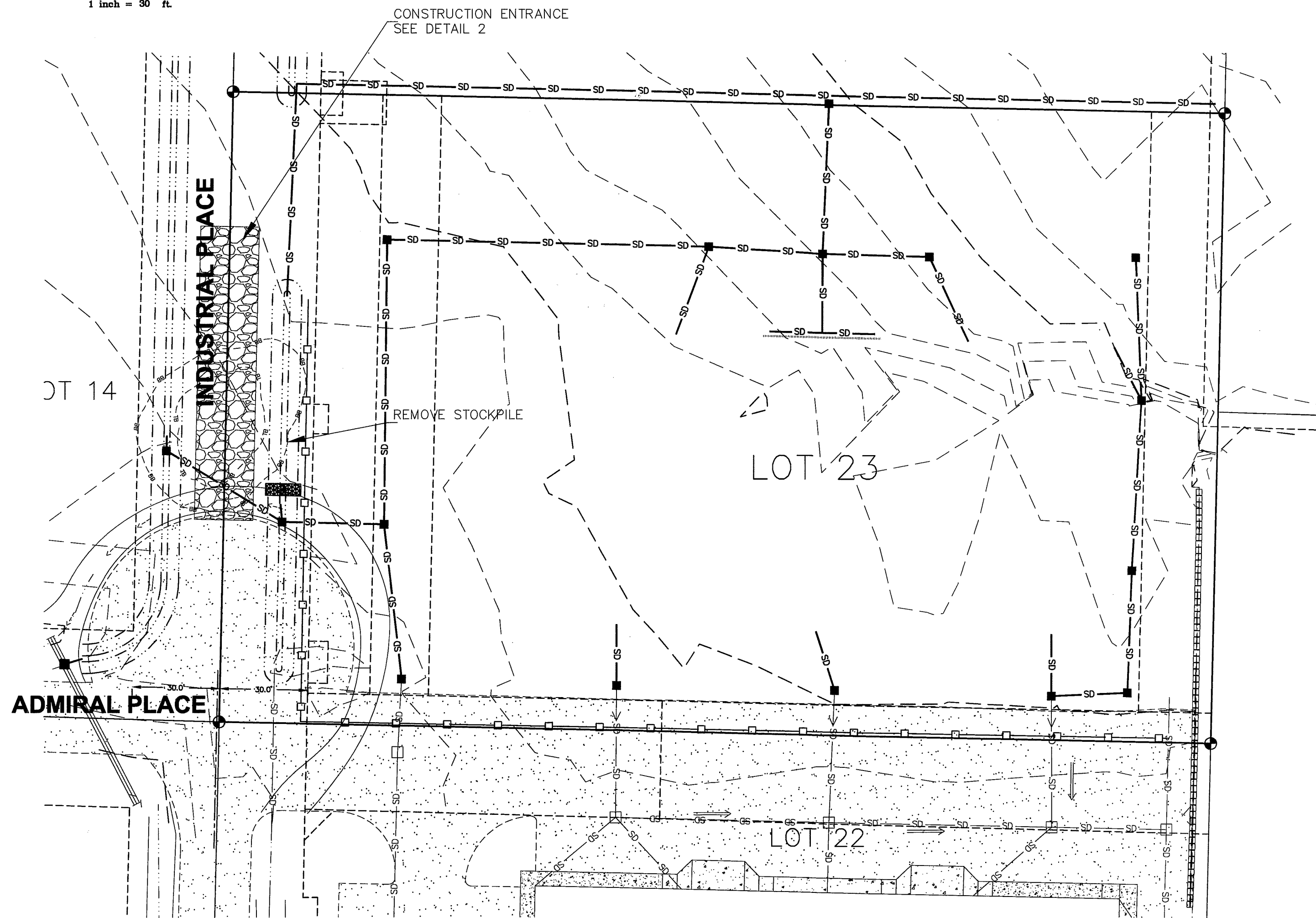
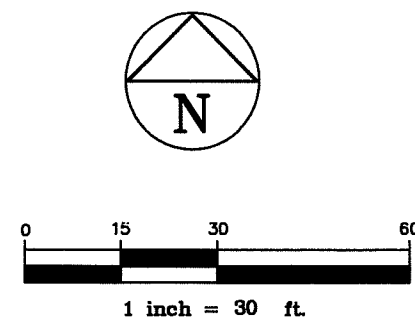
LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

**PACIFIC INDUSTRIAL PARK LOT 23
EXISTING CONDITIONS
AS-BUILT**

REVISIONS - INITIALS/DATE/COMMENTS		
SR	3/31/2011	SUBMITTAL #1
MP	6/1/2011	SUBMITTAL #2

SHEET
02
OF 10

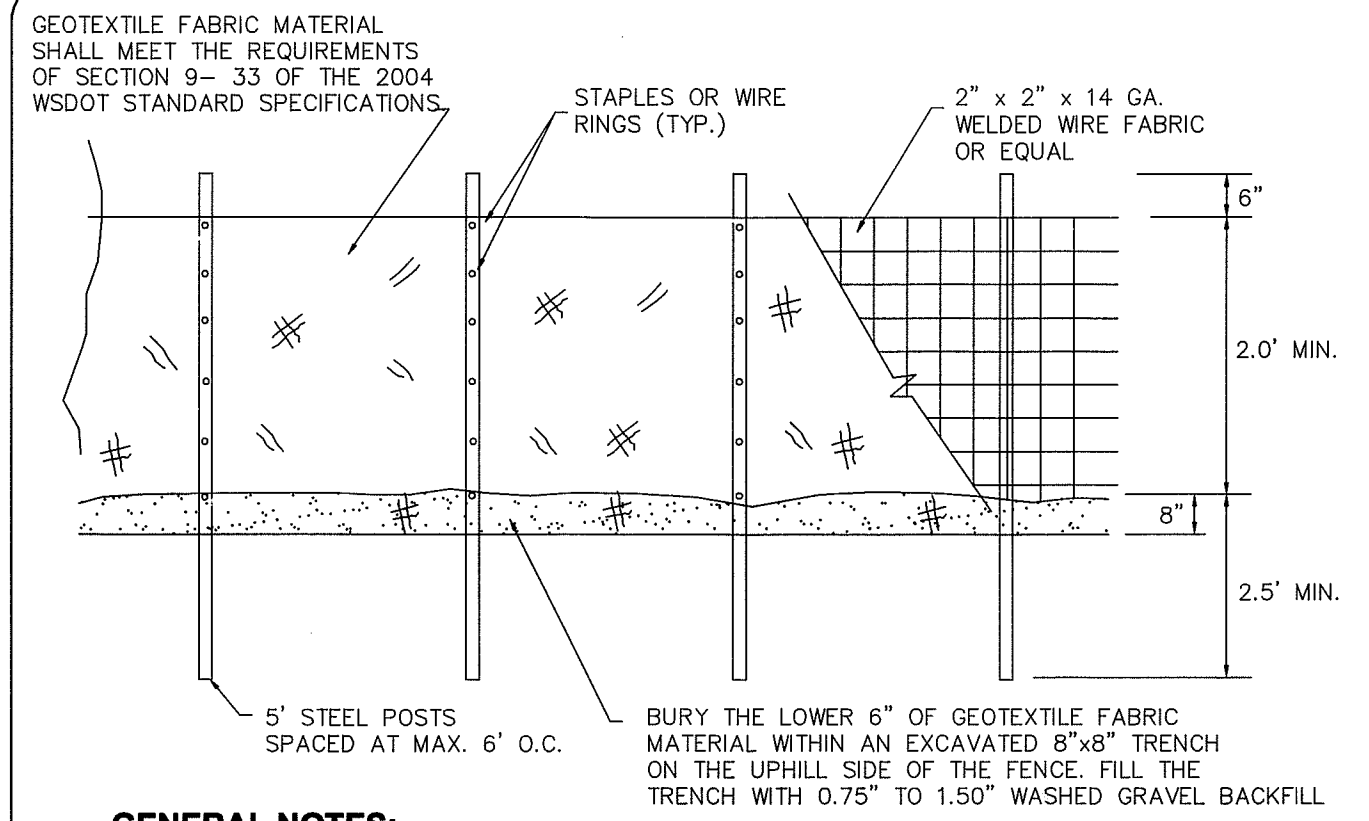
00529.002 12/31/12 SH



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



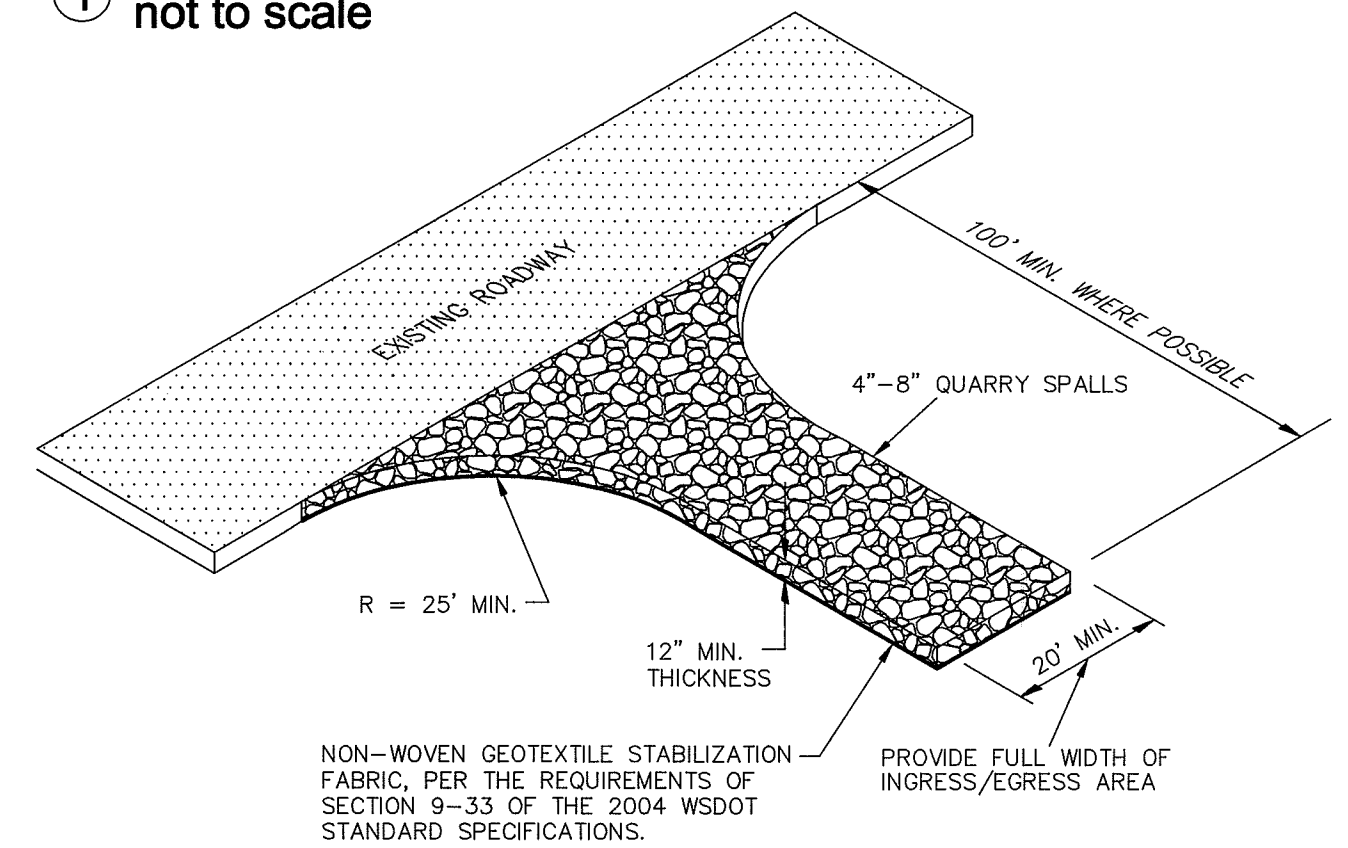
NOTE:
PROVIDE OUTLET PROTECTION FOR ALL CB'S



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 FERNDAL 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 2006 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 FERNDAL 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. FLUSHING OPERATION SHALL BE PERFORMED USING A VACTOR TRUCK.

CITY OF FERNDAL 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 THEIR 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 STREAM BANKS, 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.

APPROVED

DEC 31 2012

BY *J. N. P.E.*
CITY OF FERNDAL

DRAWN BY SB DATE 8/1/2011

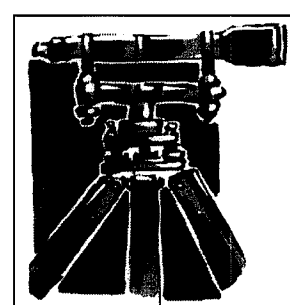
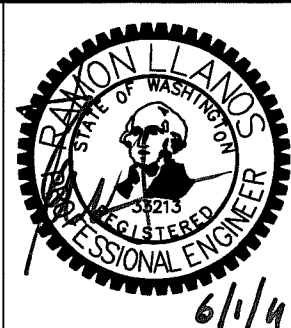
CHECKED BY RL DATE 8/1/2011

PACIFIC INDUSTRIAL PARK LOT 23

JOB # 06014

FOR:

**SAM BOULOS
PO BOX 189 FERNDAL WA 98248**



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

**PACIFIC INDUSTRIAL PARK LOT 23
EROSION CONTROL PLAN
AS-BUILT**

**REVISIONS -
INITIALS/DATE/COMMENTS**

SR	DATE	COMMENTS
3/31/2011	SUBMITTAL #1	
6/1/2011	SUBMITTAL #2	

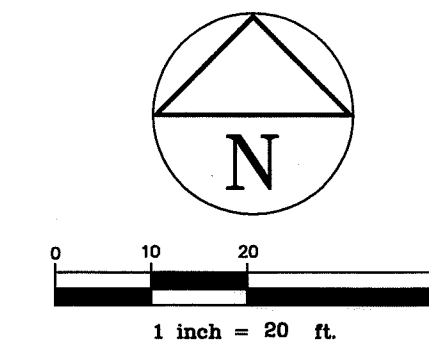
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APPROVED
DEC 31 2012
BY *J. M. [Signature]* P.E.
CITY OF FERRISDALE

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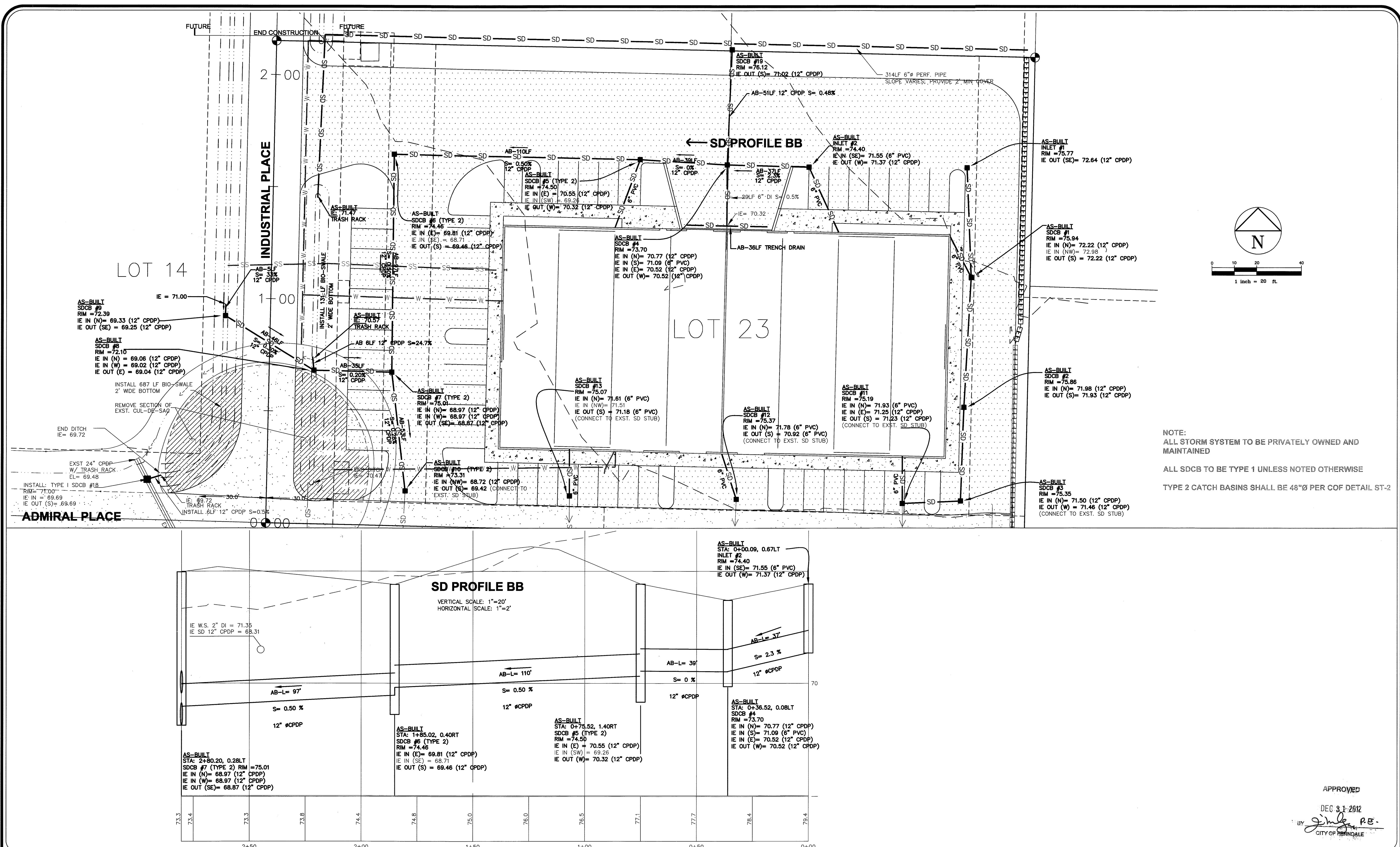
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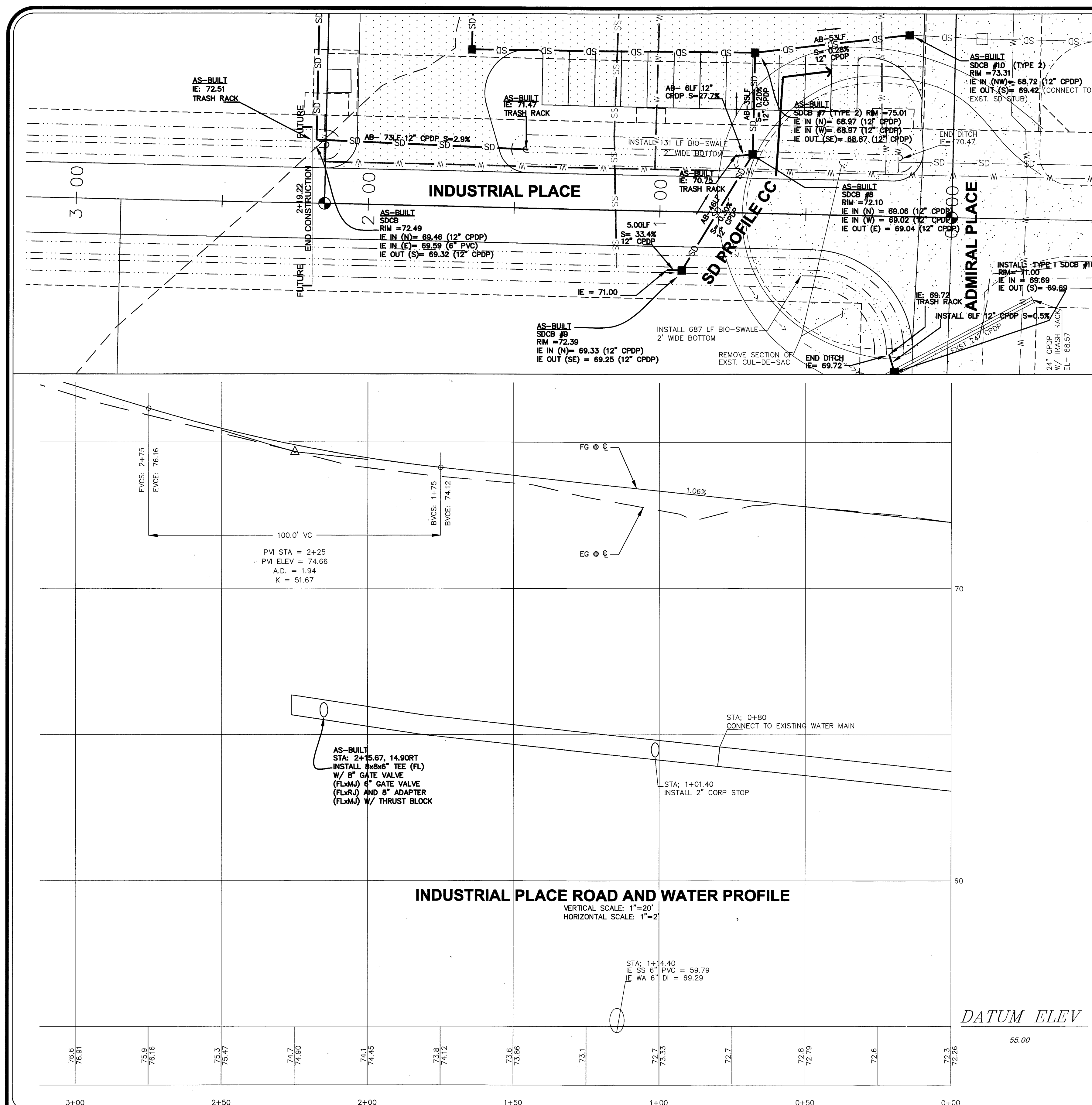
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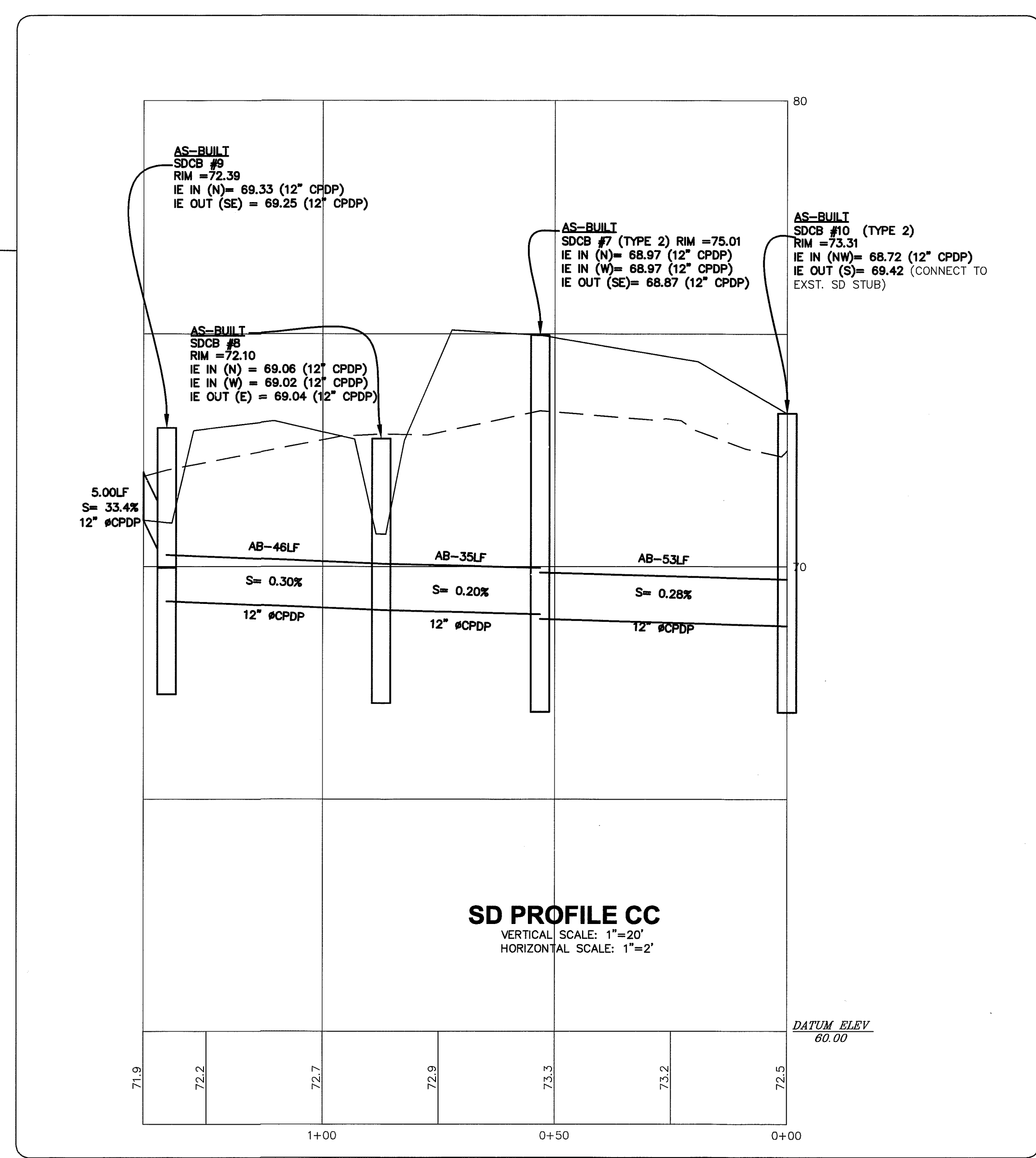
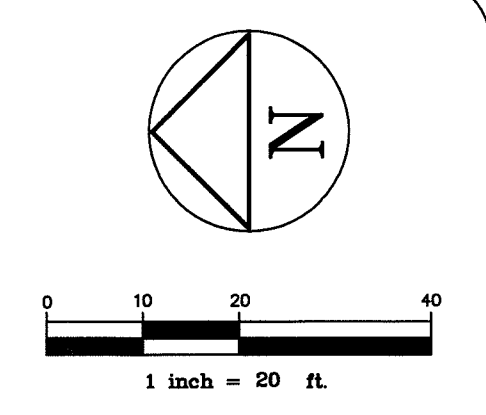


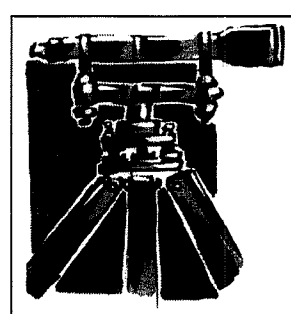
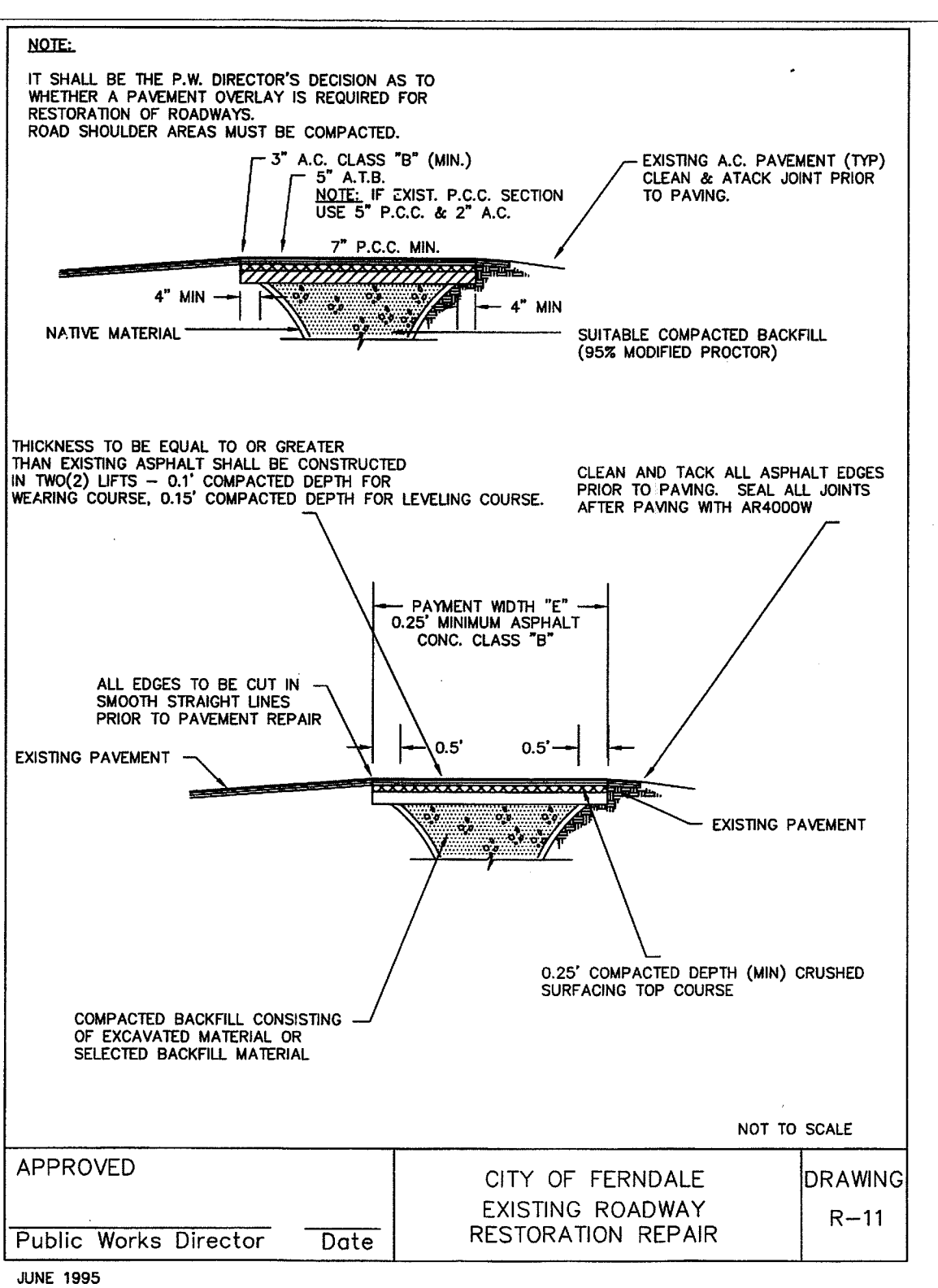
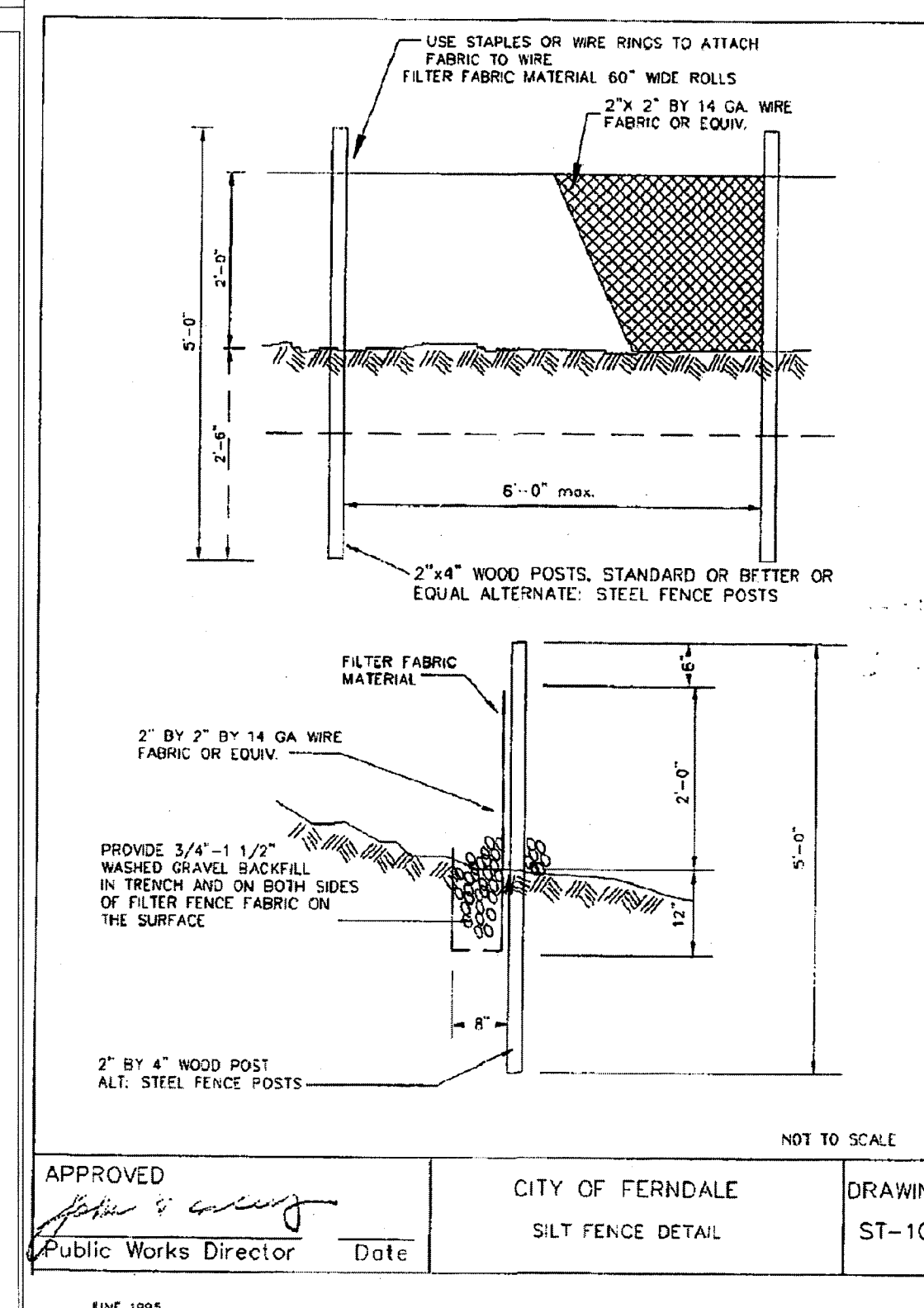
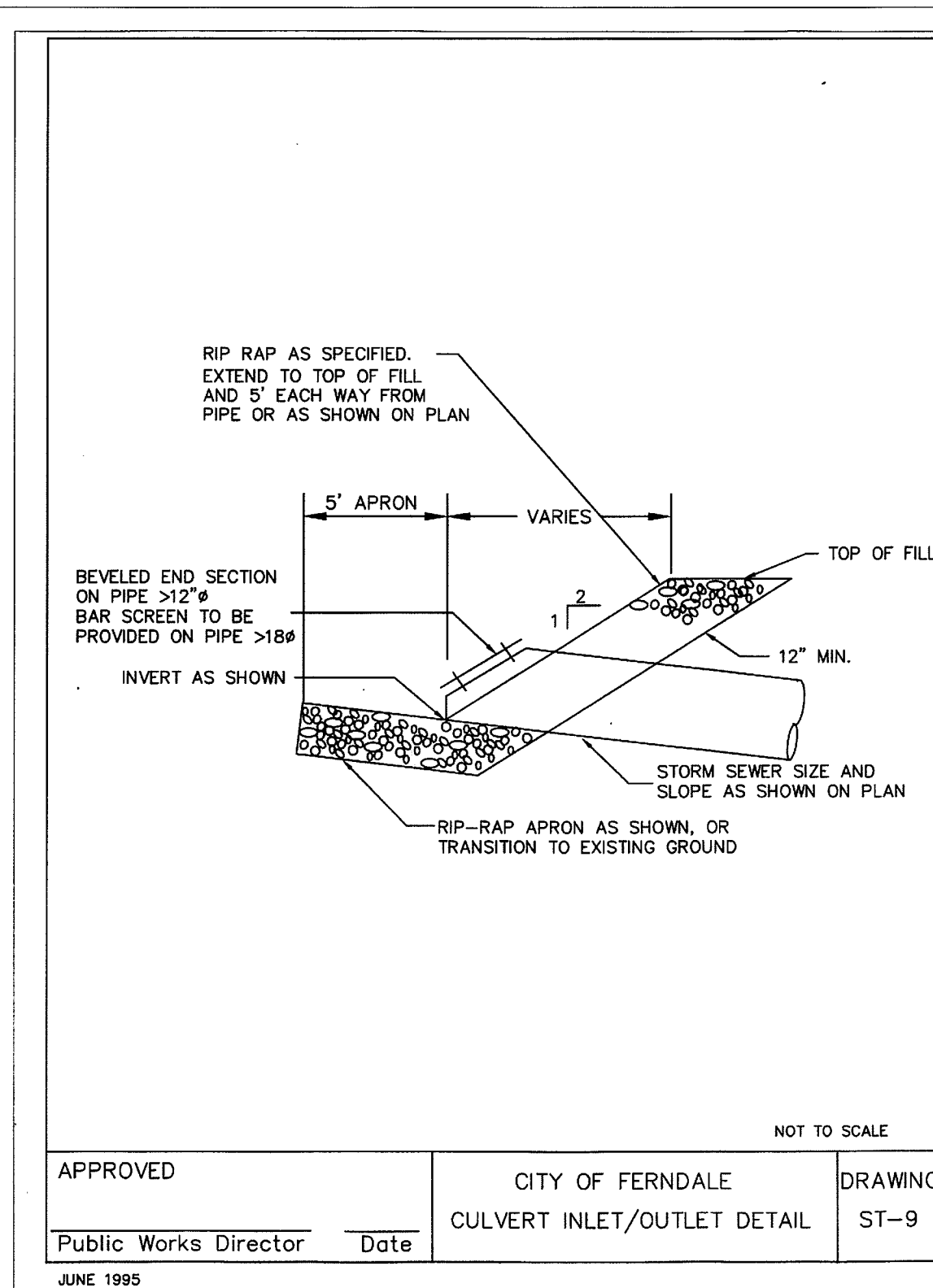
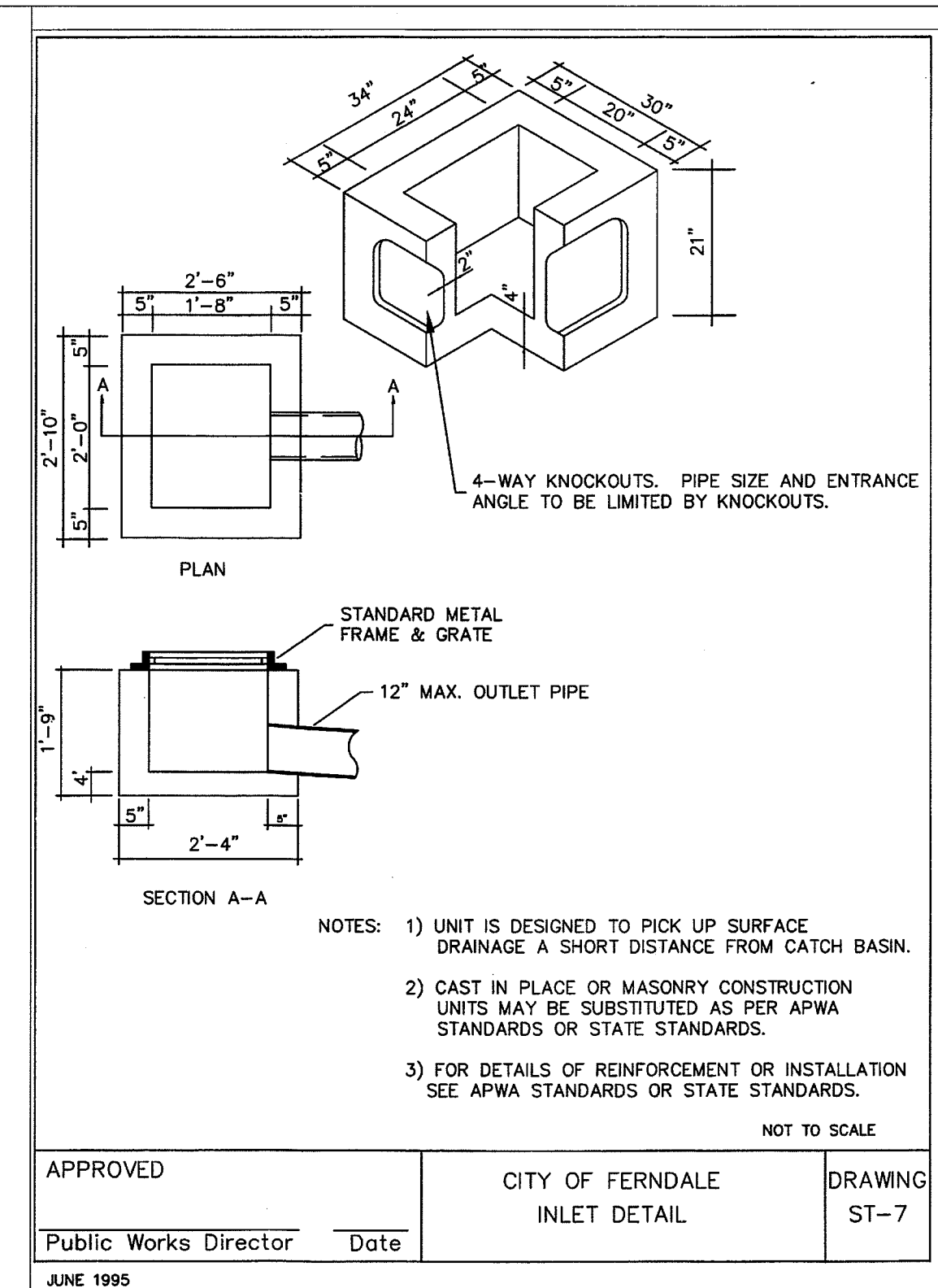
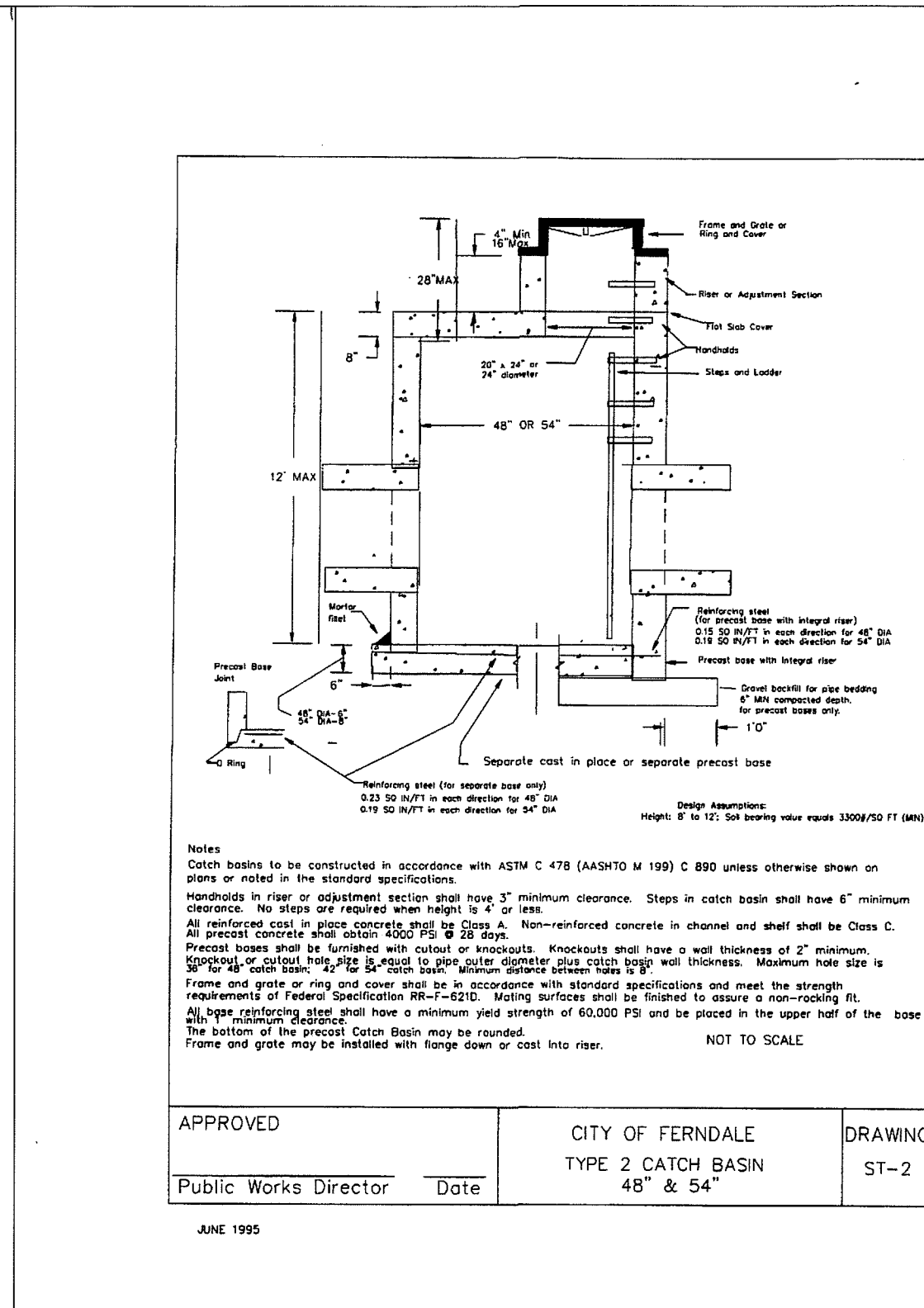
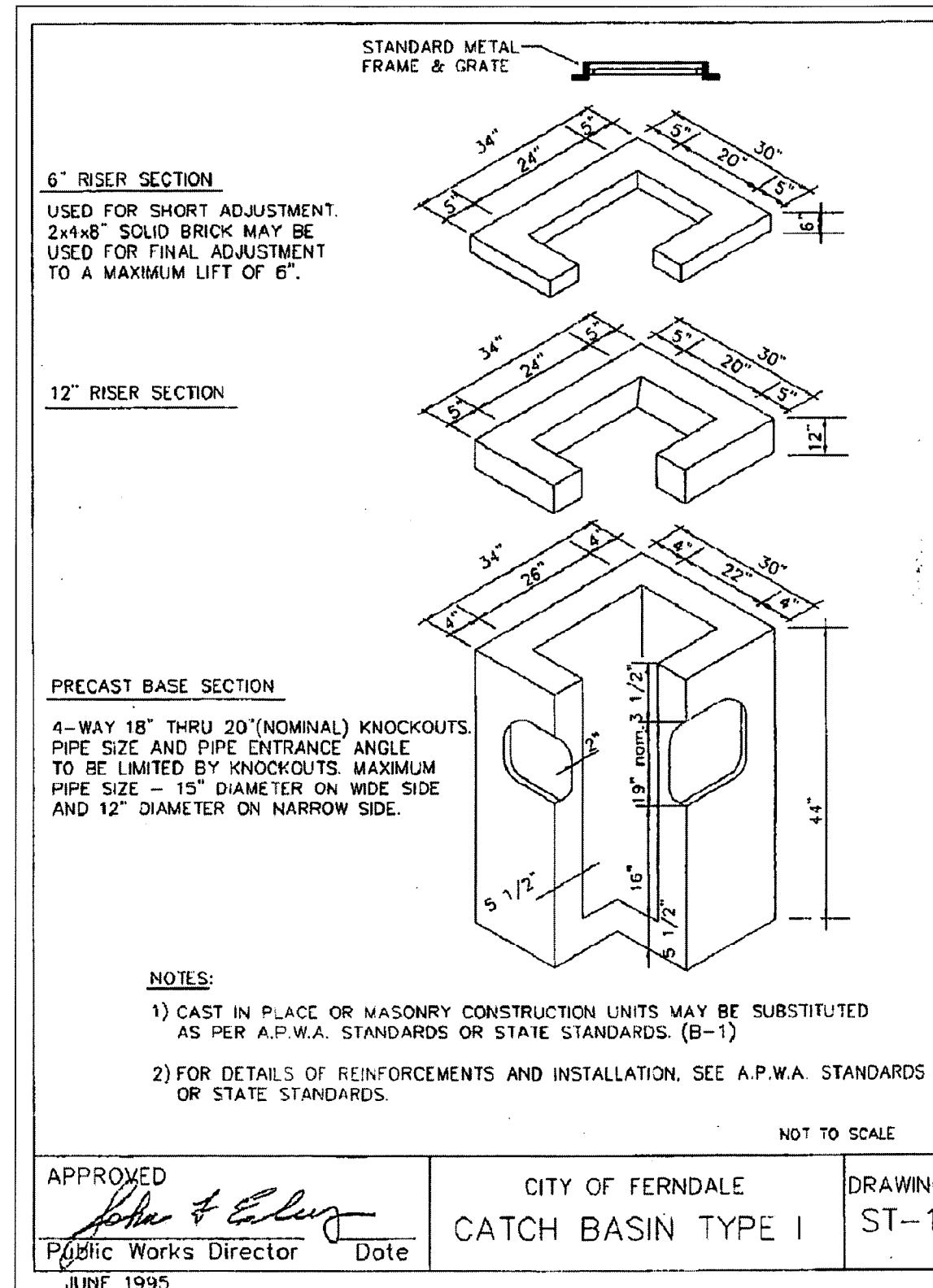
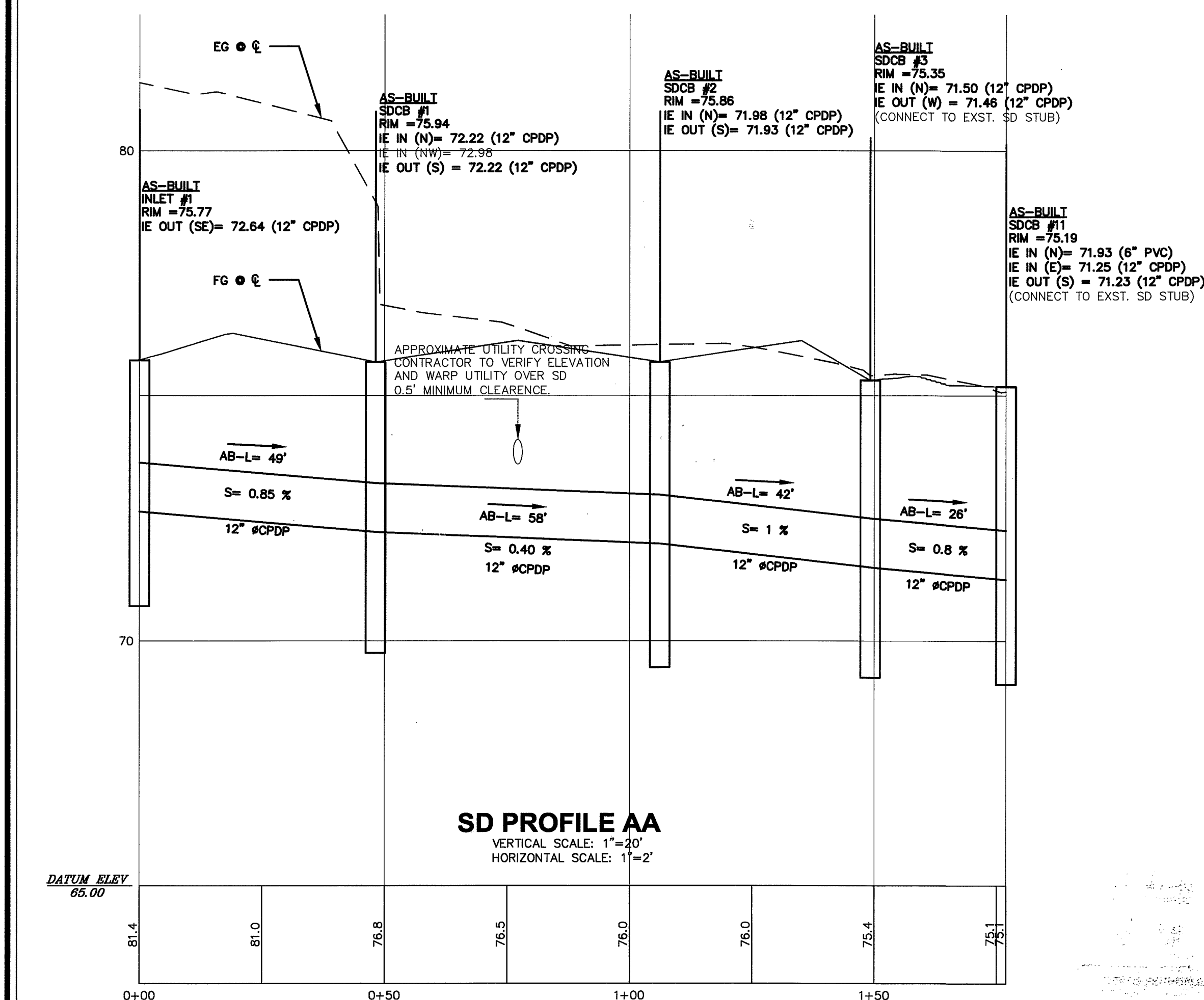
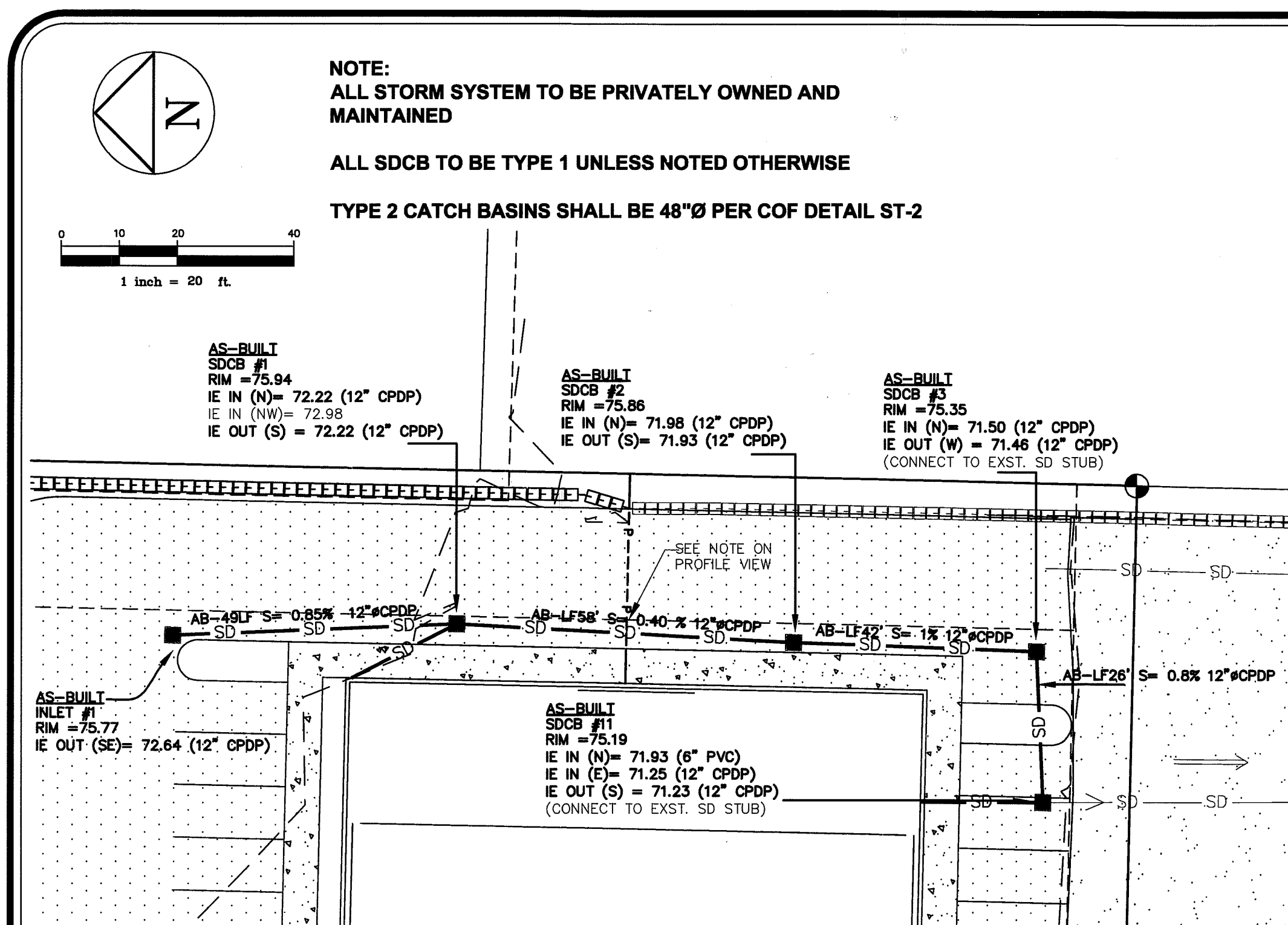


NOTE:
 ALL STORM SYSTEM TO BE PRIVATELY OWNED AND MAINTAINED

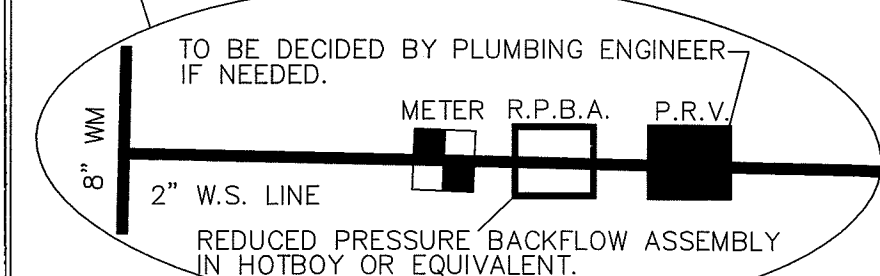
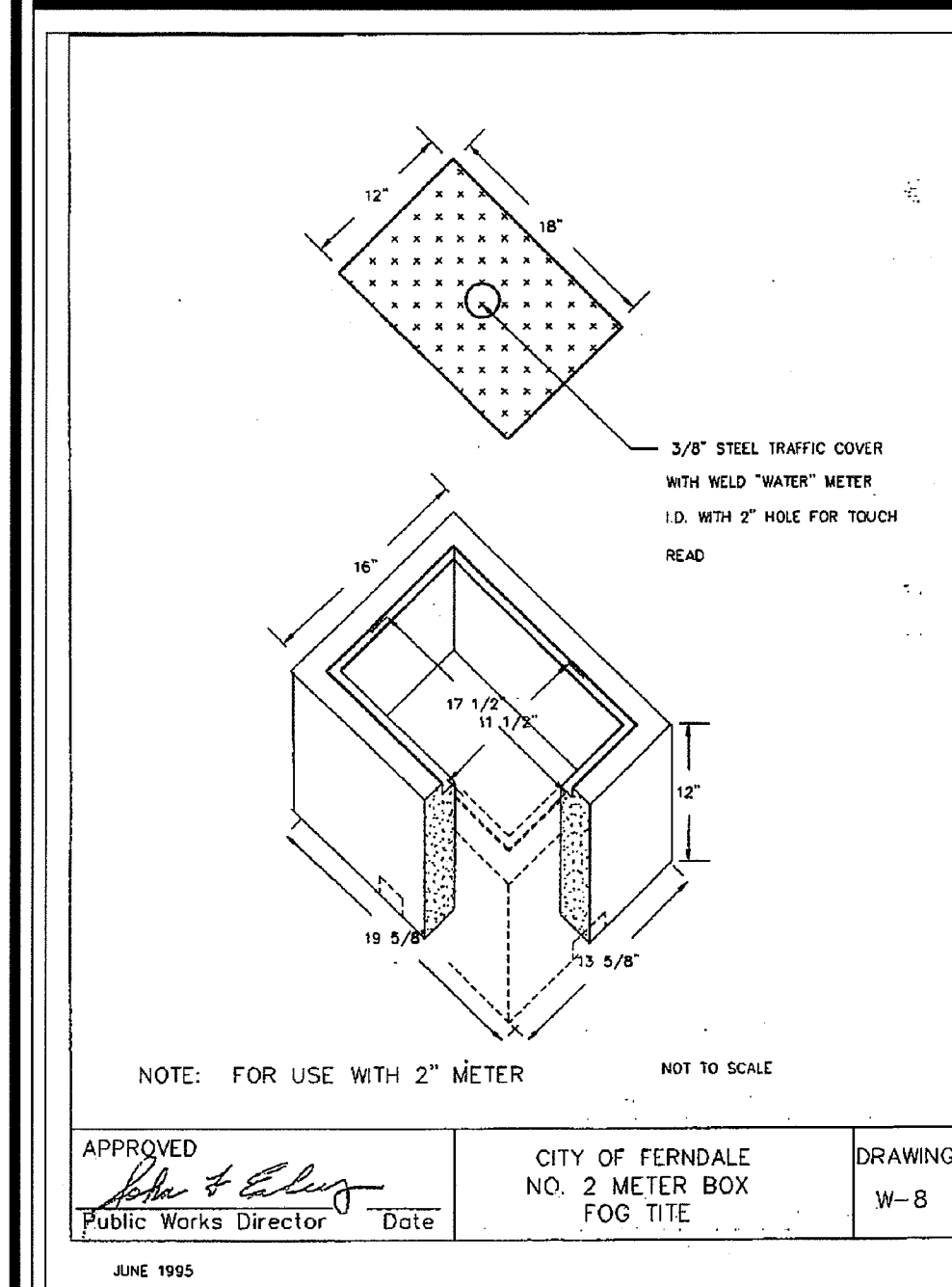
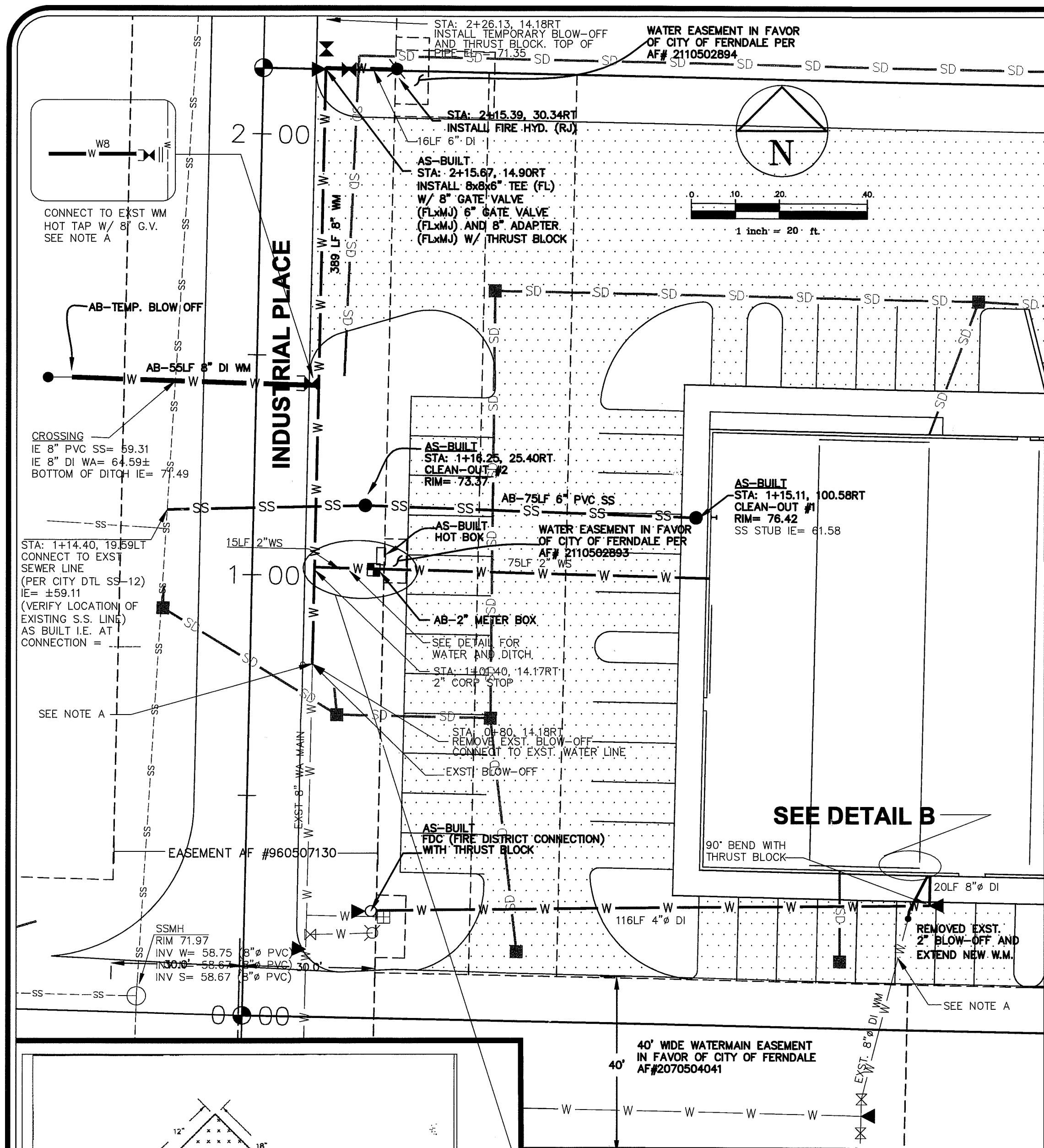
ALL SDCB TO BE TYPE 1 UNLESS NOTED OTHERWISE

TYPE 2 CATCH BASINS SHALL BE 48"Ø PER COF DETAIL ST-2



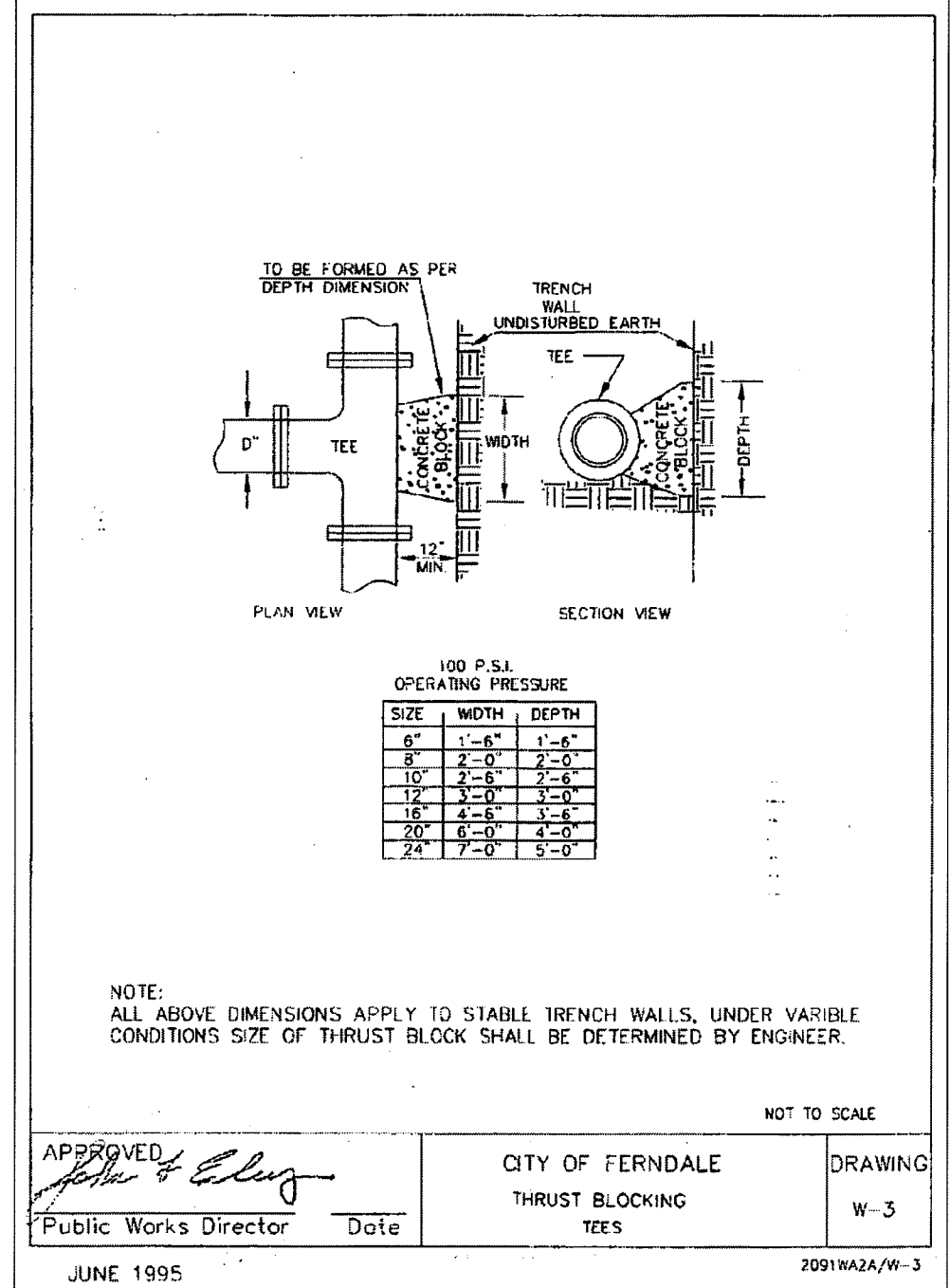
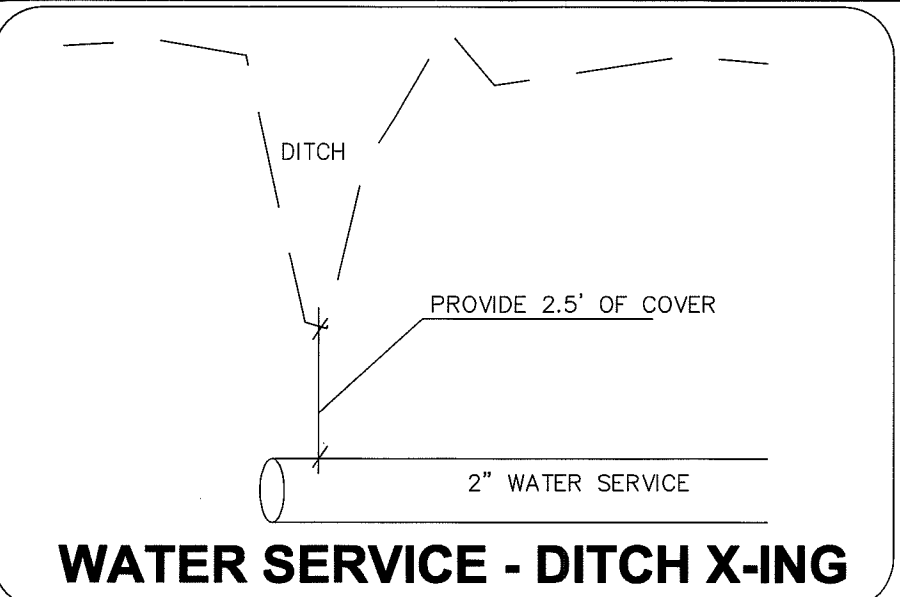


00539.007 12/31/12 5H



NOTE A:
 MAINTAIN SEPARATION BETWEEN NEW
 WATER MAIN AND EXISTING CITY WATER
 SYSTEM UNTIL PRESSURE & BACTERIA
 TESTS PASS. CONNECTION BY
 CONTRACTOR
 NOTIFY CITY 24 HRS. PRIOR TO
 SCHEDULE INSPECTION

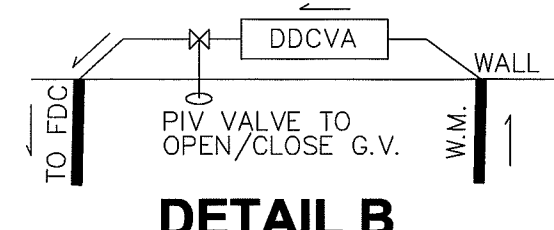
APPROVED
 DEC 31 2012
 BY *[Signature]* P.E.
 CITY OF FERNDAL



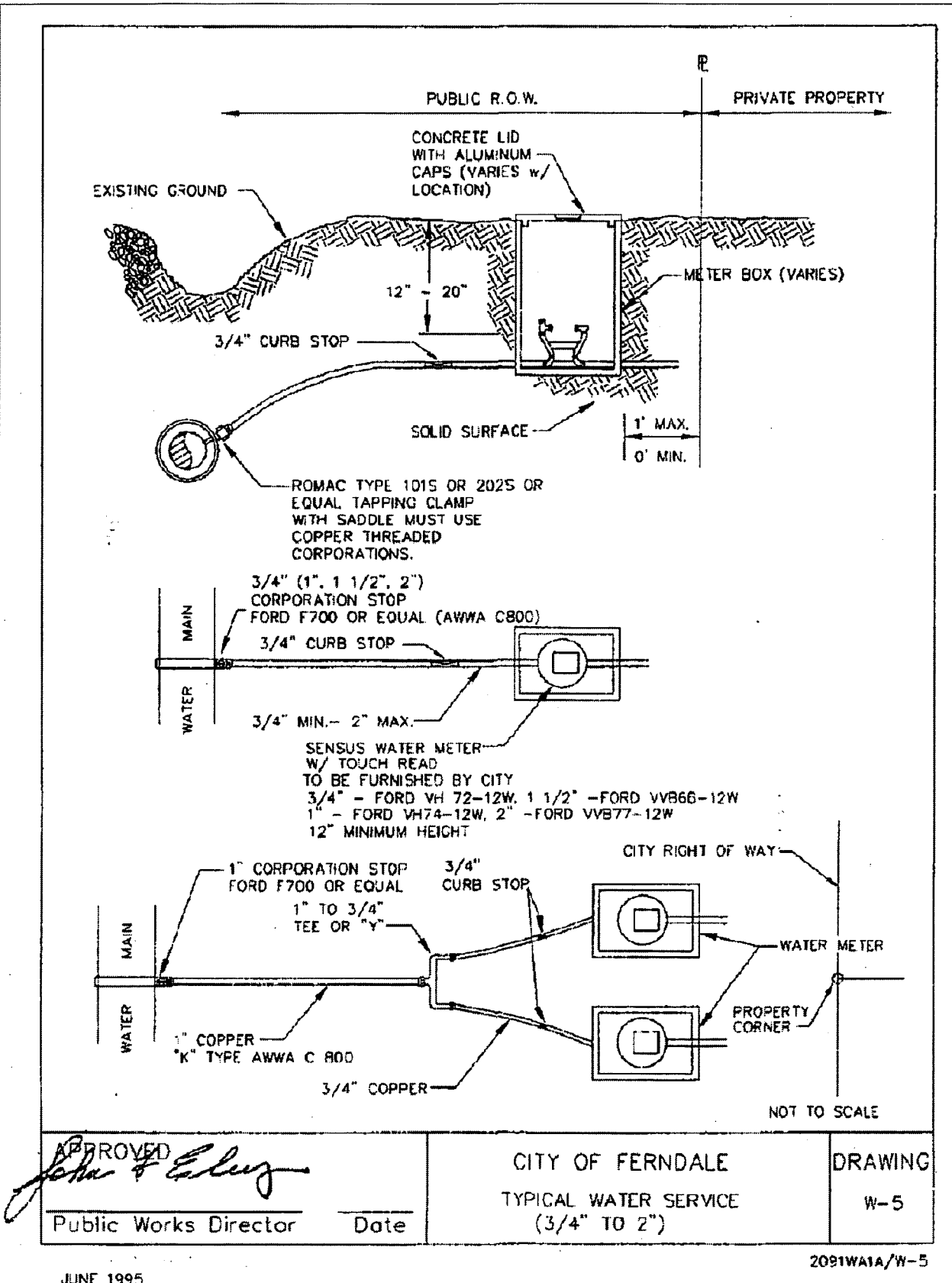
INSTALL DDCVA (DOUBLE DETECTOR CHECK VALVE ASSEMBLY)
 ON THE INSIDE OF BUILDING (BY OTHERS).

**DDCVA DETAIL (NTS)
 TYPICAL**

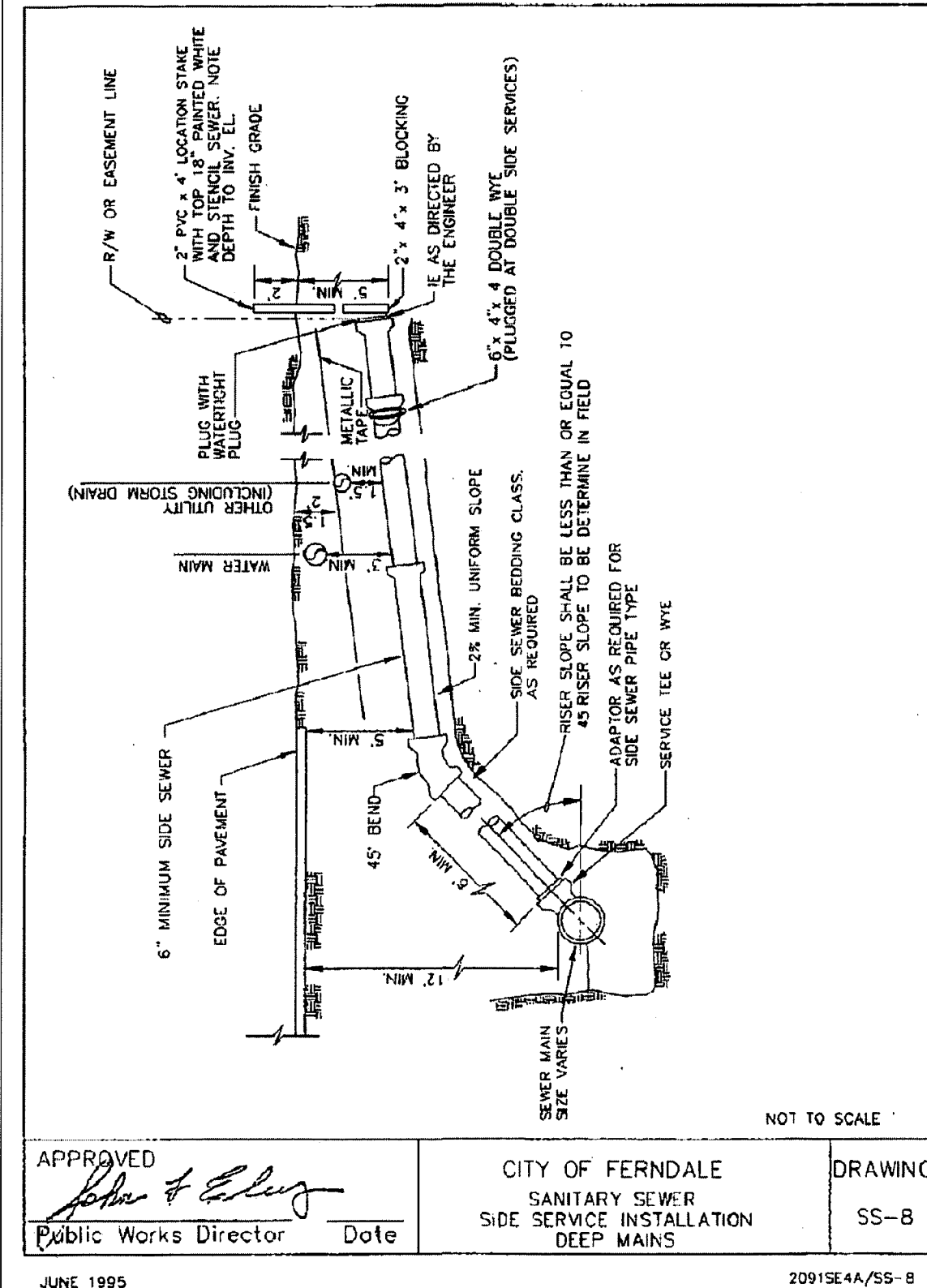
DDCVA NOTE: PROVIDE DRAIN AREA TO
 PURGE WATER EVERY 6 MONTHS OR YEARLY.
 DDCVA PIPING: USE RESTRAINT SYSTEM
 ON FITTINGS (BENDS, CONNECTIONS, VALVES).



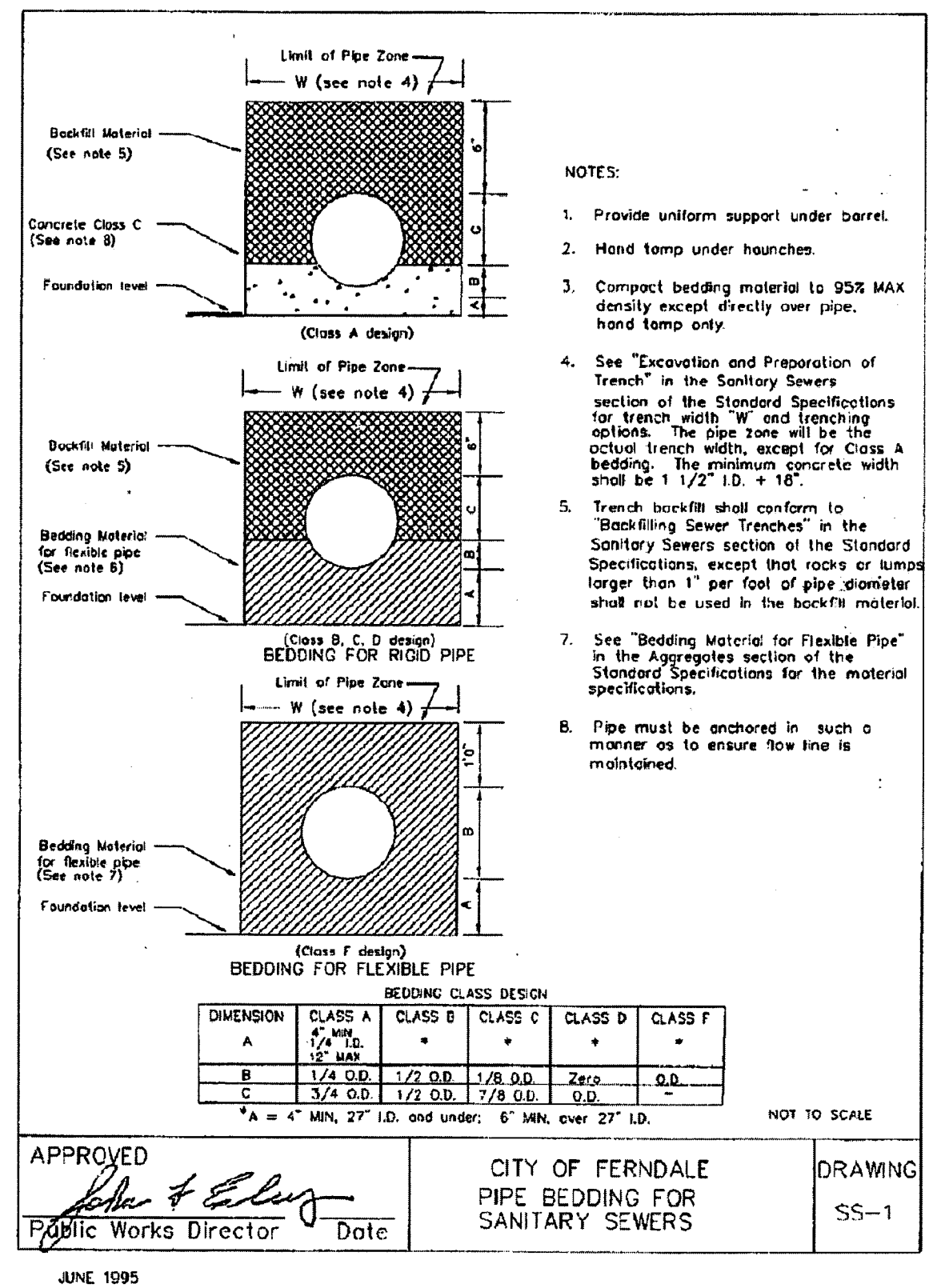
DETAIL B



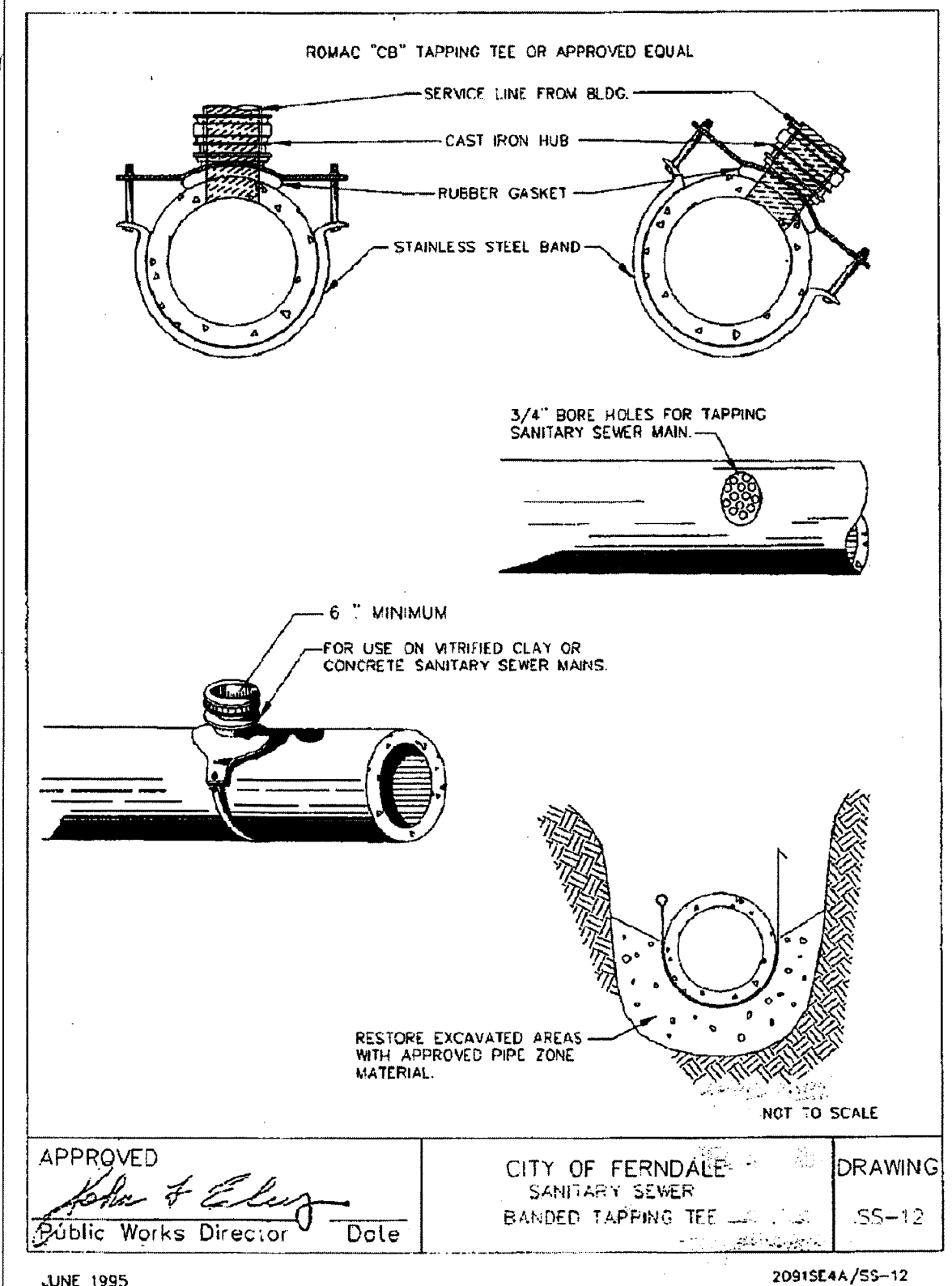
APPROVED *[Signature]*
 Public Works Director Date
 CITY OF FERNDAL
 TYPICAL WATER SERVICE
 (3/4" TO 2")
 DRAWING
 W-5
 JUNE 1995 2091WA1A/W-5



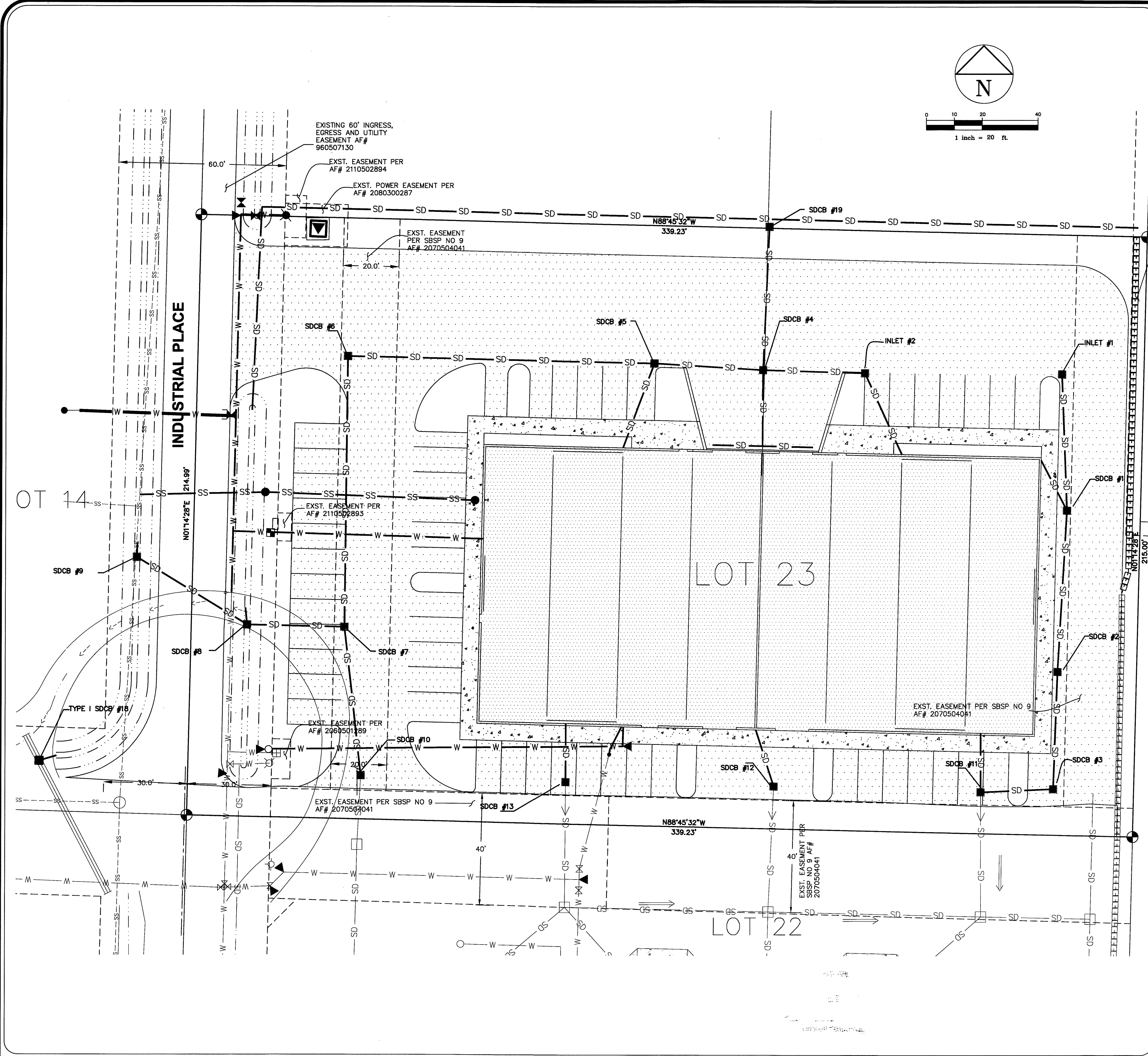
APPROVED *[Signature]*
 Public Works Director Date
 CITY OF FERNDAL
 SANITARY SEWER
 SIDE SERVICE INSTALLATION
 DEEP MAINS
 DRAWING
 SS-8
 JUNE 1995 2091SE4A/SS-8



APPROVED *[Signature]*
 Public Works Director Date
 CITY OF FERNDAL
 PIPE BEDDING FOR
 SANITARY SEWERS
 DRAWING
 SS-1
 JUNE 1995



APPROVED *[Signature]*
 Public Works Director Date
 CITY OF FERNDAL
 SANITARY SEWER
 BANDED TAPPING TEE
 DRAWING
 SS-12
 JUNE 1995 2091SE4A/SS-12



COMPOSITE UTILITY PLAN

JOB NO. 06014

LEGEND

- STORM MANHOLE
- EXIST SANITARY SEWER MANHOLE
- EXIST FIRE HYDRANT
- EXIST METER BOX
- EXIST WATER VALVE
- EXIST WATER BLOWN OFF
- EXIST ASPHALT
- EXIST SANITARY SEWER LINE
- EXIST STORM DRAIN LINE
- EXIST CONTOUR (5')
- EXIST CONTOUR (1')
- EXIST CULVERT
- EXIST DITCHLINE
- EXIST ROAD EDGE OF PAVEMENT
- EXIST SURVEY BOUNDARY LINE
- EXIST EASEMENT LINE
- EXIST UNDERGROUND POWER
- EXIST GAS MAIN
- EXIST WATER LINE
- EXIST ROAD CENTER LINE
- EXIST CONC. RET. WALL
- AS BUILT STORM DRAIN CATCH BASIN
- AS BUILT STORM DRAIN MANHOLE (TYPE 2)
- AS BUILT STORM DRAIN LINE
- AS BUILT WATER LINE
- AS BUILT WATER SERVICE
- AS BUILT WATER HYDRANT
- AS BUILT GATE VALVE
- AS BUILT SAN. SEWER LINE
- AS BUILT SANITARY SEWER SERVICE
- AS BUILT SEWER CLEANOUT
- AS BUILT SEWER MANHOLE
- DITCH
- 1' CONTOUR
- 5' CONTOUR
- ASPHALT
- CONC. SIDEWALK
- ULTRA BLOCK WALL
- DESIGN INFORMATION
- AS-BUILT INFORMATION (AB)

APPROVED

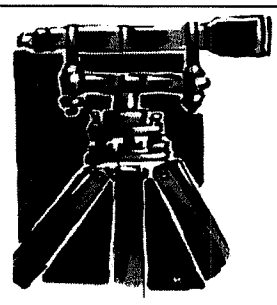
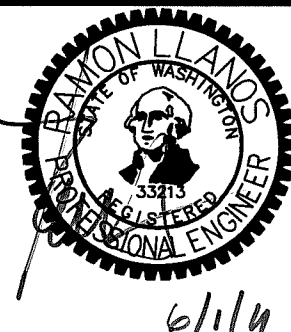
DEC 31 2012

BY *J. Boulos* P.E.
CITY OF FERNDAL

DRAWN BY SR DATE 6/1/2011
CHKD BY RL DATE 6/1/2011

PACIFIC INDUSTRIAL PARK LOT 23

FOR: **SAM BOULOS**
PO BOX 189 FERNDAL WA 98248



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

PACIFIC INDUSTRIAL PARK LOT 23
COMPOSITE UTILITY PLAN
AS-BUILT

REVISIONS - INITIALS/DATE/COMMENTS		
SR	3/31/2011	SUBMITTAL #1
MF	6/1/2011	SUBMITTAL #2

SHEET **09**
OF 10

005391.009 12/31/12 841

3. 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 THE EVENT OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
4. 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.
5. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHTS-OF-WAY.
6. 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.
7. 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 AT ALL TIMES ADVANCE 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.
8. GRADING OF PUBLIC ROADWAY AT:
 1. COMPLETION OF EXCAVATION TO SUBGRADE.
 2. COMPLETION OF BALLAST COURSE PLACEMENT.
 3. COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
9. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
10. F. END OF MAINTENANCE PERIOD.

3. 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 ANY WORKERED BY ANY CONTRACTOR. ANY WORK WITHIN TRAVEL LANE SHALL BE STOPPED IMMEDIATELY TO 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. NOTWITHSTANDING 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. THE CONTRACTOR SHALL REMEDY 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. ANY 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. ANY AND ALL TESTING ACTING IN ACCORDANCE WITH THE SPECIFICATIONS OF THE FERNDALE PUBLIC WORKS DIRECTOR. CONTRACTOR SHOULD DETERMINE THESE REQUIREMENTS PRIOR TO THE START OF CONSTRUCTION.
16. ALL PORTLAND CEMENT CONCRETE SHALL BE APWA CLASS 3000, PER APWA STANDARD SPECIFICATIONS, SECTION 6-02.3(2)(B).

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 DEFERRED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

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

PCC STANDARD SECTION PCC SIDEWALKS PCC CURB RAMPS, ADA APPROACHES SIDEWALK DRAINS	TYPE C SECTION ON SHEET 4 OF THESE PLANS COPS D-12 WSDOT STD. DETAIL F-3 COPS SD-15
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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. 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 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.
- F. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

4. 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.

5. 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 OVERLAY AND FEATHER NEW PAVEMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. APPLICATION OF A THIN PAINT COAT OF EMULSIFIED ASPHALT SHALL BE APPLIED TO INSURE PROPER BONDING.
- E. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD.

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

<p>"MAIN LINE" CATCH BASINS RESIDENTIAL SERVICE LINE CATCH BASINS TRENCH BOTTOM, TOP OF THE FOUNDATION MATERIAL AND GRATE SIDEWALK DRAINS</p>	<p>TYPE 1, 1L OR 2, WSDOT STD. DETAILS B-1, B-1A OR B-1E CITY OF FENDALE STANDARD DETAIL (CofSD) ST-7 CITY OF FENDALE STANDARD DETAIL (CofSD) ST-8 CofSD ST-15</p>
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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 (CPPE) 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. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".

5. 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".

6. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SLOD LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SLOD LOCKING LIDS.

7. 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.

8. 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 OR TYPE 1L CATCH BASIN.

9. ALL STORM STUB INVERT ELEVATIONS SHALL BE CONSTRUCTED TO FACILITATE POSITIVE FLOW TO CATCH BASIN.

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

PIPE BEDDING	CITY OF FERNDALE STANDARD DETAIL (SCSD) SS-1
TRENCH BACKFILL	COFSD SS-15 & SS-1 & WSDOT STD. SPEC. SEC. 9-03.12
SM MANHOLE, TYPE 1-48"	COFSD SS-2
SSMH RING & COVER, TYPE 2	COFSD SS-9 (BOLT DOWN/WATERTIGHT)
SS CLEANOUTS	COFSD SS-5
SIDE SEWERS	COFSD SS-6, SS-8 & SS-13

2. 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 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 PER COFSD SS-14, WITH A 2" DIA. PVC PIPE WITH THE TOP 18" PAINTED WHITE AND STENCILLED WITH THE WORD "SEWER". THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

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

TRENCH BACKFILL THRUST BLOCKING WATER SERVICE	COFSD W-11 & WSDOT STD. SPEC. SEC. 9-03.12 COFSD W-2, W-3 & W-4 COFSD W-5
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2. ALL WATERMAIN 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 7-09.3 (21) 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 - PER WSDOT STD SPEC. 7-09.3(19), 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 7-09.3(23) AND 7-09.3(24) AND OF THE WSDOT STD 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.
WATERMAIN SEPARATION REQUIRED UNTIL PRESSURE AND BACTERIA TEST PASS.
FINAL WATERMAIN CONNECTION BY CONTRACTOR AND WITNESSED BY CITY REPRESENTATIVE.

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".

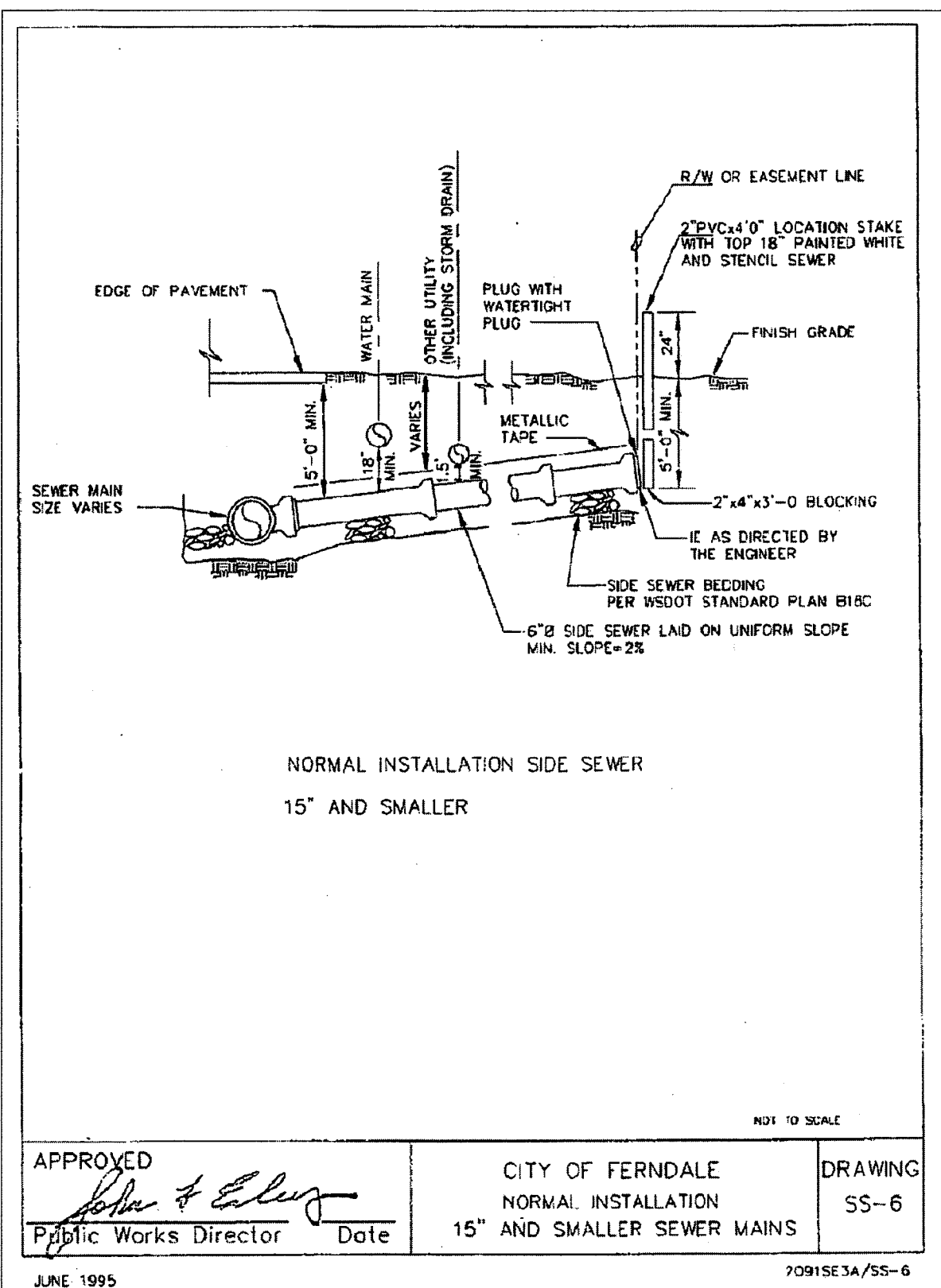
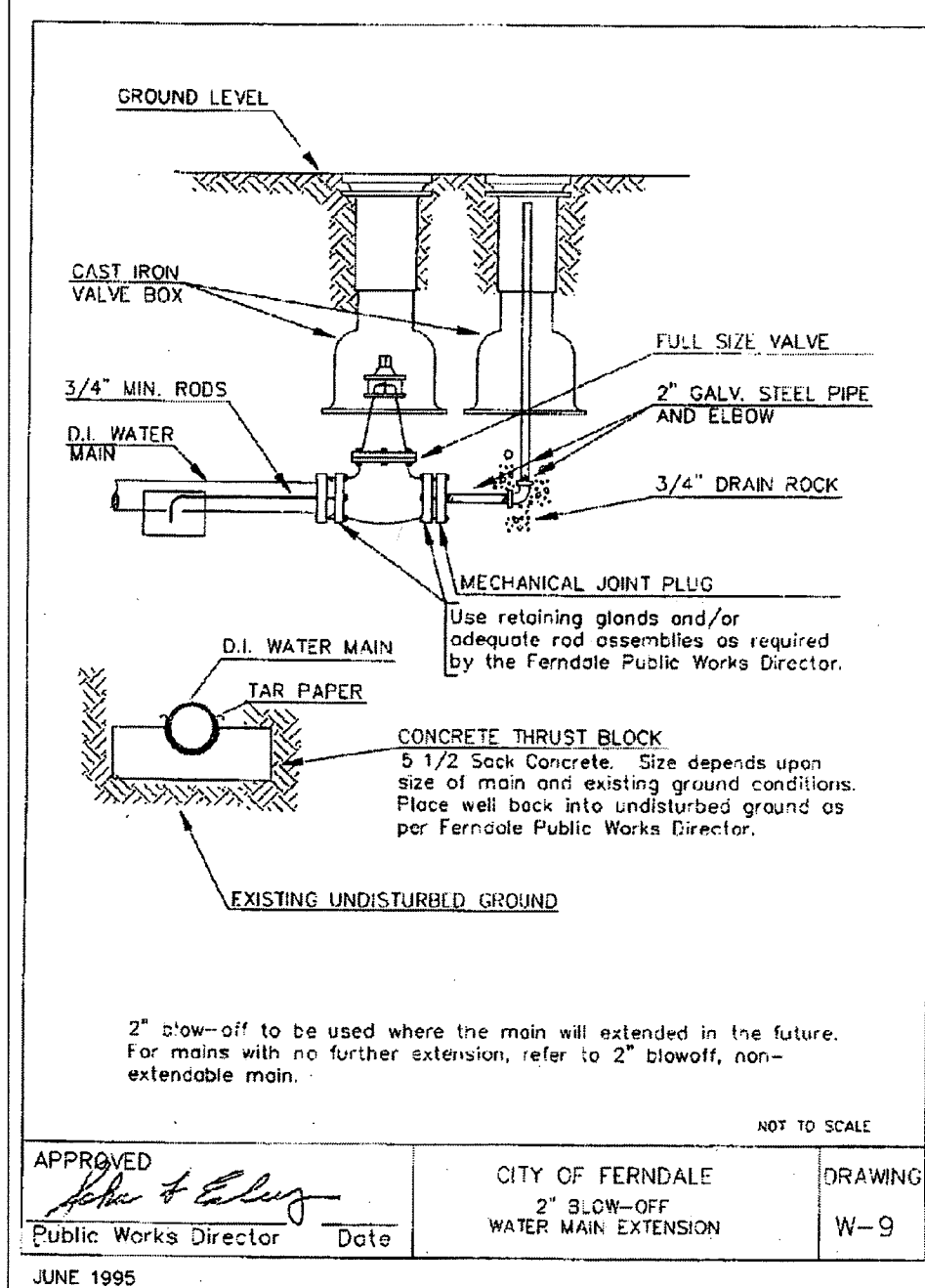
9. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES.

GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 8 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NONSHOCK 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 NONRISING 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 SERVICES SHALL BE MARKED FOR LOCATION WITH A METER BOX PER COFSD W-5.



00529. 010 12/31/12 JH

CITY OF FERNDALE CONSTRUCTION NOTES

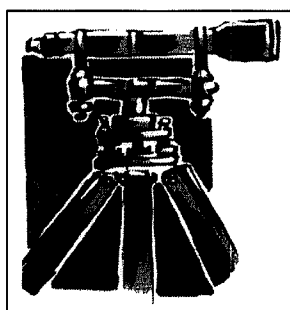
DEC 31 2012
BY J. M. J. P.E.
CITY OF FERNDALE

PACIFIC INDUSTRIAL PARK LOT 23

FOR:

SAM BOULOS

PO BOX 189 FERNDALE WA 98248



LDES, INC.
5160 INDUSTRIAL PL 3108
FERNDALE, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

**PACIFIC INDUSTRIAL PARK LOT 23
CITY OF FERNDALE CONSTRUCTION NOTES
WATER AND SEWER STANDARD DETAILS
AS-BUILT**

**REVISIONS -
INITIALS/DATE/COMMENTS**

SR	3/31/2011	SUBMITTAL #1
MF	6/1/2011	SUBMITTAL #2

SHEET

(10)

OF **10**